

MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

ALGAECIDE –ALGAECIDE 10% WHMIS: Not Regulated under WHMIS, D1B, D2B
PCP Act registered product

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: N-Alkyl Dimethyl Benzyl Ammonium Chloride
CHEMICAL FAMILY: Not applicable
CHEMICAL FORMULA: Not available
TRADE NAME & SYNONYMS: Algaecide
MOLECULAR WEIGHT: 360
MATERIAL USE: Pool Water Algaecide

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Ethanol (TWA EV = 1000 ppm)	1-5	64-17-5	7060 mg/kg	31,623 ppm, 4 hrs
N-Alkyl dimethyl Benzyl Ammonium Chloride	5-30	8000-54-5	330 mg/kg (Dermal, Rabbit) 1182 mg/kg	not available

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID X SOLID
ODOUR & APPEARANCE: Clear blue mild ammonia odour
ODOUR THRESHOLD (PPM): Not applicable
SPECIFIC GRAVITY: 1.010
VAPOUR PRESSURE (MM): Not applicable
VAPOUR DENSITY (AIR-1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (C): 100 deg C
FREEZING POINT (C): 0 deg C
SOLUBILITY IN WATER (20C): Soluble
% VOLATILE (BY VOLUME) 90%
PH: 6.0 – 8.0
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO X
IF YES, UNDER WHICH CONDITIONS?: Not applicable
MEANS OF EXTINCTION: CO2, dry chemical, foam, water spray
SPECIAL PROCEDURES: Wear self contained breathing apparatus when fire fighting.
FLASHPOINT (CELSIUS) AND METHOD: Not applicable
AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable
LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable
UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable
HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon and nitrogen, hydrogen chloride fumes.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None SENSITIVITY TO STATIC DISCHARGE: None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES X NO
IF NO, UNDER WHICH CONDITIONS?: Not applicable
INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO
IF SO, WHICH ONES: Oxidizing compounds
REACTIVITY AND UNDER WHAT CONDITIONS: None under normal conditions
HAZARDOUS DECOMPOSITION PRODUCTS: Burning may product Carbon Monoxide or Carbon Dioxide and Hydrogen Chloride fumes.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	:SKIN ABSORPTION	X	: EYE CONTACT	X
: INHALATION ACUTE	X	:INHALATION CHRONIC		: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Prolonged skin contact will cause irritation. Skin absorption will lead to nausea, vomiting, possibly leading to convulsions. Primary skin irritation study (rabbit) for the active ingredient showed signs of acute systemic toxicity (ataxia, cyanosis, apathy) after 24 hours.

EYE: Eye contact will cause severe irritation or burning, possibly leading to loss of sight.

INHALATION: If misted, causes irritation of mucous membranes, coughing and difficulty in breathing.

INGESTION: Causes smarting and burning sensations, inflammation, burns and painful blisters of the mouth, throat and digestive tract. May result in severe swelling of larynx, paralysis of skeletal muscles affecting the ability to breath, circulatory shock and convulsions.

MATERIAL SAFETY DATA SHEET

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: Skin irritation or dermatitis may occur upon frequent or prolonged contact.

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Ethanol TWAEV – 1000ppm

IRRITANCY OF MATERIAL: Skin and eye irritant

SENSITIZATION OF MATERIAL: None known

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Latex or rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses/goggles if eye contact is likely.

RESPIRATORY (Specify): None under normal conditions.

OTHER (Specify): None

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): None

LEAK AND SPILL PROCEDURE: Remove any oxidizing material. Absorb with synthetic or natural absorbent. and dispose.

WASTE DISPOSAL: Dispose absorbed material in accordance with federal, provincial and local government regulations.

HANDLING PROCEDURES AND EQUIPMENT: Avoid prolonged skin contact.

STORAGE REQUIREMENTS: Store in cool, dry area. Do not mix with other chemicals.

SPECIAL SHIPPING INFORMATION: Transportation: Not applicable
Class:
Pkg. Group:
P.I.N./UN:

SECTION VIII

FIRST AID MEASURES

SKIN: Flush skin with plenty of water for 15 minutes. If irritation persists, call a physician.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration and contact a physician.

INGESTION: Do not induce vomiting. If conscious, drink promptly a large quantity of milk, egg whites, gelatin solutions; or if these are not available, drink large quantities of water. Call a physician immediately. PHYSICIAN – Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996

DATE OF LATEST REVISION/REVIEW: December 12, 2013

ADDITIONAL NOTES OR REFERENCES:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

**FORMULA 500/SUPERKILL ALGAECIDE/ALGI KILL 40/POLY-KILL
ALGEACIDE 40%**

WHMIS: Not Regulated (D2B)
This product is regulated by the Pest
Control Product Act, Agriculture
Canada

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: See Hazardous Ingredients
CHEMICAL FAMILY: Pesticide
CHEMICAL FORMULA: Not available
TRADE NAME & SYNONYMS: WSCP Solution
MOLECULAR WEIGHT: Not available
MATERIAL USE: Algaecide for swimming pools

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Poly (oxyethylene- (dimethyliminio)ethylene- (dimethylimins) ethylene dichloride) (PCP no 18605)	60	31075-24-8	3.7 g/kg >2.0 g/kg	>26.4 mg/L

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID X SOLID
ODOUR & APPEARANCE: Clear blue slight sweet odour
ODOUR THRESHOLD (PPM): Not applicable
SPECIFIC GRAVITY: 1.098
VAPOUR PRESSURE (MM): Not applicable
VAPOUR DENSITY (AIR-1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (C): Above 100 deg C
FREEZING POINT (C): 0 deg C
SOLUBILITY IN WATER (20C): Soluble
% VOLATILE (BY VOLUME) 60%
PH: 6.0 – 8.0
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO ☒ X
IF YES, UNDER WHICH CONDITIONS?: Not applicable
MEANS OF EXTINCTION: Water fog, carbon dioxide, foam, dry chemical
SPECIAL PROCEDURES: None
FLASHPOINT (CELSIUS) AND METHOD: None
AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable
LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable
UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable
HAZARDOUS COMBUSTION PRODUCTS: Smoke and oxides of nitrogen and carbon

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES ☒ X NO
IF NO, UNDER WHICH CONDITIONS?:
INCOMPATIBILITY TO OTHER SUBSTANCES: YES ☒ X NO
IF SO, WHICH ONES: Anionic polymers
REACTIVITY AND UNDER WHAT CONDITIONS: None known
HAZARDOUS DECOMPOSITION PRODUCTS: None known

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	: SKIN ABSORPTION	: EYE CONTACT <input checked="" type="checkbox"/> X
: INHALATION ACUTE <input checked="" type="checkbox"/> X	: INHALATION CHRONIC	: INGESTION <input checked="" type="checkbox"/> X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: None expected on short term exposure
EYE: Mild irritant
INHALATION: Inhalation of mists may cause irritation or corrosion of mucous membranes and the lungs.
INGESTION: May be harmful. No data is available on human ingestion.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Not established

IRRITANCY OF MATERIAL: Eye irritant

SENSITIZATION OF MATERIAL: None known

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

MATERIAL SAFETY DATA SHEET

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Latex or rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses/goggles if eye contact is likely.

RESPIRATORY (Specify): None

OTHER (Specify): None

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): None

LEAK AND SPILL PROCEDURE: Absorb with absorbent materials and dispose into metal containers. Flush residue with water.

WASTE DISPOSAL: Dispose absorbed material in accordance with federal, provincial and local government regulations.

HANDLING PROCEDURES AND EQUIPMENT: Do not mix directly with other chemicals.

STORAGE REQUIREMENTS: Store in cool, dry area.

SPECIAL SHIPPING INFORMATION:

Transportation:	Not applicable
Class:	Not applicable
Pkg. Group:	Not applicable
P.I.N./UN:	Not applicable

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water. Should irritation occur, contact a physician.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.

INHALATION: Move individual to fresh air. If person experiences nausea, headaches, dizziness or has difficulty breathing, contact a physician immediately.

INGESTION: Drink 2 or 3 glasses of water to dilute material. Contact a physician. Do not induce vomiting.

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: June 11, 1996

DATE OF LATEST REVISION/REVIEW: March, 30, 2014

ADDITIONAL NOTES OR REFERENCES:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Formula 6000 – Algaecide 60%

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Product Act (PCP).

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Pesticide

Chemical Formula:

Not available

Trade Name & Synonyms:

WSCP Solution

Molecular Weight:

Not available

Material Use:

Algaecide for swimming pools

SECTION 2

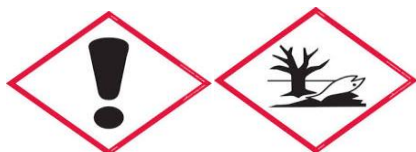
HAZARDS IDENTIFICATION

GHS classification:

Acute toxicity, Oral, Category 4

Hazardous to the aquatic environment, Acute hazard, Category 1

Symbol(s)



Signal Word

Warning

Hazard statements

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

Precautionary statements

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

SAFETY DATA SHEET

P330 Rinse mouth.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local regulations.

NFPA: 1 Health, 0 Fire, 0 Reactivity

HMIS: 1 Health, 0 Fire, 0 Reactivity

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Poly(oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride)	31512-74-0	60

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If person experiences nausea, headaches, dizziness or has difficulty breathing, contact a physician immediately.
Skin Contact:	Wash hands thoroughly with soap and water. Should irritation occur, contact a physician.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 or 3 glasses of water to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Smoke and oxides of nitrogen and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Water fog, carbon dioxide, foam, dry chemical, water should be used to cool surrounding containers.
Instructions to the Fire Fighters:	Wear proper Protective Equipment. See below.
Fire Fighting Protective Equipment:	Wear full protective clothing and a positive pressure self-contained breathing apparatus.

SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:

Block any potential routes to sewers, streams, lakes or rivers. Absorb with absorbent materials and dispose into metal containers. Flush residue with water.
Block any potential routes to sewers, streams, lakes or rivers.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Do not mix directly with other chemicals. Wear gloves and safety glasses when handling.

Ventilation Requirements:

Use in well ventilated area.

STORAGE

Ventilation Requirements:

Store in a cool, dry area.

Storage Requirements:

Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify):

Latex or rubber gloves if skin contact is likely.

Eye (Specify):

Safety glasses/goggles if eye contact is likely.

Respiratory (Specify):

None

Other (Specify):

Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:

Gas Liquid X Solid

Odour & Appearance:

Clear blue liquid, slight sweet odour.

Odour Threshold (ppm):

Not applicable

Flammability:

Yes

No

X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

SAFETY DATA SHEET

Decomposition Temp (°C)	Not available
Specific Gravity:	1.15
Viscosity:	125 CST (Kinematic)
Vapour Pressure (mm):	Not available
Vapour Density (Air-1):	Not available
Flashpoint (°C)	Closed cup: >100°C (212°F). (Tagliabue)
Evaporation Rate	Not available
Boiling Point (°C) :	>100°C (212°F)
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	40%
PH:	6.0 – 8.0
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Anionic polymers		
Conditions to Avoid:	See above		
Hazardous Decomposition Products:	Carbon monoxide may be formed upon burning.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	May cause irritation to the respiratory tract.
Skin Contact:	None expected on short term exposure.
Eye Contact:	Mild irritant
Ingestion:	Harmful if swallowed. No data available on human ingestion.

CHRONIC HEALTH EFFECTS: Prolonged or repeated skin contact may cause irritation.

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): 1850 mg/l, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Route): Not available

Exposure (Limits): Not established

Irritancy of Material Mild eye irritant.

SAFETY DATA SHEET

Sensitization of Material None known
Synergistic Materials None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

LC50: 0.353mg/l 48h (fathead minnow)
0.044mg/l 48h (rainbow trout)
0.660mg/l 24h (harlequinfish, red rasbora)

Environmental Fate

Biodegradability: Not available
Bioaccumulative Potential: Toxic to aquatic life. Unknown effect.
Mobility In Soil: Unknown effect.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance to federal, provincial and local regulations.
Safe Handling of Residues: Flush residue with copious amounts of water.
Disposal of Packaging: Dispose absorbed material in accordance to federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

IMDG

Proper shipping name: Not regulated

SAFETY DATA SHEET

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

IATA

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15

REGULATORY INFORMATION

CANADA

DSL and NDSL: Not Listed.

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Products Act (PCP).

USA

SARA (302 Extremely hazardous substances list): No components of this product are listed.

SARA (312 Hazard category): Immediate (acute) health hazard.

SARA (313 Toxic chemicals list): No components of this product are listed.

TSCA: Not listed.

FIFRA: This product is a registered pesticide.

INTERNATIONAL

Mexico, China, Korea and Taiwan: Listed

Australia, Japan and Philippines: Not listed.

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: May 17, 2016

Date Revised: December 1, 2018

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

ALKA PLUS / ALKA RISE

WHMIS: Not Regulated

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Sodium Bi Carbonate

Chemical Family:

Bi Carbonates

Chemical Formula:

NAHC03

Trade Name & Synonyms:

Baking Soda

Molecular Weight:

84.0

Material Use:

Pool Water Alkalinity Booster

SECTION II

HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III

PHYSICAL DATA FOR MATERIAL

Physical State:

Gas

Liquid

Solid

X

Odour & Appearance:

Odourless, opaque, white powder

Odour Threshold (Ppm):

Not applicable

Specific Gravity:

2.16

Vapour Pressure (Mm):

Not applicable

Vapour Density (Air-1):

Not applicable

Evaporation Rate

Not applicable

Boiling Point (C):

loses CO₂ at 270 deg C

Freezing Point (C):

Not applicable

Solubility In Water (20c):

9.6 g/100g water

% Volatile (By Weight)

Not applicable

Ph:

8.50 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes X No
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use appropriate media to extinguish source of fire
Special Procedures: Wear self contained breathing apparatus when fire fighting
Flashpoint (Celsius) And Method: Not applicable
Auto Ignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: CO

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Acids – release CO₂
Reactivity And Under What Conditions: Temperature 190 deg C
Hazardous Decomposition Products: CO₂ – The resulting dust may irritate eyes, skin and respiratory tract.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact <u>X</u>	: Skin Absorption	: Eye Contact <u>X</u>
: Inhalation Acute	: Inhalation Chronic	: Ingestion <u>X</u>

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: May cause mild irritation
Eye: Eye contact may cause irritation and redness.
Inhalation: Cough and mild respiratory irritation.
Ingestion: This product may be harmful if swallowed

Effects Of Chronic Exposure To Material Prolonged skin contact-contact dermatitis, Prolonged eye contact-conjunctivitis

Other Health Effects: Skin irritation may be aggravated in persons with existing lesions. Breathing of dust May aggravate acute or chronic asthma and other chronic pulmonary disease.

Ld 50 Of Material (Specify Species And Routes): SEE SECTION 11

Lc 50 Of Material (Specify Species And Routes): SEE SECTION 11

Exposure (Limits): ACGIH – TLV 10 mg/m³ –nuisance dust; OSHA – TWA 15 mg/m³ total dust – 5 mg/m³ respire fraction

Irritancy Of Material: Mild skin and eye irritant

Sensitization Of Material: None known

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): None normally required
Eye (Specify): None normally required
Respiratory (Specify): None except when TLV is exceeded. Use dust mask to reduce exposure to appropriate levels.
Other (Specify): None
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): None under normal circumstances
Leak And Spill Procedure: Sweep up material and dispose.
Waste Disposal: Dispose of waste material at a municipal landfill site should be satisfactory.
Handling Procedures And Equipment: None
Storage Requirements: Do not store near acids. Keep dry.
Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.
Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.
Inhalation: Remove patient to fresh air. If not breathing, administer artificial respiration or CPR. If breathing is difficult or irritation develops, administer oxygen. Get medical attention.
Ingestion: If patient is conscious and alert, give 2 or more glasses of water to drink. If appreciable quantities are swallowed, induce vomiting by giving 1 tablespoon of syrup of Ipecac. If vomiting has not occurred in 20 minutes, the same dose of syrup Ipecac may be repeated on additional time. Alternately induce vomiting by touching the back of throat with a finger. Do not induce vomiting or give anything by mouth to and unconscious person. Get medical attention.

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : AQUAFINESSE FILTER CLEANER
Product code : SWE-FC

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : SU21 Consumer product. PC35 Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier : Special Water Europe BV
Plesmanstraat 50
3905 KZ VEENENDAAL, The Netherlands
Telephone : +31 318 525 311
Fax : +31 318 551 836
E-mail : msds@aquafinesse.com
Website : www.aquafinesse.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

NL - Telephone : +31 318 525 311 (During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

National Poisons Information Service +44-844 892 0111 (24/7)

SECTION 2 HAZARDS IDENTIFICATION

*

2.1. Classification of the substance or mixture

CLP classification : Corrosive to metals, hazard category 1. Skin corrosive, category 1B. Serious eye damage, category 1.
(1272/2008/EC) Hazardous to the aquatic environment — Chronic category 3.
Human health hazards : Causes severe skin burns and eye damage. Warning! Do not use together with other products. May release dangerous gases (chlorine).
Physical/chemical hazards : Contact with acids liberates toxic gas. Reacts vigorously in contact with acids. Strong heat development possible. May be corrosive to metals.
Environmental hazards : Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.
EUH031 Contact with acids liberates toxic gas.
EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P260 dust	Do not breathe dust.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P234	Keep only in original container.
P273	Avoid release to the environment.
P390	Absorb spillage to prevent material damage.
P501	Dispose of contents/container to an official chemical waste depot.

Labelling of packagings where the contents do not exceed 125 ml:

Hazard pictograms :



Signal word : Danger

H- and P-phrases	:	H314	Causes severe skin burns and eye damage.
		H412	Harmful to aquatic life with long lasting effects.
		EUH031	Contact with acids liberates toxic gas.
		EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
		P101	If medical advice is needed, have product container or label at hand.
		P102	Keep out of reach of children.
		P260 dust	Do not breathe dust.
		P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
		P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P310	Immediately call a POISON CENTER/doctor.
		P363	Wash contaminated clothing before reuse.
		P405	Store locked up.
		P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (for all packaging sizes)

: Contains: Silicic acid, sodium salt ; Disodium metasilicate ; Sodium hydroxide ; Pentapotassium bis(peroxymonosulphate) bis(sulphate) .

Ingredient declaration according to Regulation 648/2004:

Contains:	Concentration (%)
Non-ionic surfactants , Oxygen-based bleaching agents , Chlorine-based bleaching agents	< 5

Other information : According to regulation (EC) 1272/2008, Annex II, part 3, the packaging of this product shall carry a tactile warning of danger and a child-resistant fastening.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances in concentrations higher than 0,1%.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

*

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Citric acid	10 - < 20	77-92-9	201-069-1		01-2119457026-42
Silicic acid, sodium salt	10 - < 20	1344-09-8	215-687-4		
Sodium carbonate	10 - < 20	497-19-8	207-838-8		01-2119485498-19
Disodium metasilicate	5 - < 10	6834-92-0	229-912-9		01-2119449811-37
Aluminium hydroxide	1 - < 5	21645-51-2	244-492-7	MAC	01-2119529246-39
Sodium hydroxide	1 - < 5	1310-73-2	215-185-5		01-2119457892-27
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	1 - < 3	70693-62-8	274-778-7		01-2119485567-22
Troclosene sodium, dihydrate	1 - < 2,5	51580-86-0	220-767-7		
Alcohols, C12-18, ethoxylated propoxylated	1 - < 2,5	69227-21-0	-----		

Occupational exposure limit(s), if relevant, are listed in section 8.

Substance name	Hazard Class	H-phrases	Pictograms	
Citric acid	Eye Irrit. 2	H319	GHS07	
Silicic acid, sodium salt	Eye Dam. 1; Skin Irrit. 2; STOT SE 3	H318; H315; H335	GHS05; GHS07	
Sodium carbonate	Eye Irrit. 2	H319	GHS07	
Disodium metasilicate	Met. Corr. 1; Eye Dam. 1; Skin Corr. 1B; STOT SE 3	H290; H318; H314; H335	GHS05; GHS07	
Aluminium hydroxide	-----	-----	-----	
Sodium hydroxide	Skin Corr. 1A; Eye Dam. 1; Met. Corr. 1	H290; H314; H318	GHS05	H314 A : C ≥ 5 % H319 : C ≥ 0.5 % H315 : C ≥ 0.5 % H318 : C ≥ 2 % H314 B : C ≥ 2 %
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Acute Tox. 4; Skin Corr. 1B; Aquatic Chronic 3	H302; H314; H412	GHS03; GHS05	
Troclosene sodium, dihydrate	Acute Tox. 4; Eye Irrit. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1	H302; H319; H335; H400; H410; EUH031	GHS07; GHS09	
Alcohols, C12-18, ethoxylated propoxylated	Skin Irrit.2; Aquatic Acute 1; Aquatic Chronic 2	H315; H400; H411	GHS07; GHS09	

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

Inhalation : Move victim into fresh air. Consult a doctor.

- Skin contact : Immediately wash off skin with plenty of water. Take off contaminated clothing. Consult a doctor in case burns or irritation occur.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Transport to a hospital immediately.
- Ingestion : Do not induce vomiting. Do rinse the mouth. Give one glass of water. Give condensed milk or a knob of butter. Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

- Inhalation : Corrosive. May cause sore throat and coughing. May cause shortness of breath or lack of breath.
- Skin contact : Corrosive. May cause redness, pain and severe burns (blisters).
- Eye contact : Corrosive. May cause redness and severe pain. Tears.
- Ingestion : Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

- Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

- Suitable : Water fog.
- Not suitable : Carbondioxide (CO₂). Foam. Dry chemical. Water jet.

5.2. Special hazards arising from the substance or mixture

- Special exposure hazards : Reacts violently with flammable and reducing agents with risk of explosions. Water may be used to cool containers. Heating causes oxygen release, intensifying the fire.
- Hazardous thermal decomposition products : Generates toxic (phosgene) and corrosive vapours (hydrochloric acid) in case of combustion. Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

- Special protective equipment for fire-fighters : Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

*

6.1. Personal precautions, protective equipment and emergency procedures

- Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Do not breathe dust.

6.2. Environmental precautions

- Environmental precautions : Avoid release of product into sewers, surface water and/or ground water. Waste product should not be allowed to contaminate soil or water.
- Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spilled material in containers. Do not use saw-dust. Dispose at an authorised waste collection point. Wash away remainder with plenty of water.

6.4. Reference to other sections

Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Avoid contact with skin and eyes. Wear protective clothing. After contact with skin, wash immediately with plenty of water.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C).
Recommended packaging : Keep only in the original container.
Non recommended packaging : None known.

7.3. Specific end use(s)

Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
Sodium carbonate	GB	1	3	Aluminium salts, soluble MAC: DA, calculated for Al
Aluminium hydroxide		2	-	
Aluminium hydroxide	GB	1	-	- MAC: DE
Sodium hydroxide		-	2	
Pentapotassium bis(peroxymonosulphate) bis(sulphate)		6	-	

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation			10 mg/m ³	
Disodium metasilicate	Dermal				1,49 mg/kg bw/day
Aluminium hydroxide	Inhalation			10,76 mg/m ³	6,22 mg/m ³
Sodium hydroxide	Inhalation			1 mg/m ³	
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Dermal		80 mg/kg bw		20 mg/kg bw/day
	Inhalation	50 mg/m ³	50 mg/m ³	0,28 mg/m ³	0,28 mg/m ³

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation	10 mg/m ³			
Disodium metasilicate	Dermal				0,74 mg/kg bw/day

Aluminium hydroxide	Inhalation				1,55 mg/m ³
Sodium hydroxide	Oral				0,74 mg/kg bw/day
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Oral				4,74 mg/kg bw/day
	Inhalation			1 mg/m ³	
	Dermal	0,22 mg/kg bw	40 mg/kg bw		10 mg/kg bw/day
	Inhalation	25 mg/m ³	25 mg/m ³	0,14 mg/m ³	0,14 mg/m ³
	Oral		10 mg/kg bw		10 mg/kg bw/day

Predicted no-effect concentration (PNEC):

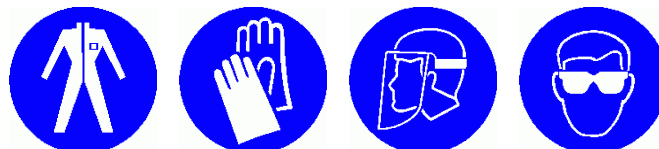
Chemical name	Route of exposure	Fresh water	Marine water	
Citric acid	Water	0,44 mg/l	0,044 mg/l	
	Sediment	34,6 mg/kg	3,46 mg/kg	
	STP			1000 mg/l
	Soil			33,1 mg/kg
Disodium metasilicate	Water	7,5 mg/l	1 mg/l	
	Intermittent water			7,5 mg/l
	STP			1000 mg/l
Aluminium hydroxide	STP			20 mg/l
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Water	0,022 mg/l	0,00222 mg/l	
	Sediment	0,0782 mg/kg	0,00796 mg/kg	
	Intermittent water			0,0109 mg/l
	STP			108 mg/l
	Soil			1 mg/kg
	Oral			44,44 mg/kg food

8.2. Exposure controls

Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.
Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



- Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: PVC. Indication of permeation breakthrough time: 6 hours.
- Respiratory protection : Wear appropriate respiratory protection in case of large scale exposure. Suitable: dust mask type FFP1 or higher, in accordance with EN 149.
- Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: PVC. ± 0,5 mm. Indication of permeation breakthrough time: 6 hours.
- Eye protection : Wear a face shield or appropriate safety glasses with side shields, in accordance with EN 166.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance : Solid.
Colour : White.
Odour : Characteristic.
Odour threshold : Not known.
pH : 8,3 10% solution.

Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not applicable.	Contains surfactants. The O/W system emulsifies.
Flash point	: Not relevant.	Solid.
Flammability (solid, gas)	: Not flammable.	Not easily ignitable.
Auto ignition temperature	: > 1010 °C	
Boiling point/boiling range	: > 250 °C	
Melting point/melting range	: Not known.	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not applicable.	
Oxidising properties	: Slightly oxidizing.	
Decomposition temperature	: Not known.	
Viscosity (20°C)	: Not applicable.	Solid.
Viscosity (40°C)	: Not applicable.	Solid.
Vapour pressure (20°C)	: Very low.	Solid.
Vapour density (20°C)	: Not relevant.	The solvent content of this product is less than 1%.
Relative density (20°C)	: Not known.	
Evaporation rate	: Very low.	Solid.

SECTION 10 STABILITY AND REACTIVITY

*

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : Reacts vigorously in contact with acids. Strong heat development possible. Reacts vigorously in contact with alkalines. Strong heat development possible. Reacts with metals.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from acids. Keep away from bases. Contact with acids liberates toxic gas. Keep away from reducing agents. Keep away from halogenated substances. Keep away from heavy metals.

10.6. Hazardous decomposition products

Hazardous decomposition products : May include and are not limited to: Oxygen. HCl-gas and chlorine vapours.

SECTION 11 TOXICOLOGICAL INFORMATION

*

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

Acute toxicity : Calculated LC50: > 2,864 mg/l. Ingredients of unknown toxicity: 38 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met.

Corrosion/irritation : Corrosive. May cause sore throat and coughing. May cause pulmonary oedema. Symptoms of pulmonary oedema often manifest after several hours. May cause irritation to respiratory airways and coughing.

Sensitisation	: Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Skin contact	
Acute toxicity	: Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
Corrosion/irritation	: Corrosive. Causes severe burns.
Sensitisation	: Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Eye contact	
Corrosion/irritation	: Corrosive. Risk of serious damage to eyes.
Ingestion	
Acute toxicity	: Calculated LD50: > 3321 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Not classified - based on available data, the classification criteria are not met.
Aspiration	: Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
Corrosion/irritation	: Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Reprotoxicity	: Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Silicic acid, sodium salt	Skin irritation	Irritant	----	Rabbit
	Eye irritation	Severely irritant	----	----
	LD50 (oral)	3400 mg/kg bw	----	Rat
Disodium metasilicate	Skin irritation	Corrosive.	OECD 404	Rabbit
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	Skin sensitisation	Not sensitizing	OECD 429	Mouse
	LD50 (dermal) - estimate	> 5000 mg/kg bw	----	Rat
	NOAEL (oral)	127 mg/kg bw/d	----	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	----	----
	LD50 (oral) - estimate	> 2000 mg/kg bw	----	----
	Eye irritation - estimate	Corrosive.		Rabbit
Sodium hydroxide	LD50 (oral)	662 mg/kg bw	----	Mouse
	Skin sensitisation - estimate	Not sensitizing		
	LD50 (oral) - estimate	> 2000 mg/kg bw		
	Skin irritation	Corrosive.		
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Eye irritation	Corrosive.		
	LD50 (oral)	1204 mg/kg bw	----	Rat
	LD50 (dermal)	> 2000 mg/kg bw	----	Rat

	LC50 (inhalation)	> 5000 mg/m3		Rat
	Skin sensitisation	Not sensitizing		Guinea pig
	Skin irritation	Corrosive.	OECD 404	Rabbit
	Eye irritation	Highly irritant	-----	Rabbit
	NOAEL (inhalation)	1,4 mg/m3		
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vivo	Not genotoxic	OECD 474	Mouse
	NOAEL (development, oral)	Not teratogenic	OECD 414	Rat

SECTION 12 ECOLOGICAL INFORMATION

*

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Harmful to aquatic organisms. Calculated LC50 (fish): 14 mg/l. Calculated EC50 (waterflea): 12 mg/l.
Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence – degradability : May cause long-term adverse effects in the aquatic environment. The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances in concentrations higher than 0,1%.

12.6. Other adverse effects

Other information : Not applicable.

Ecological information:

Chemical name	Property		Method	Test animal
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	EC50 (waterflea)	5,3 mg/l	OECD 202	Daphnia magna
	LC50 (fish)	32 mg/l	OECD 203	Brachydanio rerio
	NOEC (fish)	0,222 mg/l.d		Cyprinodon variegatus
	NOEC (waterflea) - chronic	0,267 mg/l.d		Mysidopsis bahia
	Log P(ow)	-3,9		
Troclosene sodium, dihydrate	LC50 (fish)	0,22 mg/l	-----	-----
	EC50 (waterflea)	0,2 mg/l	-----	-----
Alcohols, C12-18, ethoxylated propoxylated	LC50 (fish)	1 mg/l	-----	-----
	EC50 (waterflea)	1 mg/l	-----	Daphnia magna
	Ultimate aerobic biodegradation (%)	> 60 %	-----	

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.
- Additional warning : None.
- European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.
- Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

*

14.1. UN number

UN nr. : UN 3262

14.2. UN proper shipping name

Transport name : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Disodium metasilicate ; Sodium hydroxide)

Transport name (IMDG, IATA) : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Disodium metasilicate ; Sodium hydroxide)

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : 8

Classification code : C6

Packaging group : II

Danger label : 8

Tunnel restriction code : E



Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)

Class : 8

Packaging group : II

EmS (fire / spill) : F - A / S - B

Marine pollutant : No

IATA (air)

Class : 8

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments. Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Community regulations : Regulation (EU) No 2015/830 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

*

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2015/830 dated 28 May 2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ADR	: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	: Acute Toxicity Estimate
CLP	: Classification, Labeling & Packaging
CMR	: Carcinogenic, Mutagenic or toxic for Reproduction
EEC	: European Economic Community
GHS	: Globally Harmonized System of Classification and Labelling of Chemicals
IATA	: International Air Transport Association
IBC code	: International Bulk Chemical Code
IMDG	: International Maritime Dangerous Goods Code
LD50/LC50	: Lethal Dose/Concentration for 50% of a population
MAC	: Maximum Allowable Concentration
MARPOL	: International Convention for the Prevention of Pollution From Ships
NO(A)EL	: No Observed (Adverse) Effect Level
OECD	: Organisation for Economic Co-operation and Development
PBT	: Persistent, Bioaccumulative and Toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant
SU	: Sector of Use
TWA/STEL	: Time-Weighted Average/Short Term Exposure Limit
UN	: United Nations
VOC	: Volatile Organic Compounds
vPvB	: Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Skin Corr. 1B	: Calculation method
Eye Dam. 1	: Calculation method
Aquatic Chronic 3	: Calculation method
Met. Corr. 1	: Expert judgement

Full text of hazard classes mentioned in section 3:

Acute Tox. 4	: Acute toxicity, category 4.
Skin Corr. 1A/B/C	: Skin corrosive, category 1A/B/C.

Skin Irrit. 2	: Skin irritation, category 2.
Eye Dam. 1	: Serious eye damage, category 1.
Eye Irrit. 2	: Eye irritation, category 2.
STOT SE 3	: Specific target organ toxicity after single exposure, category 3.
Aquatic Chronic 1	: Hazardous to the aquatic environment — Chronic category 1.
Aquatic Chronic 2	: Hazardous to the aquatic environment — Chronic category 2.
Aquatic Chronic 3	: Hazardous to the aquatic environment — Chronic category 3.
Aquatic Acute 1	: Hazardous to the aquatic environment — Acute category 1.
Met. Corr. 1	: Corrosive to metals, hazard category 1.

Full text of H-phrases mentioned in section 3:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

Number format : ", " used as decimal separator.

End of safety data sheet.

Safety Data Sheet

Product Identifier

Manufacturer's Name: CAPO INDUSTRIES LTD.
Street Address: 1200 Corporate Drive
City: Burlington, Ontario, CANADA
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

SECTION 1. IDENTIFICATION

Product Identifier

Aquafinesse Hot Tub Water Care

Other Means of Identification

Not applicable

Recommended Use

Consumer product, Cleaning agent, Pool and spa maintenance.

Restrictions on Use

Do not use product for anything outside of the above-specified uses

Initial Supplier Identifier

Capo Industries Ltd.

Emergency Telephone Number

Canutec (613) 996-6666 (Collect)

Chemtrec 1-800-424-9300

Chemtrec Int'l +1 703-527-3887

SECTION 2. HAZARD IDENTIFICATION

Classification

Not classified.

Label Elements

No labelling applicable.

Other Hazards

No additional information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Disodium carbonate	497-19-8	1-5%	Sodium carbonate, Soda ash	Not applicable

Notes

None applicable

SECTION 4. FIRST-AID MEASURES

Inhalation

Allow victim to breathe fresh air. Allow the victim to rest. Get medical advice/attention if feeling unwell.

Skin Contact

Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs, et medical advice/attention.

Eye Contact

Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

Ingestion

Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if feeling unwell.

Most Important Symptoms and Effects, Acute and Delayed

Symptoms/injuries after inhalation

Not expected to present a significant inhalation hazard under anticipated condition of normal use.

Symptoms/injuries after skin contact

Not expected to present a significant skin hazard under anticipated condition of normal use.

Symptoms/injuries after eye contact

Prolonged contact may cause slight irritation.

Symptoms/injuries after ingestion

May be harmful if swallowed.

Immediate Medical Attention and Special Treatment

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Foam. Dry powder. Carbon dioxide. Water spray.

Unsuitable Extinguishing Media

Do not use a heavy water stream.

Specific Hazards Arising from the Product

Fire Hazard	None known. Combustion may produce irritating fumes.
Explosion Hazard	None known.
Reactivity	None under normal conditions.

Special Protective Equipment and Precautions for Fire-Fighters

Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment, and Emergency Procedures**

Equip clean-up crew with proper protection. Ventilate area.

Methods for Containment and Cleaning Up

Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

SECTION 7. HANDLING AND STORAGE**Precautions for Safe Handling**

Provide good ventilation in process area to prevent formation of vapour.

Conditions for Safe Storage

Keep only in the original container in a cool, well ventilated area from incompatible materials. Keep container sealed when not in use. Store at <35°C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters**

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Disodium carbonate (CAS 497-19-8)				
Not applicable				

Notes

None applicable.

Appropriate Engineering Controls

Provide adequate ventilation. Provide local exhaust general room ventilation to minimize vapour concentrations.

Individual Protection Measures**Eye/Face Protection**

Chemical glasses or safety goggles.

Skin Protection

Not required for normal conditions of use

Respiratory Protection

In case of inadequate ventilation, wear respiratory protection.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Opaque white liquid

Odour

Characteristic

Odour Threshold

No data available

pH

11.4

Melting Point and Freezing Point

< 0°C

Initial Boiling Point and Boiling Range

100°C

Flash Point

No data available

Evaporation Rate (butyl acetate = 1)

< 1

Flammability (solid, gas)

Not applicable

Upper and Lower Flammability or Explosive Limit

No data available

Vapour Pressure

2300 Pa

Vapour Density (air = 1, 20°C)

1

Relative Density (water = 1)

1 g/mL

Solubility in Water

Soluble

Solubility in Other Liquids

No data available

Partition Coefficient, n-Octanol / Water (Log K_{ow})

No data available

Auto-ignition Temperature

No data available.

Decomposition Temperature

No data available.

Viscosity

No data available.

SECTION 10. STABILITY AND REACTIVITY**Reactivity**

None under normal conditions.

Chemical Stability

Stable at normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Direct sunlight. Extremely high or low temperatures.

Incompatible Materials

None known

Hazardous Decomposition Products

None known. Combustion may produce irritating fumes.

SECTION 11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

☒ Inhalation ☒ Skin contact ☒ Eye contact ☒ Ingestion

Acute Toxicity**LC50**

No data available.

LD50 (oral)

No data available.

LD50 (dermal)

No data available.

Notes

None

Skin Corrosion / Irritation

Not classified, pH 11.4

Serious Eye Damage / Irritation

Not classified, pH 11.4

STOT (Specific Target Organ Toxicity) - Single Exposure

Not classified, pH 11.4

Aspiration Hazard

Not classified, pH 11.4

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Not classified, pH 11.4

Respiratory and/or Skin Sensitization

Not classified, pH 11.4

Carcinogenicity

Not classified, pH 11.4

Reproductive Toxicity

Not classified, pH 11.4

Germ Cell Mutagenicity

Not classified, pH 11.4

Interactive Effects

No additional data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

Not established

Bioaccumulative potential

Not established

Mobility in soil

No additional information available.

Other Adverse Effects

Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in a safe manner in accordance with national, provincial and regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
DOT	Not applicable				
TDG	Not applicable				
Transport by sea	Not applicable				
Air transport	Not applicable				

Special Precautions

No additional information available

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

All components of this product are listed, or are excluded from listing on the Environment & Climate Change Canada Domestic Substances List (DSL) and on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Inventory.

SECTION 16. OTHER INFORMATION

Prepared By (Group, Department): Quality Control

Telephone: (905) 332-6626

Preparation Date: 03-February-2017

Date of Latest Revision: 01-December-2019

Additional Notes or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial/State and local laws and regulations.

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : AQUAFINESSE POOL
Product code : SWE-PL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : SU21 Consumer product. PC35 Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier : Special Water Europe BV
Plesmanstraat 50
3905 KZ VEENENDAAL, The Netherlands
Telephone : +31 318 525 311
Fax : +31 318 551 836
E-mail : msds@aquafinesse.com
Website : www.aquafinesse.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

NL - Telephone : +31 318 525 311 (During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

National Poisons Information Service +44-844 892 0111 (24/7)

SECTION 2 HAZARDS IDENTIFICATION

*

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Corrosive to metals, category 1. Skin corrosive, category 1B. Serious eye damage, category 1. Specific target organ toxicity after single exposure, category 3.
Human health hazards : Causes severe skin burns and eye damage. May cause respiratory irritation.
Physical/chemical hazards : Reacts vigorously in contact with acids. Strong heat development possible. May be corrosive to metals.
Environmental hazards : Not classified as dangerous according to statutory EC-Directives.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases :
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 dust Do not breathe dust.
P271 Use only outdoors or in a well-ventilated area.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P234	Keep only in original container.
P390	Absorb spillage to prevent material damage.
P501	Dispose of contents/container to an official chemical waste depot.

Labelling of packagings where the contents do not exceed 125 ml:

Hazard pictograms :



Signal word : Danger

H- and P-phrases	:	H314	Causes severe skin burns and eye damage.
		H335	May cause respiratory irritation.
		P101	If medical advice is needed, have product container or label at hand.
		P102	Keep out of reach of children.
		P260 dust	Do not breathe dust.
		P271	Use only outdoors or in a well-ventilated area.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P310	Immediately call a POISON CENTER/doctor.
		P363	Wash contaminated clothing before reuse.
		P403+P233	Store in a well-ventilated place. Keep container tightly closed.
		P405	Store locked up.
		P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (for all packaging sizes)

: Contains: Disodium metasilicate .

Other information : According to regulation (EC) 1272/2008, Annex II, part 3, the packaging of this product shall carry a tactile warning of danger and a child-resistant fastening.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Sodium carbonate	25 - < 50	497-19-8	207-838-8	MAC	01-2119485498-19
Disodium metasilicate	20 - < 25	6834-92-0	229-912-9		01-2119449811-37
Aluminium potassium bis(sulphate) dodecahydrate	10 - < 20	7784-24-9	616-521-7		

Substance name	Hazard Class	H-phrases	Pictograms	
Sodium carbonate	Eye Irrit. 2	H319	GHS07	
Disodium metasilicate	Met. Corr. 1; Eye Dam. 1; Skin Corr. 1B; STOT SE 3	H290; H318; H314; H335	GHS05; GHS07	
Aluminium potassium bis(sulphate) dodecahydrate	-----	-----	-----	

Occupational exposure limit(s), if relevant, are listed in section 8.

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

- Inhalation : Move victim into fresh air. Consult a doctor.
- Skin contact : Immediately take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor in case burns or irritation occur.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Transport to a hospital immediately.
- Ingestion : Do not induce vomiting. Rinse the mouth, give 1 glass of water at most. Do not give milk. Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

- Inhalation : Corrosive. May cause sore throat and coughing. May cause shortness of breath or lack of breath.
- Skin contact : Corrosive. May cause redness, pain and severe burns (blisters).
- Eye contact : Corrosive. May cause redness and severe pain. Tears.
- Ingestion : Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

*

5.1. Extinguishing media

Extinguishing media

- Suitable : Carbondioxide (CO2). Foam. Dry chemical. Water fog.
- Not suitable : None known.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards : None known.

Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters : Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Do not breathe dust.

6.2. Environmental precautions

Environmental precautions : Avoid release of product into sewers, surface water and/or ground water.
Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spilled material in containers. Carefully neutralise residues with acid. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Avoid contact with skin and eyes. Wear protective clothing. After contact with skin, wash immediately with plenty of water.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C).
Recommended packaging : Keep only in the original container.
Non recommended packaging : Steel and aluminium. PET and PETG.

7.3. Specific end use(s)

Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
Sodium carbonate		1	3	

Aluminium potassium bis(sulphate) dodecahydrate	GB	2	-	-
Aluminium potassium bis(sulphate) dodecahydrate		1	-	-

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation			10 mg/m ³	
Disodium metasilicate	Dermal				1,49 mg/kg bw/day
	Inhalation				6,22 mg/m ³

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation	10 mg/m ³			
Disodium metasilicate	Dermal				0,74 mg/kg bw/day
	Inhalation				1,55 mg/m ³
	Oral				0,74 mg/kg bw/day

Predicted no-effect concentration (PNEC):

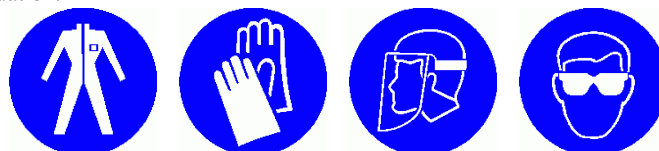
Chemical name	Route of exposure	Fresh water	Marine water	
Disodium metasilicate	Water	7,5 mg/l	1 mg/l	
	Intermittent water			7,5 mg/l
	STP			1000 mg/l

8.2. Exposure controls

- Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.
- Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



- Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: PVC. Indication of permeation breakthrough time: 6 hours.
- Respiratory protection : Wear appropriate respiratory protection in case of large scale exposure. Suitable: dust mask type FFP1 or higher, in accordance with EN 149.
- Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: PVC. ± 0,5 mm. Indication of permeation breakthrough time: 6 hours.
- Eye protection : Wear a face shield or appropriate safety glasses with side shields, in accordance with EN 166.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*

9.1. Information on basic physical and chemical properties

- Appearance : Solid.
- Colour : White.
- Odour : Characteristic.
- Odour threshold : Not applicable.

pH	: 12,5	10% solution.
Alkali reserve (g NaOH/100 ml)	: 20,08	
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	
Flash point	: Not relevant.	Solid.
Flammability (solid, gas)	: Not flammable.	
Auto ignition temperature	: Not known.	Does not contain substances with a known auto ignition temperature.
Boiling point/boiling range	: > 100 °C	
Melting point/melting range	: > 30 °C	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not applicable.	
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not applicable.	
Viscosity (20°C)	: Not applicable.	Solid.
Vapour pressure (20°C)	: Very low.	Solid.
Vapour density (20°C)	: Not relevant.	The solvent content of this product is less than 1%.
Relative density (20°C)	: 1 g/ml	
Evaporation rate	: Very low.	Solid.

SECTION 10 STABILITY AND REACTIVITY

*

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : Reacts vigorously in contact with acids. Strong heat development possible. Reacts with metals.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from acids.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

Acute toxicity : Calculated LC50: 7,207 mg/l. Ingredients of unknown toxicity: 26 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause damage to organs. Target organ(s): Respiratory system. Effect(s): May cause irritation to respiratory airways and coughing.

Corrosion/irritation	: Corrosive. May cause sore throat and coughing. May cause pulmonary oedema. Symptoms of pulmonary oedema often manifest after several hours. May cause irritation to respiratory airways and coughing.
Sensitisation	: Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Skin contact	
Acute toxicity	: Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
Corrosion/irritation	: Corrosive. Causes severe burns.
Sensitisation	: Does not contain skin sensitisers. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Eye contact	
Corrosion/irritation	: Corrosive. Risk of serious damage to eyes.
Ingestion	
Acute toxicity	: Calculated LD50: > 1737 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Not classified - based on available data, the classification criteria are not met.
Aspiration	: Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
Corrosion/irritation	: Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Reprotoxicity	: Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Disodium metasilicate	Eye irritation - estimate	Corrosive.		Rabbit
	Skin irritation	Corrosive.	OECD 404	Rabbit
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	Skin sensitisation	Not sensitizing	OECD 429	Mouse
	LD50 (dermal) - estimate	> 5000 mg/kg bw	-----	Rat
	NOAEL (oral)	127 mg/kg bw/d	-----	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----
	LD50 (oral) - estimate	> 2000 mg/kg bw	-----	-----
	LD50 (oral)	662 mg/kg bw	-----	Mouse

SECTION 12 ECOLOGICAL INFORMATION

*

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Calculated LC50 (fish): 209 mg/l. Calculated EC50 (waterflea): 477 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment. Not classified - based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

Other information : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.

Additional warning : None.

European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.

Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

★

14.1. UN number

UN nr. : UN 3253

14.2. UN proper shipping name

Transport name : DISODIUM TRIOXOSILICATE MIXTURE

Transport name (IMDG, IATA) : DISODIUM TRIOXOSILICATE MIXTURE

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : 8

Classification code : C6

Packaging group : III

Danger label : 8

Tunnel restriction code : E



Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)

Class : 8
Packaging group : III
EmS (fire / spill) : F - A / S - B
Marine pollutant : No

IATA (air)

Class : 8

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments.
Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION

*

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Community regulations : Regulation (EU) No 2015/830 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

*

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2015/830 dated 28 May 2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE : Acute Toxicity Estimate
CLP : Classification, Labeling & Packaging
CMR : Carcinogenic, Mutagenic or toxic for Reproduction
EEC : European Economic Community
GHS : Globally Harmonized System of Classification and Labelling of Chemicals
IATA : International Air Transport Association
IBC code : International Bulk Chemical Code

IMDG	: International Maritime Dangerous Goods Code
LD50/LC50	: Lethal Dose/Concentration for 50% of a population
MAC	: Maximum Allowable Concentration
MARPOL	: International Convention for the Prevention of Pollution From Ships
NO(A)EL	: No Observed (Adverse) Effect Level
OECD	: Organisation for Economic Co-operation and Development
PBT	: Persistent, Bioaccumulative and Toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant
SU	: Sector of Use
TWA/STEL	: Time-Weighted Average/Short Term Exposure Limit
UN	: United Nations
VOC	: Volatile Organic Compounds
vPvB	: Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Skin Corr. 1B	: Calculation method.
Eye Dam. 1	: Calculation method.
STOT SE 3	: Calculation method.
Met. Corr. 1	: Bridging principle.

Full text of hazard classes mentioned in section 3:

Skin Corr. 1A/B/C	: Skin corrosive, category 1A/B/C.
Eye Dam. 1	: Serious eye damage, category 1.
Eye Irrit. 2	: Eye irritation, category 2.
STOT SE 3	: Specific target organ toxicity after single exposure, category 3.
Met. Corr. 1	: Corrosive to metals, category 1.

Full text of H-phrases mentioned in section 3:

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Number format : ", " used as decimal separator.

End of safety data sheet.

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : AQUAFINESSE SPACLEAN
Product code : SWE-SC

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : SU21 Consumer product. PC35 Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier : Special Water Europe BV
Plesmanstraat 50
3905 KZ VEENENDAAL, The Netherlands
Telephone : +31 318 525 311
Fax : +31 318 551 836
E-mail : msds@aquafinesse.com
Website : www.aquafinesse.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

NL - Telephone : +31 318 525 311

(During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

National Poisons Information Service +44-844 892 0111

(24/7)

SECTION 2 HAZARDS IDENTIFICATION

*

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Corrosive to metals, hazard category 1. Skin corrosive, category 1B. Serious eye damage, category 1. Specific target organ toxicity after single exposure, category 3.

Human health hazards : Causes severe skin burns and eye damage. May cause respiratory irritation.

Physical/chemical hazards : Reacts vigorously in contact with acids. Strong heat development possible. May be corrosive to metals.

Environmental hazards : Not classified as dangerous according to statutory EC-Directives.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases	:	H290	May be corrosive to metals.
		H314	Causes severe skin burns and eye damage.
		H335	May cause respiratory irritation.
		P101	If medical advice is needed, have product container or label at hand.
		P102	Keep out of reach of children.
		P260 dust	Do not breathe dust.
		P271	Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P234 Keep only in original container.
P390 Absorb spillage to prevent material damage.
P501 Dispose of contents/container to an official chemical waste depot.

Additional labelling

: Contains: Disodium metasilicate .

Other information

: According to regulation (EC) 1272/2008, Annex II, part 3, the packaging of this product shall carry a tactile warning of danger and a child-resistant fastening.

2.3. Other hazards

Other information

: Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description

: Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Aluminium potassium bis(sulphate) dodecahydrate	10 - < 20	7784-24-9	616-521-7	MAC	
Disodium metasilicate	20 - < 25	6834-92-0	229-912-9		01-2119449811-37
Sodium carbonate	25 - < 50	497-19-8	207-838-8		01-2119485498-19

Occupational exposure limit(s), if relevant, are listed in section 8.

Substance name	Hazard Class	H-phrases	Pictograms	
Aluminium potassium bis(sulphate) dodecahydrate	-----	-----	-----	
Disodium metasilicate	Met. Corr. 1; Eye Dam. 1; Skin Corr. 1B; STOT SE 3	H290; H318; H314; H335	GHS05; GHS07	
Sodium carbonate	Eye Irrit. 2	H319	GHS07	

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

*

4.1. Description of first aid measures

First aid measures

Inhalation : Move victim into fresh air. Consult a doctor.

- Skin contact : Immediately take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor in case burns or irritation occur.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Transport to a hospital immediately.
- Ingestion : Do not induce vomiting. Rinse the mouth, give 1 glass of water at most. Do not give milk. Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

- Inhalation : Corrosive. May cause sore throat and coughing. May cause shortness of breath or lack of breath.
- Skin contact : Corrosive. May cause redness, pain and severe burns (blisters).
- Eye contact : Corrosive. May cause redness and severe pain. Tears.
- Ingestion : Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

- Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

- Suitable : Carbondioxide (CO2). Foam. Dry chemical. Water fog.
- Not suitable : None known.

5.2. Special hazards arising from the substance or mixture

- Special exposure hazards : None known. Non flammable product.
- Hazardous thermal decomposition products : None known.

5.3. Advice for firefighters

- Special protective equipment for fire-fighters : Not applicable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

*

6.1. Personal precautions, protective equipment and emergency procedures

- Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Do not breathe dust.

6.2. Environmental precautions

- Environmental precautions : Avoid release of product into sewers, surface water and/or ground water.
- Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spilled material in containers. Carefully neutralise residues with acid. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

- Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Avoid contact with skin and eyes. Wear protective clothing. After contact with skin, wash immediately with plenty of water.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C).
Recommended packaging : Keep only in the original container.
Non recommended packaging : Steel and aluminium.

7.3. Specific end use(s)

Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
Aluminium potassium bis(sulphate) dodecahydrate	GB	2	-	-
Aluminium potassium bis(sulphate) dodecahydrate		1	-	MAC: DA, SE
Sodium carbonate		1	3	MAC RO

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Disodium metasilicate	Dermal				1,49 mg/kg bw/day
	Inhalation				6,22 mg/m ³
Sodium carbonate	Inhalation			10 mg/m ³	

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Disodium metasilicate	Dermal				0,74 mg/kg bw/day
	Inhalation				1,55 mg/m ³
	Oral				0,74 mg/kg bw/day
Sodium carbonate	Inhalation	10 mg/m ³			

Predicted no-effect concentration (PNEC):

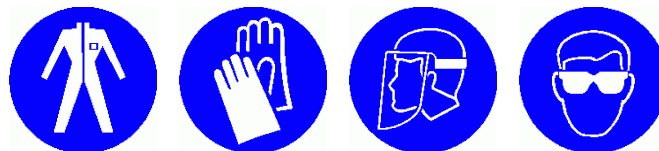
Chemical name	Route of exposure	Fresh water	Marine water	
Disodium metasilicate	Water	7,5 mg/l	1 mg/l	
	Intermittent water			7,5 mg/l
	STP			1000 mg/l

8.2. Exposure controls

Engineering measures : Comply with standard precautionary measures for working with chemicals.
Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: PVC. Indication of permeation breakthrough time: 6 hours.
Respiratory protection : Wear appropriate respiratory protection in case of large scale exposure. Suitable: dust mask type FFP1 or higher, in accordance with EN 149.
Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: PVC. $\pm 0,5$ mm. Indication of permeation breakthrough time: 6 hours.
Eye protection : Wear a face shield or appropriate safety glasses with side shields, in accordance with EN 166.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*

9.1. Information on basic physical and chemical properties

Appearance	: Solid.	
Colour	: White.	
Odour	: Odourless.	
Odour threshold	: Not applicable.	
pH	: 12,5	10% solution.
Alkali reserve (g NaOH/100 ml)	: Not known.	
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	
Flash point	: Not relevant.	Solid.
Flammability (solid, gas)	: Not flammable.	
Auto ignition temperature	: Not known.	Does not contain substances with a known auto ignition temperature.
Boiling point/boiling range	: > 100 °C	
Melting point/melting range	: Not known.	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not applicable.	
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not known.	
Viscosity (20°C)	: Not applicable.	Solid.
Viscosity (40°C)	: Not applicable.	Solid.
Vapour pressure (20°C)	: Very low.	Solid.
Vapour density (20°C)	: Not applicable.	The solvent content of this product is less than 1%.
Relative density (20°C)	: 1 g/ml	
Evaporation rate	: Very low.	Solid.

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : Reacts vigorously in contact with acids. Strong heat development possible.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from acids.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

*

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: 7,207 mg/l. Ingredients of unknown toxicity: 26 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause damage to organs. Target organ(s): Respiratory system. Effect(s): May cause irritation to respiratory airways and coughing.
- Corrosion/irritation : Corrosive. May cause sore throat and coughing. May cause pulmonary oedema. Symptoms of pulmonary oedema often manifest after several hours. May cause irritation to respiratory airways and coughing.
- Sensitisation : Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Skin contact

- Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : Corrosive. Causes severe burns.
- Sensitisation : Does not contain skin sensitisers. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Corrosive. Risk of serious damage to eyes.

Ingestion

- Acute toxicity : Calculated LD50: > 1737 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Not classified - based on available data, the classification criteria are not met.
- Aspiration : Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
- Corrosion/irritation : Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.

- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
- Reprotoxicity : Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Disodium metasilicate	LD50 (oral)	662 mg/kg bw	-----	Mouse
	Eye irritation - estimate	Corrosive.		Rabbit
	LD50 (oral) - estimate	> 2000 mg/kg bw	-----	-----
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----
	NOAEL (oral)	127 mg/kg bw/d	-----	Rat
	LD50 (dermal) - estimate	> 5000 mg/kg bw	-----	Rat
	Skin sensitisation	Not sensitizing	OECD 429	Mouse
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Skin irritation	Corrosive.	OECD 404	Rabbit

SECTION 12 ECOLOGICAL INFORMATION

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12.1. Toxicity

No ecotoxicological research has been carried out on this product.

- Ecotoxicity : Calculated LC50 (fish): 285 mg/l. Calculated EC50 (waterflea): 677 mg/l. Contains 13 % of components with unknown hazards to the aquatic environment. Not classified - based on available data, the classification criteria are not met.

12.2. Persistence and degradability

- Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

- Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

- Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

- PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

- Other information : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.

Additional warning : None.
European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.
Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

14.1. UN number

UN nr. : UN 3253

14.2. UN proper shipping name

Transport name : DISODIUM TRIOXOSILICATE MIXTURE
Transport name (IMDG, : DISODIUM TRIOXOSILICATE MIXTURE
IATA)

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : 8
Classification code : C6
Packaging group : III
Danger label : 8



Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)

Class : 8
Packaging group : III
EmS (fire / spill) : F - A / S - B
Marine pollutant : No

IATA (air)

Class : 8

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments.
Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Community regulations : Regulation (EC) No 453/2010 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION *

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EC) No 453/2010 dated 20 May 2010 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

Full text of H-phrases mentioned in section 3:

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Full text of hazard classes mentioned in section 3:

Skin Corr. 1A/B/C	: Skin corrosive, category 1A/B/C.
Eye Dam. 1	: Serious eye damage, category 1.
Eye Irrit. 2	: Eye irritation, category 2.
STOT SE 3	: Specific target organ toxicity after single exposure, category 3.
Met. Corr. 1	: Corrosive to metals, hazard category 1.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ADR	: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	: Acute Toxicity Estimate
CLP	: Classification, Labeling & Packaging
CMR	: Carcinogenic, Mutagenic or toxic for Reproduction
EEC	: European Economic Community
IATA	: International Air Transport Association
IBC code	: International Bulk Chemical Code
IMDG	: International Maritime Dangerous Goods Code
LD50/LC50	: Lethal Dose/Concentration for 50% of a population
MAC	: Maximum Allowable Concentration
MARPOL	: International Convention for the Prevention of Pollution From Ships
NO(A)EL	: No Observed (Adverse) Effect Level
OECD	: Organisation for Economic Co-operation and Development
PBT	: Persistent, Bioaccumulative and Toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant
SU	: Sector of Use
TWA/STEL	: Time-Weighted Average/Short Term Exposure Limit
UN	: United Nations
VOC	: Volatile Organic Compounds
vPvB	: Very Persistent and Very Bioaccumulative

Number format : ", " used as decimal separator.

History

Date of first issue : 17-03-2010
Date of second issue : 23-02-2011
Date of third issue : 14-01-2014
Date of fourth issue : 25-09-2014
Date of fifth issue : 15-11-2015
Date of sixth issue : 06-04-2016

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : AQUAFINESSE SWIM SPA WATER CARE
Product code : SWE-SWSP

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : SU21 Consumer product. PC35 Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier : Special Water Europe BV
Plesmanstraat 50
3905 KZ VEENENDAAL, The Netherlands
Telephone : +31 318 525 311
Fax : +31 318 551 836
E-mail : msds@aquafinesse.com
Website : www.aquafinesse.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

NL - Telephone : +31 318 525 311 (During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

National Poisons Information Service +44-844 892 0111 (24/7)

SECTION 2 HAZARDS IDENTIFICATION

*

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Corrosive to metals, category 1. Skin corrosive, category 1B. Serious eye damage, category 1. Specific target organ toxicity after single exposure, category 3.
Human health hazards : Causes severe skin burns and eye damage. May cause respiratory irritation.
Physical/chemical hazards : Reacts vigorously in contact with acids. Strong heat development possible. May be corrosive to metals.
Environmental hazards : Not classified as dangerous according to statutory EC-Directives.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases :
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 dust Do not breathe dust.
P271 Use only outdoors or in a well-ventilated area.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P234	Keep only in original container.
P390	Absorb spillage to prevent material damage.
P501	Dispose of contents/container to an official chemical waste depot.

Labelling of packagings where the contents do not exceed 125 ml:

Hazard pictograms :



Signal word : Danger

H- and P-phrases	:	H314	Causes severe skin burns and eye damage.
		H335	May cause respiratory irritation.
		P101	If medical advice is needed, have product container or label at hand.
		P102	Keep out of reach of children.
		P260 dust	Do not breathe dust.
		P271	Use only outdoors or in a well-ventilated area.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P310	Immediately call a POISON CENTER/doctor.
		P363	Wash contaminated clothing before reuse.
		P403+P233	Store in a well-ventilated place. Keep container tightly closed.
		P405	Store locked up.
		P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (for all packaging sizes)

: Contains: Disodium metasilicate .

Other information : According to regulation (EC) 1272/2008, Annex II, part 3, the packaging of this product shall carry a tactile warning of danger and a child-resistant fastening.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Sodium carbonate	25 - < 50	497-19-8	207-838-8	MAC	01-2119485498-19
Disodium metasilicate	20 - < 25	6834-92-0	229-912-9		01-2119449811-37
Aluminium potassium bis(sulphate) dodecahydrate	10 - < 20	7784-24-9	616-521-7		

Substance name	Hazard Class	H-phrases	Pictograms	
Sodium carbonate	Eye Irrit. 2	H319	GHS07	
Disodium metasilicate	Met. Corr. 1; Eye Dam. 1; Skin Corr. 1B; STOT SE 3	H290; H318; H314; H335	GHS05; GHS07	
Aluminium potassium bis(sulphate) dodecahydrate	-----	-----	-----	

Occupational exposure limit(s), if relevant, are listed in section 8.

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

- Inhalation : Move victim into fresh air. Consult a doctor.
- Skin contact : Immediately take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor in case burns or irritation occur.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Transport to a hospital immediately.
- Ingestion : Do not induce vomiting. Rinse the mouth, give 1 glass of water at most. Do not give milk. Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

- Inhalation : Corrosive. May cause sore throat and coughing. May cause shortness of breath or lack of breath.
- Skin contact : Corrosive. May cause redness, pain and severe burns (blisters).
- Eye contact : Corrosive. May cause redness and severe pain. Tears.
- Ingestion : Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

*

5.1. Extinguishing media

Extinguishing media

- Suitable : Carbondioxide (CO2). Foam. Dry chemical. Water fog.
- Not suitable : None known.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards : None known.

Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters : Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Do not breathe dust.

6.2. Environmental precautions

Environmental precautions : Avoid release of product into sewers, surface water and/or ground water.
Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spilled material in containers. Carefully neutralise residues with acid. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Avoid contact with skin and eyes. Wear protective clothing. After contact with skin, wash immediately with plenty of water.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C).
Recommended packaging : Keep only in the original container.
Non recommended packaging : Steel and aluminium. PET and PETG.

7.3. Specific end use(s)

Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
Sodium carbonate		1	3	

Aluminium potassium bis(sulphate) dodecahydrate	GB	2	-	-
Aluminium potassium bis(sulphate) dodecahydrate		1	-	MAC: DA, SE

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation			10 mg/m ³	
Disodium metasilicate	Dermal				1,49 mg/kg bw/day
	Inhalation				6,22 mg/m ³

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Sodium carbonate	Inhalation	10 mg/m ³			
Disodium metasilicate	Dermal				0,74 mg/kg bw/day
	Inhalation				1,55 mg/m ³
	Oral				0,74 mg/kg bw/day

Predicted no-effect concentration (PNEC):

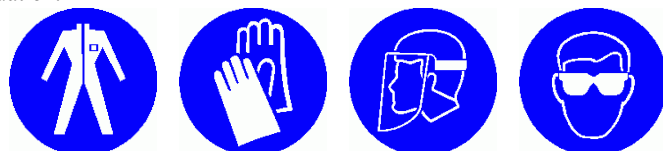
Chemical name	Route of exposure	Fresh water	Marine water	
Disodium metasilicate	Water	7,5 mg/l	1 mg/l	
	Intermittent water			7,5 mg/l
	STP			1000 mg/l

8.2. Exposure controls

- Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.
Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



- Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: PVC. Indication of permeation breakthrough time: 6 hours.
Respiratory protection : Wear appropriate respiratory protection in case of large scale exposure. Suitable: dust mask type FFP1 or higher, in accordance with EN 149.
Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: PVC. ± 0,5 mm. Indication of permeation breakthrough time: 6 hours.
Eye protection : Wear a face shield or appropriate safety glasses with side shields, in accordance with EN 166.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*

9.1. Information on basic physical and chemical properties

- Appearance : Solid.
Colour : White.
Odour : Characteristic.
Odour threshold : Not applicable.

pH	: 12,5	10% solution.
Alkali reserve (g NaOH/100 ml)	: 20,08	
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	
Flash point	: Not relevant.	Solid.
Flammability (solid, gas)	: Not flammable.	
Auto ignition temperature	: Not known.	Does not contain substances with a known auto ignition temperature.
Boiling point/boiling range	: > 100 °C	
Melting point/melting range	: > 30 °C	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not applicable.	
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not applicable.	
Viscosity (20°C)	: Not applicable.	Solid.
Vapour pressure (20°C)	: Very low.	Solid.
Vapour density (20°C)	: Not relevant.	The solvent content of this product is less than 1%.
Relative density (20°C)	: 1 g/ml	
Evaporation rate	: Very low.	Solid.

SECTION 10 STABILITY AND REACTIVITY

*

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : Reacts vigorously in contact with acids. Strong heat development possible. Reacts with metals.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from acids.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

Acute toxicity : Calculated LC50: 7,207 mg/l. Ingredients of unknown toxicity: 26 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause damage to organs. Target organ(s): Respiratory system. Effect(s): May cause irritation to respiratory airways and coughing.

Corrosion/irritation	: Corrosive. May cause sore throat and coughing. May cause pulmonary oedema. Symptoms of pulmonary oedema often manifest after several hours. May cause irritation to respiratory airways and coughing.
Sensitisation	: Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Skin contact	
Acute toxicity	: Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
Corrosion/irritation	: Corrosive. Causes severe burns.
Sensitisation	: Does not contain skin sensitisers. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Eye contact	
Corrosion/irritation	: Corrosive. Risk of serious damage to eyes.
Ingestion	
Acute toxicity	: Calculated LD50: > 1737 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Not classified - based on available data, the classification criteria are not met.
Aspiration	: Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
Corrosion/irritation	: Corrosive. May cause burning pain in throat and mouth. May cause a feeling of sickness, stomachache, vomiting and diarrhoea.
Carcinogenicity	: Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
Reprotoxicity	: Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Disodium metasilicate	Skin irritation	Corrosive.	OECD 404	Rabbit
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	Skin sensitisation	Not sensitizing	OECD 429	Mouse
	LD50 (dermal) - estimate	> 5000 mg/kg bw	-----	Rat
	NOAEL (oral)	127 mg/kg bw/d	-----	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----
	LD50 (oral) - estimate	> 2000 mg/kg bw	-----	-----
	Eye irritation - estimate	Corrosive.		Rabbit
	LD50 (oral)	662 mg/kg bw	-----	Mouse

SECTION 12 ECOLOGICAL INFORMATION

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12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Calculated LC50 (fish): 209 mg/l. Calculated EC50 (waterflea): 477 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment. Not classified - based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

Other information : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.

Additional warning : None.

European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.

Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

★

14.1. UN number

UN nr. : UN 3253

14.2. UN proper shipping name

Transport name : DISODIUM TRIOXOSILICATE MIXTURE

Transport name (IMDG, IATA) : DISODIUM TRIOXOSILICATE MIXTURE

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : 8

Classification code : C6

Packaging group : III

Danger label : 8

Tunnel restriction code : E



Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)

Class : 8
Packaging group : III
EmS (fire / spill) : F - A / S - B
Marine pollutant : No

IATA (air)

Class : 8

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments.
Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION

*

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Community regulations : Regulation (EU) No 2015/830 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

*

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2015/830 dated 28 May 2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE : Acute Toxicity Estimate
CLP : Classification, Labeling & Packaging
CMR : Carcinogenic, Mutagenic or toxic for Reproduction
EEC : European Economic Community
GHS : Globally Harmonized System of Classification and Labelling of Chemicals
IATA : International Air Transport Association
IBC code : International Bulk Chemical Code

IMDG	: International Maritime Dangerous Goods Code
LD50/LC50	: Lethal Dose/Concentration for 50% of a population
MAC	: Maximum Allowable Concentration
MARPOL	: International Convention for the Prevention of Pollution From Ships
NO(A)EL	: No Observed (Adverse) Effect Level
OECD	: Organisation for Economic Co-operation and Development
PBT	: Persistent, Bioaccumulative and Toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant
SU	: Sector of Use
TWA/STEL	: Time-Weighted Average/Short Term Exposure Limit
UN	: United Nations
VOC	: Volatile Organic Compounds
vPvB	: Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Skin Corr. 1B	: Calculation method
Eye Dam. 1	: Calculation method
STOT SE 3	: Calculation method
Met. Corr. 1	: Bridging principle

Full text of hazard classes mentioned in section 3:

Skin Corr. 1A/B/C	: Skin corrosive, category 1A/B/C.
Eye Dam. 1	: Serious eye damage, category 1.
Eye Irrit. 2	: Eye irritation, category 2.
STOT SE 3	: Specific target organ toxicity after single exposure, category 3.
Met. Corr. 1	: Corrosive to metals, category 1.

Full text of H-phrases mentioned in section 3:

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Number format : "," used as decimal separator.

End of safety data sheet.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

C-Clear / Clear All

WHMIS: E

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Polynuclear Inorganic Salt

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Poly Aluminum Hydroxychlorosulphate

Molecular Weight:

Not applicable

Material Use:

Flocculant

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Corrosive to metals, Category 1

Serious eye damage/eye irritation, Category 1

Symbol(s)



Signal Word

Danger

Hazard statements

H290 May be corrosive to metals.

H318 Causes serious eye damage.

Precautionary statements

P234 Keep only in original packaging.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

P390 Absorb spillage to prevent material-damage.

SAFETY DATA SHEET

P406 Store in a corrosion resistant container with a resistant inner liner.

HMIS: 2 Health, 0 Flammability, 1 Reactivity

NFPA: 2 Health, 0 Fire, 1 Reactivity

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Aluminum chloride hydroxide sulphate	39290-78-3	33 – 40

SECTION 4 FIRST AID MEASURES

Inhalation:	No expected damage due to low volatility. Remove person to fresh air if mists are irritating.
Skin Contact:	Wash hands thoroughly with soap and water.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water to dilute. Do not induce vomiting. Contact a physician immediately.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Hydrogen chloride gas, aluminum oxides, and oxides of sulphur.
Unusual Fire or Explosion Hazards:	None
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Keep containers cool by spraying with water if exposed to fire.
Fire Fighting Protective Equipment:	Wear self-contained breathing apparatus and protective clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Avoid runoff into storm sewers and ditches which lead to waterways. Restrict access until clean-up operations are complete. Soak spill with absorbent material and transfer to plastic drums. Spill may be neutralized with soda ash to a pH between 6 and 9.
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SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with eyes, skin and clothing. Avoid contact with aluminum and zinc. Wash hands thoroughly after use.

Ventilation Requirements: Local exhaust ventilation.

STORAGE

Ventilation Requirements: Store in a cool, dry area. Avoid temperatures above 40°C

Storage Requirements: Material may be stored in tightly closed shipping containers. Containers of this material may be hazardous when empty, since they retain product residues (vapours, liquids); observe all warnings and precautions listed for the product. Do not use metal containers. Store in dry rubber lined, plastic, or FRP vessels.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Neoprene or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): If mists are encountered, use NIOSH-approved respirator.

Other (Specify): Impermeable clothing and footwear if contact is likely.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.18 – 1.38

Viscosity: Not available

SAFETY DATA SHEET

Vapour Pressure (mm):	17 mm/hg
Vapour Density (Air-1):	1.3
Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	100°C
Freezing Point (°C):	-12°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	80% (water)
PH:	2.1 – 3.1
Coefficient Of Water/Oil Distribution:	Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Strong oxidizers, strong reducing agents. Reacts with aluminum or zinc to form hydrogen gas.		
Conditions to Avoid:	Mineral acids, excessive heat and bases/alkalis.		
Hazardous Decomposition Products:	Hydrogen chloride gas, aluminum oxides, and oxides of sulphur.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	None expected on short-term use.
Skin Contact:	Irritant
Eye Contact:	Irritant, and may cause burns.
Ingestion:	Small quantities – nausea, vomiting, and stomach cramps. Large quantities – ulcerations and necrosis of the mucous membranes in the throat, mouth and esophagus in addition to small quantity effects, liver or kidney damage and intense thirst.

CHRONIC HEALTH EFFECTS: Prolonged skin contact may cause dermatitis. Mists may irritate respiratory tract if exposure is prolonged.

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

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Exposure (Limits): Not established
Irritancy of Material Skin and eye irritant.
Sensitization of Material None known
Synergistic Materials None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Fish Test Results:

LC50 96 h Fathead minnow (*Pimephales promelas*): 1074 mg/l

LC50 96 h Rainbow trout (*Oncorhynchus mykiss*): 1768 mg/l

Invertebrate Test Results:

LC50 48 h Water flea (*Daphnia magna*): 1698 mg/l

LC50 48 h Water flea (*Ceriodaphnia dubia*): 1106 mg/l

Environmental Fate

Biodegradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative Potential: The product is not expected to bioaccumulate.

Mobility In Soil: Completely soluble.

SECTION 13 DISPOSAL CONSIDERATIONS

Deactivating Chemicals: Neutralize with soda ash to a pH between 6 and 9.

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush with copious amounts of water to reuse containers if possible.

Disposal of Packaging: Reuse container if possible. Otherwise, dispose containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride hydroxide sulfate)

Class: 8

Packing group: III

UN number: 3264

SAFETY DATA SHEET

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride hydroxide sulfate)
Class: 8
Packing group: III
UN number: 3264

ICAO/IATA

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride hydroxide sulfate)
Class: 8
Packing group: III
UN number: 3264

IMDG

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum chloride hydroxide sulfate)
Class: 8
Packing group: III
UN number: 3264

SECTION 15 REGULATORY INFORMATION

CANADA All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

WHMIS: E

USA All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

INTERNATIONAL

European Union (EU) All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2016

SAFETY DATA SHEET

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Cal Plus – Calcium Up

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Calcium Chloride

Chemical Family:

Chlorides

Chemical Formula:

CaCl₂ 2H₂O

Trade Name & Synonyms:

Not Available

Molecular Weight:

Not Applicable

Material Use:

Hardness Booster

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Acute toxicity, Oral, Category 5

Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 2B

Symbol(s)



Signal Word:

Warning

Hazard statements:

H303 May be harmful if swallowed.

H315 Causes skin irritation and serious eye irritation.

H320 Causes eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

SAFETY DATA SHEET

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P321 Specific treatment (see first aid on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

NFPA: 1 Health, 0 Fire, 0 Reactivity

HMIS: 2 Health, 0 Fire, 0 Reactivity

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Calcium Chloride	10043-52-4	83 - 87
Water	7732-18-5	8 – 14
Potassium Chloride	7747-40-7	2 - 3
Sodium Chloride	7647-14-5	1 – 2

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Contact a physician immediately.

Skin Contact: Flush skin with running water for 20 minutes. If irritation persists, repeat flushing. Contact a physician if irritation or a burning sensation develops.

Eye Contact: Immediately flush eyes with plenty of water for 20 minutes. If irritation persists, repeat flushing. Contact a physician immediately.

Ingestion: Drink ½ to 1 glass of water to dilute. Immediately contact a physician or poison control centre. Vomiting Should only be induced under the direction of a physician or poison control centre. If spontaneous vomiting occurs have victim lean forward with head down to avoid breathing in of vomitus. Transport victim to an emergency facility.

Note to physicians: Due to irritant properties, resulting from heat created as solid material dissolves in water, swallowing may result in burns/ulceration of mucous membranes. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SAFETY DATA SHEET

SECTION 5

FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Formed under fire conditions: hydrogen chloride gas, calcium oxide.
Unusual Fire or Explosion Hazards:	None known.
Sensitivity to Mechanical Impact:	None
Rate of Burning:	None
Explosive Power:	None
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.
Instructions to the Fire Fighters:	Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.
Fire Fighting Protective Equipment:	Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water.
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SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:	Avoid contact with eyes, skin and clothing. Do not swallow. Wash thoroughly After handling.
Ventilation Requirements:	Local exhaust ventilation.
Other Precautions:	Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80°F, 27°C).

STORAGE

Ventilation Requirements:	Store in a cool, dry environment.
Storage Requirements:	Protect from atmospheric moisture. Keep container tightly closed. Keep separated from incompatible substances.

SAFETY DATA SHEET

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation if dusty conditions are encountered.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if prolonged skin contact is likely.

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Safety showers and eye wash located close to chemical exposure area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white granular, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 2.2

Viscosity: Not applicable

Vapour Pressure (mm): <0.005

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Above 815°C

Freezing Point (°C): 772°C

Solubility In Water (20°C): Soluble

% Volatile (By Weight) Not applicable

PH: 7.40 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SAFETY DATA SHEET

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Lewis or mineral acids, sodium, methyl vinyl, ether and zinc as in Galvanized iron. Hydrogen gas may be produced on prolonged contact With metals such as aluminum, lead, tin and zinc.		
Conditions to Avoid:	Avoid excessive amounts of heat.		
Hazardous Decomposition Products:	Thermal decomposition products are toxic and may include Hydrochloric acid and oxides of calcium and chlorine oxide.		

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to upper respiratory tract (nose and throat). Irritant of mucous membranes May cause coughing and sneezing.
Skin Contact:	Prolonged and repeated skin contact may cause irritation.
Eye Contact:	Severe irritation. May cause corneal damage and conjunctivitis.
Ingestion:	Causes gastrointestinal upset and abdominal pain, possible nausea.
Other Health Effects:	None known.

CHRONIC HEALTH EFFECTS:

Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component(s): **Potassium Chloride:** In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart and kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. **Sodium Chloride:** Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

LD 50 of Material (Specify Species and Routes)

Calcium Chloride:	LD 50, Oral 1000 mg/kg (Rat), Dermal 2630 mg/kg (Rat)
Potassium Chloride:	LD 50, Oral 2600 mg/kg (Rat)
Sodium Chloride:	LD 50, Oral 3 g/kg (Rat), Dermal 10 g/kg (Rabbit)

LC 50 of Material (Specify Species and Routes)

Calcium Chloride:	LC 50, Inhalation, no data
Potassium Chloride:	LC 50, Inhalation, no data

SAFETY DATA SHEET

Sodium Chloride: LC 50, Inhalation 42 g/m³ (1hr-Rat)

Exposure (Limits): ACGIH TWA 10mg/m³ (Inhalable), 3mg/m³ (Respirable),
OSHA PEL/TWA 15mg/m³ (Total), 5mg/m³ (Respirable)

Irritancy of Material Skin, eye and nose irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Aquatic Toxicity:

Material is practically non-toxic to aquatic organisms on an acute basis. (LC₅₀/EC₅₀/EL₅₀/LL₅₀>100mg/L in the most sensitive species tested).

Freshwater Fish Toxicity:

Calcium Chloride: LC₅₀, bluegill (*Lepomis macrochirus*): 8350 – 10650 mg/l

Potassium Chloride: LC₅₀, rainbow trout (*Oncorhynchus mykiss*), 96 h: 4236 mg/l

Sodium Chloride: LC₅₀, fathead minnow (*Pimephales promelas*): 10610 mg/l

Invertebrate Toxicity:

Calcium Chloride: LC₅₀, water flea *Daphnia magna*: 759 – 3005 mg/l

Potassium Chloride: EC₅₀, water flea *Daphnia magna*, 24 h, immobilization: 590 mg/l,

LC₅₀, water flea *Ceriodaphnia dubia*, 96 h: 3470 mg/l

Sodium Chloride: LC₅₀, water flea *Daphnia magna*: 4571 mg/l

Other Toxicity:

Sodium Chloride: IC₅₀, OECD 209 Test; activated sludge, respiration inhibition: > 1000 mg/l

FATE AND TRANSPORT:

Biodegradation: This material is inorganic and not subject to biodegradation.

Persistence: Calcium chloride is believed not to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into the water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature, and their concentrations in surface water will depend on various factors, such as geological parameters, weathering, and human activities.

Bioconcentration: No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (K_{oc} between 0 and 50). Partitioning from water to n-octanol is not applicable.

SAFETY DATA SHEET

Bioaccumulative Potential: Calcium chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms.

Mobility In Soil: Calcium chloride is not expected to be absorbed in soil due to its dissociation properties and high water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable salts with other ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with Federal, Provincial and local government regulations. Do not dispose of wastes in local sewer or with normal refuse.

Safe Handling of Residues: Flush residue with plenty of water.

Disposal of Packaging: Dispose of container in accordance with Federal, Provincial and local government regulations. Container rinsate must be disposed of in compliance with applicable regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Transportation of Dangerous Goods: Not regulated

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

U.S. DOT 49 CFR 172.101: Not regulated

SECTION 15 REGULATORY INFORMATION

CANADA

All components of this product are listed on either the DSL or the NDSL

WHMIS: D2B

USA

Toxic Substance Control Act (TSCA):

All components are listed on the TSCA.

INTERNATIONAL

All components are listed on the AICS, IECS, NZIOC, and PICCS chemical inventory.

SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: May 3, 2016
Date Revised: December 1, 2018
Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Cal Rise

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Calcium Chloride

Chemical Family:

Chlorides

Chemical Formula:

CaCl₂ 2H₂O

Trade Name & Synonyms:

Not Available

Molecular Weight:

Not Applicable

Material Use:

Hardness Booster

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Acute toxicity, Oral, Category 5

Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 2B

Symbol(s)



Signal Word:

Warning

Hazard statements:

H303 May be harmful if swallowed.

H315 Causes skin irritation and serious eye irritation.

H320 Causes eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

SAFETY DATA SHEET

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P321 Specific treatment (see first aid on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

NFPA: 1 Health, 0 Fire, 0 Reactivity

HMIS: 2 Health, 0 Fire, 0 Reactivity

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Calcium Chloride	10043-52-4	83 - 87
Water	7732-18-5	8 – 14
Potassium Chloride	7747-40-7	2 - 3
Sodium Chloride	7647-14-5	1 – 2

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Contact a physician immediately.

Skin Contact: Flush skin with running water for 20 minutes. If irritation persists, repeat flushing. Contact a physician if irritation or a burning sensation develops.

Eye Contact: Immediately flush eyes with plenty of water for 20 minutes. If irritation persists, repeat flushing. Contact a physician immediately.

Ingestion: Drink ½ to 1 glass of water to dilute. Immediately contact a physician or poison control centre. Vomiting Should only be induced under the direction of a physician or poison control centre. If spontaneous vomiting occurs have victim lean forward with head down to avoid breathing in of vomitus. Transport victim to an emergency facility.

Note to physicians: Due to irritant properties, resulting from heat created as solid material dissolves in water, swallowing may result in burns/ulceration of mucous membranes. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SAFETY DATA SHEET

SECTION 5

FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Formed under fire conditions: hydrogen chloride gas, calcium oxide.
Unusual Fire or Explosion Hazards:	None known.
Sensitivity to Mechanical Impact:	None
Rate of Burning:	None
Explosive Power:	None
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.
Instructions to the Fire Fighters:	Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.
Fire Fighting Protective Equipment:	Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water.
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SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:	Avoid contact with eyes, skin and clothing. Do not swallow. Wash thoroughly After handling.
Ventilation Requirements:	Local exhaust ventilation.
Other Precautions:	Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80°F, 27°C).

STORAGE

Ventilation Requirements:	Store in a cool, dry environment.
Storage Requirements:	Protect from atmospheric moisture. Keep container tightly closed. Keep separated from incompatible substances.

SAFETY DATA SHEET

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation if dusty conditions are encountered.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if prolonged skin contact is likely.

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Safety showers and eye wash located close to chemical exposure area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white granular, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 2.2

Viscosity: Not applicable

Vapour Pressure (mm): <0.005

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Above 815°C

Freezing Point (°C): 772°C

Solubility In Water (20°C): Soluble

% Volatile (By Weight) Not applicable

PH: 7.40 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SAFETY DATA SHEET

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Lewis or mineral acids, sodium, methyl vinyl, ether and zinc as in Galvanized iron. Hydrogen gas may be produced on prolonged contact With metals such as aluminum, lead, tin and zinc.		
Conditions to Avoid:	Avoid excessive amounts of heat.		
Hazardous Decomposition Products:	Thermal decomposition products are toxic and may include Hydrochloric acid and oxides of calcium and chlorine oxide.		

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to upper respiratory tract (nose and throat). Irritant of mucous membranes May cause coughing and sneezing.
Skin Contact:	Prolonged and repeated skin contact may cause irritation.
Eye Contact:	Severe irritation. May cause corneal damage and conjunctivitis.
Ingestion:	Causes gastrointestinal upset and abdominal pain, possible nausea.
Other Health Effects:	None known.

CHRONIC HEALTH EFFECTS:

Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component(s): **Potassium Chloride:** In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart and kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. **Sodium Chloride:** Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

LD 50 of Material (Specify Species and Routes)

Calcium Chloride:	LD 50, Oral 1000 mg/kg (Rat), Dermal 2630 mg/kg (Rat)
Potassium Chloride:	LD 50, Oral 2600 mg/kg (Rat)
Sodium Chloride:	LD 50, Oral 3 g/kg (Rat), Dermal 10 g/kg (Rabbit)

LC 50 of Material (Specify Species and Routes)

Calcium Chloride:	LC 50, Inhalation, no data
Potassium Chloride:	LC 50, Inhalation, no data

SAFETY DATA SHEET

Sodium Chloride: LC 50, Inhalation 42 g/m³ (1hr-Rat)

Exposure (Limits): ACGIH TWA 10mg/m³ (Inhalable), 3mg/m³ (Respirable),
OSHA PEL/TWA 15mg/m³ (Total), 5mg/m³ (Respirable)

Irritancy of Material Skin, eye and nose irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Aquatic Toxicity:

Material is practically non-toxic to aquatic organisms on an acute basis. (LC₅₀/EC₅₀/EL₅₀/LL₅₀>100mg/L in the most sensitive species tested).

Freshwater Fish Toxicity:

Calcium Chloride: LC₅₀, bluegill (*Lepomis macrochirus*): 8350 – 10650 mg/l

Potassium Chloride: LC₅₀, rainbow trout (*Oncorhynchus mykiss*), 96 h: 4236 mg/l

Sodium Chloride: LC₅₀, fathead minnow (*Pimephales promelas*): 10610 mg/l

Invertebrate Toxicity:

Calcium Chloride: LC₅₀, water flea *Daphnia magna*: 759 – 3005 mg/l

Potassium Chloride: EC₅₀, water flea *Daphnia magna*, 24 h, immobilization: 590 mg/l,

LC₅₀, water flea *Ceriodaphnia dubia*, 96 h: 3470 mg/l

Sodium Chloride: LC₅₀, water flea *Daphnia magna*: 4571 mg/l

Other Toxicity:

Sodium Chloride: IC₅₀, OECD 209 Test; activated sludge, respiration inhibition: > 1000 mg/l

FATE AND TRANSPORT:

Biodegradation: This material is inorganic and not subject to biodegradation.

Persistence: Calcium chloride is believed not to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into the water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature, and their concentrations in surface water will depend on various factors, such as geological parameters, weathering, and human activities.

Bioconcentration: No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (K_{oc} between 0 and 50). Partitioning from water to n-octanol is not applicable.

SAFETY DATA SHEET

Bioaccumulative Potential: Calcium chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms.

Mobility In Soil: Calcium chloride is not expected to be absorbed in soil due to its dissociation properties and high water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable salts with other ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with Federal, Provincial and local government regulations. Do not dispose of wastes in local sewer or with normal refuse.

Safe Handling of Residues: Flush residue with plenty of water.

Disposal of Packaging: Dispose of container in accordance with Federal, Provincial and local government regulations. Container rinsate must be disposed of in compliance with applicable regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Transportation of Dangerous Goods: Not regulated

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

U.S. DOT 49 CFR 172.101: Not regulated

SECTION 15 REGULATORY INFORMATION

CANADA

All components of this product are listed on either the DSL or the NDSL

WHMIS: D2B

USA

Toxic Substance Control Act (TSCA):

All components are listed on the TSCA.

SAFETY DATA SHEET

INTERNATIONAL

All components are listed on the AICS, IECS, NZIOC, and PICCS chemical inventory.

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2016
Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

ALKA PLUS / ALKA RISE

WHMIS: Not Regulated

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Sodium Bi Carbonate

Chemical Family:

Bi Carbonates

Chemical Formula:

NAHC03

Trade Name & Synonyms:

Baking Soda

Molecular Weight:

84.0

Material Use:

Pool Water Alkalinity Booster

SECTION II

HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Odourless, opaque, white powder

Odour Threshold (Ppm): Not applicable

Specific Gravity: 2.16

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate Not applicable

Boiling Point (C): loses C02 at 270 deg C

Freezing Point (C): Not applicable

Solubility In Water (20c): 9.6 g/100g water

% Volatile (By Weight) Not applicable

Ph: 8.50 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes X No
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use appropriate media to extinguish source of fire
Special Procedures: Wear self contained breathing apparatus when fire fighting
Flashpoint (Celsius) And Method: Not applicable
Auto Ignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: CO

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Acids – release CO₂
Reactivity And Under What Conditions: Temperature 190 deg C
Hazardous Decomposition Products: CO₂ – The resulting dust may irritate eyes, skin and respiratory tract.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact X : Skin Absorption : Eye Contact X
: Inhalation Acute : Inhalation Chronic : Ingestion X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: May cause mild irritation
Eye: Eye contact may cause irritation and redness.
Inhalation: Cough and mild respiratory irritation.
Ingestion: This product may be harmful if swallowed

Effects Of Chronic Exposure To Material Prolonged skin contact-contact dermatitis, Prolonged eye contact-conjunctivitis

Other Health Effects: Skin irritation may be aggravated in persons with existing lesions. Breathing of dust May aggravate acute or chronic asthma and other chronic pulmonary disease.

Ld 50 Of Material (Specify Species And Routes): SEE SECTION 11

Lc 50 Of Material (Specify Species And Routes): SEE SECTION 11

Exposure (Limits): ACGIH – TLV 10 mg/m³ –nuisance dust; OSHA – TWA 15 mg/m³ total dust – 5 mg/m³ respire fraction

Irritancy Of Material: Mild skin and eye irritant

Sensitization Of Material: None known

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): None normally required
Eye (Specify): None normally required
Respiratory (Specify): None except when TLV is exceeded. Use dust mask to reduce exposure to appropriate levels.
Other (Specify): None
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): None under normal circumstances
Leak And Spill Procedure: Sweep up material and dispose.
Waste Disposal: Dispose of waste material at a municipal landfill site should be satisfactory.
Handling Procedures And Equipment: None
Storage Requirements: Do not store near acids. Keep dry.
Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.
Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.
Inhalation: Remove patient to fresh air. If not breathing, administer artificial respiration or CPR. If breathing is difficult or irritation develops, administer oxygen. Get medical attention.
Ingestion: If patient is conscious and alert, give 2 or more glasses of water to drink. If appreciable quantities are swallowed, induce vomiting by giving 1 tablespoon of syrup of Ipecac. If vomiting has not occurred in 20 minutes, the same dose of syrup Ipecac may be repeated on additional time. Alternately induce vomiting by touching the back of throat with a finger. Do not induce vomiting or give anything by mouth to and unconscious person. Get medical attention.

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

OXY OUT/OXY CLEAR-NON- CHLORINE SHOCK **WHMIS:** D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Oxone
Chemical Family: Monopersulphate
Chemical Formula: 2KHSO5 KHSO4 K2S04
Trade Name & Synonyms: Potassium Monopersulphate
Molecular Weight: Not applicable
Material Use: Pool Water Treatment Chemical

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Potassium Peroxymono Sulphate	30-60	10058-23-8	Not available	Not available
Potassium Bisulphate	10-30	7646-93-7	Not available	Not available
Potassium Sulphate	15-40	7778-80-5	Not available	Not available
Magnesium Carbonate	1-5	546-93-0	Not available	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: **Gas** **Liquid** **Solid** **X**

Odour & Appearance: White, granular, opaque, odourless

Odour Threshold (Ppm): Not applicable

Specific Gravity: 1.1 to 1.4

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): Decomposes

Solubility In Water (20c): 25.6% @ 20 deg C

% Volatile (By Volume) Not applicable

Ph: 2.30 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No **X**

If Yes, Under Which Conditions?: Not applicable. NOTE: Grinding or intensive mixing may cause ignition or oxidizable material present.

Means Of Extinction: Use media suitable to extinguish source of fire.

Special Procedures: Wear self-contained breathing apparatus when fire fighting.

Flashpoint (Celsius) And Method: Not applicable

Autoignition Temperature (Celsius): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Hazardous Combustion Products: Not applicable

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes **X** No

If No, Under Which Conditions?: Not applicable

Incompatibility To Other Substances: Yes **X** No

If So, Which Ones: This product is an oxidizer. When mixed with halides (chlorine, bromine) or compounds containing halides, it will release the respective halogen gas. Examples: Mixture of this product and salt will emit chlorine gas. Mixture with cyanides can release hydrogen cyanide gas. Heavy metal salts such as cobalt, nickel and copper cause the evolution of oxygen.

Reactivity And Under What Conditions: See above.

Hazardous Decomposition Products: Releases oxygen gas.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact	X	: Skin Absorption	: Eye Contact	X
: Inhalation Acute		: Inhalation Chronic	: Ingestion	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Skin contact may cause irritation and burns.

Eye: Eye contact may cause irritation and burns.

Inhalation: Will cause irritation of mucosal membrane and respiratory passages.

Ingestion: Gastritis possibility progressing to necrosis or haemorrhage.

Effects Of Chronic Exposure To Material: None known.

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): Oral Rat – 2000 mg/kg, Skin absorption Rabbit - > 11,000 mg/kg

Lc 50 Of Material (Specify Species And Routes): 4 hr inhalation Rat - > 5 mg/kg

MATERIAL SAFETY DATA SHEET

Exposure (Limits): OSHA PEL particulates not otherwise classified: 15 mg/m³, 8 hr, TWA Total Dust; 5 mg/m³, 8 hr, TWA Respirable Dust.

Irritancy Of Material: Skin, eye, nose and throat.

Sensitization Of Material: None known.

Synergistic Materials: None known.

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known.

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): NIOSH/MSHA air purifying respirator if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Impervious clothing if contact is likely.

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area. Local ventilation may be required to keep particulates below OSHA-PEL.

Leak And Spill Procedure: Sweep up and collect in a metal container. Flush residue with water. Large quantities should be neutralized with soda ash.

Waste Disposal: Dispose material in accordance with federal, provincial and local government regulations.

Handling Procedures And Equipment: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly after handling.

Storage Requirements: Store in cool, dry area. Do not mix directly with other chemicals. Do not store with combustible materials.

Special Shipping Information:

Transportation:	Corrosive Solid Acidic- Inorganic N.O.S. (Monopersulphate Compound)
Class:	8
Pkg. Group:	II
P.I.N./Un:	3260 1Kg and under Ltd Qty.

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. Flush with water for 15 minutes.

Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

Inhalation: Remove person to fresh air. Give artificial respiration if required. Seek medical attention.

Ingestion: Drink large quantities of water and contact a physician.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist Telephone: (905) 332-6626

Preparation Date: July 16, 1999
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Cartridge Cleaner Concentrate WHMIS: E

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Proprietary blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Spa Cartridge Cleaner

SECTION 2

HAZARDS IDENTIFICATION

GHS classification: H302 Acute toxicity, Oral, Category 4
H314 Skin corrosion/irritation, Category 1B
H318 Serious eye damage/eye irritation, Category 1
H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation, Category 3
H401 Hazardous to the aquatic environment, Acute Hazard, Category 2

Symbol(s)



Signal Word

Danger

Hazard statements

Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Toxic to aquatic life.

Precautionary statements

Do not ingest. If ingested, drink 2 to 3 glasses of water to dilute. Do not induce vomiting. Seek immediate medical attention. Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If in eyes, flush with copious amounts of water for 20 minutes and seek medical

SAFETY DATA SHEET

attention. Use in a well ventilated area. Avoid breathing in mists/vapours/fumes. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Tetrasodium Ethylene Diamine Tetraacetate	64-02-8	1 - 5
Sodium Hydroxide	1310-73-20	3 – 7

SECTION 4 FIRST AID MEASURES

Inhalation:	If mists are inhaled, remove person to fresh air and seek medical attention.
Skin Contact:	Wash thoroughly with soap and water.
Eye Contact:	Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 or 3 glasses of water to dilute and contact a physician immediately. Do not induce vomiting unless advised by a physician or poison control centre.
Note to physicians	Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower GI tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Chemical eye burns may require extended irrigation. Obtain prompt consultation from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	CO, CO ₂ , nitrous oxide and smoke.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Isolate and restrict area access. Product reacts with water. Reaction may

SAFETY DATA SHEET

Produce heat and/or gases. This reaction may be violent. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Contact with some metals (particularly magnesium, aluminum and galvanized zinc) can rapidly generate hydrogen.

Fire Fighting Protective Equipment: Wear full protective clothing and a full face piece self-contained breathing apparatus in positive pressure mode.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Prevent entry into soil, ditches, sewers, waterways and/or groundwater. Isolate hazard area and restrict access. Dike area to contain spill. Dilute spill with large amounts of water and neutralize with dilute acid. Vacuum or sweep up neutralized material for proper disposal.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin, eyes and clothing. Do not ingest. Avoid inhalation of mists. Wear gloves and safety glasses and face shield when handling. Handle and open containers with care. Empty containers may contain hazardous product residues. Keep containers closed when not in use. Protect against physical damage.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry well ventilated area.

Storage Requirements: Keep away from heat and ignition sources. Place away from incompatible materials.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep exposures within applicable limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin Specify): PVC, neoprene or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles, and face shield if eye contact is likely.

Respiratory (Specify): None in normal conditions. In non-ventilated areas wear a positive pressure supplied air respirator. In misty atmospheres, use an organic vapour respirator in combination

SAFETY DATA SHEET

with a dust/mist filter.

Other (Specify):

Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Yellow-green liquid with characteristic odour.

Odour Threshold (ppm): Not available

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.110

Viscosity: Not available

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C) Not applicable

Evaporation Rate Not available

Boiling Point (°C): 100°C

Freezing Point (°C): Not available

Solubility In Water (20°C): Soluble

% Volatile (By Weight) 81%

PH: 11.5 – 12.5 (1% solution)

Coefficient Of Water/Oil Distribution: Not available

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Oxidizing compounds

Conditions to Avoid: None known

Hazardous Decomposition Products: CO and CO₂

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Mists are corrosive – causes burns to the respiratory tract.

Skin Contact: Corrosive – causes burns.

Eye Contact: Corrosive – causes burns.

Ingestion: This product may be harmful or fatal if swallowed.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Tetrasodium Ethylene Diamine Tetraacetate (5%): 200 g/kg, Oral (Rat)

Sodium Hydroxide (7%): 7142.9 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Sodium Hydroxide: 2 mg/m³ Ceiling Exposure Value, ACGIH and OSHA.

Irritancy of Material: Severe skin, eye and respiratory tract irritant.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: Tetrasodium ethylene diamine tetraacetate has been reported to cause birth defects in animals at very high doses not expected in occupational exposure. These effects were observed at doses that were toxic to the mother.

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic life.

FISH

Sodium Hydroxide (7%) LC50 (Rainbow Trout): 2052 mg/l

LC50 (Chinook Salmon): 271 mg/l

Tetrasodium Ethylene Diamine Tetraacetate (5%) LC50 (Lepomis Macrochirus) 96 h, static: 820 mg/l

LC50 (Pimephales Promelas) 96 h, static: 1196 mg/l

FRESHWATER ALGAE

Tetrasodium Ethylene Diamine Tetraacetate (5%) EC50 (Desmodesmus Subspicatus) 72 h: 20.2 mg/l

SAFETY DATA SHEET

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Deactivating Chemicals: Neutralize with dilute acetic acid to pH 6 to 9.

Waste Disposal: Dispose absorbed neutralized material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush with copious amounts of water and neutralize with dilute acetic acid.

Disposal of Packaging: Dispose of packaging in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Sodium Hydroxide Solution

Class: 8

Packing group: II

UN: 1824

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Sodium Hydroxide Solution

Class: 8

Packing group: II

UN: 1824

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: E

Canadian DSL Inventory: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

CPR Compliance: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SAFETY DATA SHEET

USA

TSCA Inventory: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

California Proposition 65: Not Listed

MA, New Jersey and Pennsylvania Right to Know Lists: Listed

CERCLA/SARA – Section 302: Tetrasodium Ethylene Diamine Tetraacetate: Not Listed

Sodium Hydroxide: Not Listed

SARA (311, 312) Hazard Class: Tetrasodium Ethylene Diamine Tetraacetate: Not Listed

Sodium Hydroxide: Listed

CERCLA/SARA – Section 313: Tetrasodium Ethylene Diamine Tetraacetate: Not Listed

Sodium Hydroxide: Not Listed

INTERNATIONAL Not available

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: June 9, 2016

Date Revised: December 1, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Chlor -X / Dechlorination Tablets

WHMIS: Non Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Sodium Sulphite

Chemical Family: Sulphites

Chemical Formula: Na₂SO₃

Trade Name & Synonyms: Sodium Sulphite

Molecular Weight: 126.04

Material Use: Water Treatment

SECTION 2

HAZARDS IDENTIFICATION

GHS classification: H315 Skin corrosion/irritation, Category 2
H320 Serious eye damage/eye irritation, Category 2B
H335 Specific organ toxicity, Single exposure, Respiratory irritation, Category 3

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and eye irritation. May cause respiratory irritation.

Precautionary statements

Wear gloves and safety glasses when handling. Wash hands thoroughly after use. Avoid breathing in dust/vapours. If inhaled, remove person to fresh air and seek medical attention. Use in a well ventilated area.

MATERIAL SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Sulphite	7757-83-7	80-100

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. Seek medical attention if breathing is difficult.
Skin Contact:	Remove contaminated clothing. Flush affected areas with running water for 15 minutes. Wash hands thoroughly with soap and water. Obtain medical attention if irritation develops.
Eye Contact:	Flush eyes with running water for 15 minutes. Seek medical attention immediately.
Ingestion:	Give 2 glasses of water or milk. Do not induce vomiting. Obtain medical attention immediately.
Note to physicians	Treatment based on sound judgement of physician and individual reactions of patient. Potential for anaphylactic shock with allergic individuals.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Toxic gas in vapours (SO ₂) will be released in a fire situation.
Unusual Fire or Explosion Hazards:	Not applicable
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Use water spray to cool fire-exposed containers and structures. Emits toxic fumes under fire
Fire Fighting Protective Equipment:	Fire fighters should wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure:	Prevent entry into sewers or streams, dike if needed. Ventilate area. Pick up solids and put in a clean labelled container.
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SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices:	Avoid dust generation. Do not ingest. Do not breathe dust. Keep containers closed
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MATERIAL SAFETY DATA SHEET

Ventilation Requirements: when not in use.
Local exhaust ventilation.

STORAGE

Ventilation Requirements: Store in a cool, dry well ventilated area.
Storage Requirements: Place away from incompatible materials. Store in accordance with normal industrial hygiene and housekeeping practices.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep exposure to airborne contaminants below the exposure limit.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Impermeable gloves if skin contact is likely.
Eye (Specify): Safety glasses/goggles if eye contact is likely.
Respiratory (Specify): Air purifying respirator as required for dusts.
Other (Specify): Impermeable clothing as required. Shower and eye wash stations close to work area.

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State:	Gas	Liquid	Solid	<u>X</u>
Odour & Appearance:	White to yellow powder, odourless			
Odour Threshold (ppm):	Not available			
Flammability:	Yes	No	<u>X</u>	
If Yes, Under Which Conditions?:				
Auto Ignition Temperature (Celsius):	Not applicable			
Upper Explosion Limit (% By Volume):	Not applicable			
Lower Explosion Limit (% By Volume):	Not applicable			
Decomposition Temp (°C)	600°C/1112°C			
Specific Gravity:	2.633			
Viscosity:	Not applicable			
Vapour Pressure (mm):	Not available			
Vapour Density (Air-1):	Not available			
Flashpoint (°C)	Not applicable			

MATERIAL SAFETY DATA SHEET

Evaporation Rate Not applicable
Boiling Point (°C): Not applicable
Freezing Point (°C): Decomposes at 600°C
Solubility In Water (20°C): Soluble
% Volatile (By Weight) Not applicable
PH: 8.5 – 10.5
Coefficient Of Water/Oil Distribution: Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Acids, oxidizing agents and nitrites.
Conditions to Avoid: High temperatures.
Hazardous Decomposition Products: Toxic gas or vapours (SO₂) will be emitted by decomposition.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Irritation of the respiratory tract.
Skin Contact: Irritant. Pain and brownish yellow stains. Burns.
Eye Contact: Irritant. Pain, tearing. May cause burns.
Ingestion: Irritation of the gastrointestinal tract. May cause violent reaction in some asthmatics and Sulphite sensitive individuals.

CHRONIC HEALTH EFFECTS: Not available

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): 820 mg/kg, Oral (Rat),

LC 50 of Material (Specify Species and Routes): >22 mg/l, Inhalation 1 h (Rat), >5.5 mg/l, Inhalation 4 h (Rat)

Exposure (Limits): Not available.

Irritancy of Material Severe, skin, eye, nose and throat irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

MATERIAL SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

LC50 96 h, Fish (*Leucisus idus*): 220-460 mg/l, static

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: See above.

Disposal of Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

Marine Pollutant: No

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

Reportable quantity (lbs): Not available

Marine Pollutant: No

MATERIAL SAFETY DATA SHEET

SECTION 15 REGULATORY INFORMATION

CANADA All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

WHMIS: Non-controlled

USA All components of this product are either on the Toxic Substances Control Act (TSCA) inventory list or exempt.

SARA (302, 311, 312, and 313): Not listed

California Prop 65: Not listed

Massachusetts, New Jersey and Pennsylvania Right to Know Lists: Not listed

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: June 1, 2015
Date Revised: December 1, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Defoamer - Foam Free **WHMIS:** Not Controlled

Manufacturer's Name: **CAPO INDUSTRIES LTD**
Street Address: **1200 CORPORATE DRIVE**
City: **BURLINGTON, ONTARIO**
Postal Code: **L7L 5R6**

Emergency Telephone: **Canutec (613) 996-6666 (Collect)**

Chemical Name: Not applicable
Chemical Family: Silicone Emulsion
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Defoamer for Spas

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: None
Symbol(s) None
Signal Word None
Hazard statements None
Precautionary statements None

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: If mists are inhaled, seek immediate medical attention.
Skin Contact: Wash thoroughly with soap and water.
Eye Contact: Flush eyes with copious amounts of water for 15 minutes.
Ingestion: Drink 2 or 3 glasses of water. Do not induce vomiting. Seek medical attention.

SAFETY DATA SHEET

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: CO, CO₂ and SiO₂
Unusual Fire or Explosion Hazards: None known
Sensitivity to Mechanical Impact: None
Rate of Burning: Not applicable
Explosive Power: Not applicable
Sensitivity to Static Discharge: None
Fire Extinguishing Media: Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters: See below
Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Soak up with absorbent material. Collect and place in a clean, dry labelled container for disposal. Wash spill area with water.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin and eyes. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.
Ventilation Requirements: None required

STORAGE

Ventilation Requirements: None required.
Storage Requirements: Store at ambient temperatures.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required

PERSONAL PROTECTIVE EQUIPMENT

Skin Specify): May be required by sensitive individuals
Eye (Specify): Safety glasses/goggles if eye contact is likely.

SAFETY DATA SHEET

Respiratory (Specify): None required
Other (Specify): Eye wash and shower stations are close to work area.

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid
Odour & Appearance: Opaque, white liquid, mild odour
Odour Threshold (ppm): Not applicable
Flammability: Yes No X
If Yes, Under Which Conditions?:
Auto Ignition Temperature (Celsius): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Decomposition Temp (°C) Not available
Specific Gravity: 1.000
Viscosity: Not available
Vapour Pressure (mm): Not applicable
Vapour Density (Air-1): Not applicable
Flashpoint (°C) Not applicable
Evaporation Rate Not applicable
Boiling Point (°C): 100°C
Freezing Point (°C): 0°C
Solubility In Water (20°C): Dispersible
% Volatile (By Weight) 83%
PH: 8.0 – 10.5
Coefficient Of Water/Oil Distribution: Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Oxidizing agents
Conditions to Avoid: None known
Hazardous Decomposition Products: Burning may produce CO, CO₂, and SiO₂.

SAFETY DATA SHEET

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None expected

Skin Contact: None expected

Eye Contact: Mild irritation

Ingestion: None known

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not applicable

Irritancy of Material: Mild eye irritant

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush with copious amounts of water.

Disposal of Packaging: Dispose of empty packaging in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

SAFETY DATA SHEET

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Not Controlled

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: June 8, 2016
Date Revised: December 1, 2018

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Descummer **WHMIS:** Not Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Enzyme
Chemical Formula: Proprietary blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Spa treatment

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: None
Symbol(s) None
Signal Word None
Hazard statements None
Precautionary statements None

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
No Regulated Components		

SECTION 4 FIRST AID MEASURES

Inhalation: Not applicable
Skin Contact: Wash thoroughly with soap and water.
Eye Contact: Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion: None required.
Note to physicians None

SAFETY DATA SHEET

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Not available

Unusual Fire or Explosion Hazards: None known

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: See below

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Flush into any sewage or disposal system.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: None required

Ventilation Requirements: None required

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Enzymatic activity may be lost if temperatures exceed 50°C, or if pH exposure is below 3.5 or above 9.0.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): None required

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): None required

Other (Specify): None required

SAFETY DATA SHEET

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Odourless, straw coloured liquid.

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C): Not available

Specific Gravity: 1.002

Viscosity: Not available

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C): Not applicable

Evaporation Rate: Not available

Boiling Point (°C): 100°C

Freezing Point (°C): Not available

Solubility In Water (20°C): Soluble

% Volatile (By Weight): Not available

PH: 3.1

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Oxidizing compounds

Conditions to Avoid: None known

Hazardous Decomposition Products: Not available

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None expected
Skin Contact: None expected
Eye Contact: May cause eye irritation.
Ingestion: None expected, however excessive ingestion may cause mild nausea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None expected. All tests show no inhalation, skin or ingestion toxicity.

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: Mild eye irritant

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Flush into any sewage or disposal system.

Safe Handling of Residues: Flush with plenty of water.

Disposal of Packaging: Empty packaging can be recycled if possible, or dispose in accordance with federal, provincial, and local regulations.

SAFETY DATA SHEET

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Not Controlled

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Eclipse 3 Algaecide

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Algaecide

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

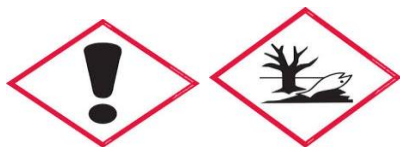
H315 Skin corrosion/irritation, Category 2

H320 Serious eye damage/eye irritation, Category 2B

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation, Category 3

H400 Hazardous to the aquatic environment, Acute hazard, Category 1

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and eye irritation. May cause respiratory irritation. Very toxic to aquatic life.

Precautionary statements

Avoid contact with skin and eyes. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If in eyes, flush with copious amounts of water for 20 minutes, and seek medical attention. Use in a well ventilated area. Avoid breathing in dust. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

MATERIAL SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Cupric Sulphate	7758-99-8	10 – 30
Citric Acid	77-92-9	10 – 30
Sodium Carbonate	497-19-8	5 – 10

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.

Ingestion: Drink 2 to 3 glasses of water to dilute material. Do not induce vomiting. Seek medical attention immediately.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: CO, CO₂, toxic and corrosive oxides of Sulphur, calcium, carbon, sodium or copper may form.

Unusual Fire or Explosion Hazards: Dust can produce explosive mixtures if the proper concentration of dust is dispersed in air.

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: When heated above 110°C (230°F) material will melt. Avoid using a direct water stream on molten material, as it may cause splattering.

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus with a full face piece in positive pressure mode.

MATERIAL SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:

Do not let material enter natural waters or public water supply. Ventilate area of leak or spill. Sweep up material into a clean, dry labelled container for reuse or disposal. Vacuum may be used to avoid dust dispersal. Do not put material into copper, aluminum or other easily corroded materials.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Avoid contact with skin and eyes. Wash thoroughly after handling. Wear gloves and safety glasses. Keep out of reach of children. Transport in dry equipment since they may contain product residues. Observe all warnings and precautions listed for the product. This product absorbs moisture and becomes a safety hazard when spilled by becoming slippery.

Ventilation Requirements:

Local exhaust ventilation to keep airborne levels below the exposure guidelines.

STORAGE

Ventilation Requirements:

Store in a cool, dry ventilated area.

Storage Requirements:

Keep in a tightly closed container. Protect against physical damage. Do not store in easily corroded containers.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin Specify:

Latex, rubber, neoprene or nitrile gloves if skin contact is likely.

Eye (Specify):

Safety glasses/goggles if eye contact is likely.

Respiratory (Specify):

Dust mask

Other (Specify):

Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:

Gas

Liquid

Solid

X

Odour & Appearance:

Pale blue powder, odourless

Odour Threshold (ppm):

Not applicable

MATERIAL SAFETY DATA SHEET

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) 825°C

Specific Gravity: 1.14

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): Not applicable

Solubility In Water (20°C): Soluble

% Volatile (By Weight) 0%

PH: 6 – 7 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10	STABILITY AND REACTIVITY
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Chemical Stability:	Yes	<u>X</u>	No
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If No, Under Which Conditions?:

Incompatibility To Other Substances:	Yes	<u>X</u>	No
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If So, Which Ones: Strong acids, metal nitrates, alkali carbonates and bicarbonates, potassium tartrate. Will corrode copper, zinc, aluminum and other alloys. Acids, fluorine, aluminum, phosphorus pentoxide, sulphuric acid, zinc, lithium, moisture, calcium hydroxide, 2,4,6-trinitrotoluene, magnesium with hydrogen. Substance will ignite hydroxylamine. Solutions are acidic and can react with magnesium to evolve flammable hydrogen gas. May react with acetylene to form dangerous acetylides. Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or sodium potassium alloy.

Conditions to Avoid: Heat, flames, ignition sources, moisture, dusting and incompatible materials. Water is only to be avoided during storage. This product is designed to be diluted with water as per application instructions.

MATERIAL SAFETY DATA SHEET

Hazardous Decomposition Products:

CO₂ and CO may form when heated to decomposition. Hydrolyzes to form dilute sulphuric acid. Toxic and corrosive oxides of sulphur, carbon, sodium or copper may be formed when heated to decomposition. When heated to decomposition (825°C), product emits calcium oxide fumes and liberates carbon dioxide.

SECTION 11**TOXICOLOGICAL INFORMATION****ACUTE HEALTH EFFECTS**

- Inhalation:** Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
- Skin Contact:** Causes irritation to the skin. Symptoms include redness, itching and pain.
- Eye Contact:** Causes irritation, redness and pain. May cause conjunctivitis, ulceration or clouding of the cornea.
- Ingestion:** Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: Excessive oral doses of calcium carbonate may produce alkalosis and hypercalcemia.

Prolonged or repeated skin exposure may cause dermatitis. Prolonged or repeated exposure to dust of copper salts may cause discolouration of the skin or hair; blood and liver damage; ulceration and perforation of the nasal septum; runny nose, metallic taste in the mouth; and atrophic changes and irritation of the mucous membranes. Evidence that aluminum compounds may cause brain or nerve abnormalities is inconclusive.

Other Health Effects: Persons with pre-existing skin disorders, impaired liver, kidney or lung function, glucose-6-phosphate-dehydrogenase deficiency or pre-existing Wilson's disease (excess of copper in system) may be more susceptible to the effects of this material.

LD 50 of Material (Specify Species and Routes): Cupric Sulphate 960 mg/kg, Oral (Rat), Citric Acid 3000 mg/kg, Oral (Rat), Sodium Carbonate 4090 mg/kg, Oral (Rat).

LC 50 of Material (Specify Species and Routes): Sodium Carbonate 1150 mg/m³, Inhalation 4 h (Male Rat).

Exposure (Limits): None established

Irritancy of Material: Skin, eye, and respiratory tract irritant.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

MATERIAL SAFETY DATA SHEET

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

Cupric Sulphate is very toxic to aquatic life.

AQUATIC TOXICITY: Copper

LC50 96 h, Fish >1 mg/l

LC50 72 h, Algae >1 mg/l

Environmental Fate

Biodegradability: Cupric Sulphate is not expected to biodegrade when released into the soil or water. It may leach into groundwater and is not expected to evaporate significantly.

Bioaccumulative Potential: Cupric Sulphate is expected to bioaccumulate significantly. It has an experimentally-determined bioconcentration factor (BCF) of greater than 100.

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of material in accordance with federal, provincial, and local regulations.

Safe Handling of Residues: Flush with copious amounts of water.

Disposal of Packaging: Dispose of packaging in accordance with federal, provincial, and local regulations.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION: Not regulated when shipped by ground in packages of 38 kg or less of product (5 kg net Cupric Sulphate). Otherwise description is:

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Cupric Sulphate)

Class: 9

Packing group: III

UN: 3077

US DOT CLASSIFICATION (49CFR 172.101, 172.102): Not regulated when shipped in packages of 34 kg or less of product (4.54 kg net Cupric Sulphate). Otherwise description is:

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Cupric Sulphate)

Class: 9

Packing group: III

UN: 3077

MATERIAL SAFETY DATA SHEET

IMO: Contains a Marine Pollutant.

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Cupric Sulphate)

Class: 9

Packing group: III

UN: 3077

ICAO: Not regulated, unless by national law.

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

CEPA: All ingredients are on the Domestic Substances List.

USA

TSCA: All ingredients are on the TSCA List.

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996

Date Revised: June 9, 2016

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Product identifier: EMERGE
Product code: CRY-021042
Product use: Pool and Spa Water Treatment
Trade Name and Synonyms: Potassium Monopersulphate
Chemical Family: Not Applicable
Chemical Name: Not Applicable
Molecular Weight: Not Applicable
Chemical Formula: Proprietary Blend
WHMIS classification: D2B, D2A

Supplier name and address:

Crystal Clear Pool and Spa
1200 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Emergency Telephone #: 1-800-263-8250

SECTION 2 - CHEMICAL COMPOSITION/HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Approx. Conc. %</u>	<u>LD 50</u> Specify Species and Route (Oral, RAT)	<u>LC 50</u> Specify Series and Route (Inhal., RAT)
Potassium Peroxymonno Sulphate	10058-23-8	10-30	Not Available	Not Available
Potassium Bisulphate	7646-93-7	10-30	Not Available	Not Available
Potassium Sulphate	7778-80-5	10-30	Not Available	Not Available
Magnesium Carbonate	546-93-0	1-5	Not Available	Not Available
Potassium Peroxydisulphate	7727-21-1	1-5	Not Available	Not Available
Disodium Tetraborate	1330434	10-30	Not Available	Not Available

SECTION 3 – PHYSICAL DATA FOR MATERIAL

Physical State: GAS ____ LIQUID ____ SOLID X
Evaporation Rate: Not Applicable Vapour Density (AIR-1): Not Applicable
Odour Threshold (P.P.M): Not Applicable Boiling Point (degrees C): Not Applicable
Specific Gravity: Not Applicable Freezing Point (degrees C): Decomposes
Vapour Pressure (MM): Not Applicable pH: 6.7 (1% solution)
Solubility in Water (20C): soluble % Volatile (by weight): Not Applicable
Coefficient of Water/Oil Distribution: Not Available
Odour and Appearance: White, granular, opaque, odourless

SECTION 4 – FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability: Yes ____ No X
If yes, under which conditions?: Not Applicable
NOTE: Grinding or intense mixing may cause ignition or oxidizable material present.
Auto-ignition Temperature (deg. C): Not Applicable
Upper Explosion Limit (% by Volume): Not Applicable
Means of Extinction: Use media to extinguish source of fire
Special Procedures: Wear self contained breathing apparatus when fire fighting:
Lower Explosion Limit (% by volume): Not Applicable
Flashpoint (deg. C) and Method: Not Applicable
Hazardous Combustion Products: Not Applicable

SECTION 5 – EXPLOSION DATA

Sensitivity to Mechanical Impact: None Sensitivity to Static Discharge: None

SECTION 6 – REACTIVITY DATA

Chemical Stability: Yes X No ____
If no, under what conditions?: Not applicable.
Incompatibility to Other Substances: Yes X No ____
If so, which ones?: This product is an oxidizer. When mixed with halides (chlorine, bromine) or compounds containing halides it will release the respective halogen gas.
Examples: Mixture of this product and salt will emit chlorine gas. Mixture with cyanides can release hydrogen cyanide gas. Heavy metal salts such as cobalt, nickel and copper can cause the evolution of oxygen. Elemental Zirconium.
Reactivity and under what conditions: See above
Hazardous Decomposition Products: Releases oxygen gas

SECTION 7 – TOXICOLOGICAL PROPERTIES OF MATERIAL

Route of Entry:

Skin Contact: X Skin Absorption: Eye Contact: X
Inhalation Chronic: Ingestion: X Inhalation Acute:

EFFECTS OF ACUTE EXPOSURE TO MATERIAL:

Skin: Skin contact may cause irritation and burns

Eye: Eye contact may cause irritation and burns

Inhalation: Will cause irritation of mucosal membrane and respiratory passages. Mucus

Ingestion: Gastritis possibly progressing to necrosis or haemorrhage. Product is toxic by ingestion.

Effects of Chronic Exposure to material: None Known

Other Health Effects: None Known

LD 50 of Material (Specify Species and Routes): See Section II

LD 50 of Material (Specify Series and Routes): See Section II

Exposure (Limits): OSHA PEL particulates not otherwise classified: 15 mg/m³, 8hr TWA Total
Dust: 5 mg/m³, 8 hr, TWA respirable dust.

Potassium Peroxydisulphate TLU (ACGIH) 0.1 mg/m³, 8 hr. TWA.

Sodium Tetraborate – Decahydrate – TWAEV 5 mg/m³

Irritancy of Material: Skin, eyes, nose and throat

Sensitisation of Material: None Known

Synergistic Materials: None Known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None Known

SECTION 8 – PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (specify): Latex or rubber gloves if prolonged skin contact is likely.

Eye (specify): Safety Glasses / goggles if eye contact is likely.

Respiratory (specify): NIOSH / MSHA air purifying respirator if prolonged use in non-ventilated area is avoidable.

Other (specify): Impervious clothing if contact is likely.

Engineering controls (i.e.: ventilation, enclosed process – specify): Use in well-ventilated area.

Local ventilation may be required to keep particulates below OSHA-PEL.

Leak and Spill Procedure: Sweep up and collect in metal container. Flush residue with water.

Waste Disposal: Dispose material in accordance with Federal, Provincial/State and local government regulations.

Handling Procedures and Equipments: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly after handling.

Storage Requirements: Store in cool, dry area. Do not mix directly with other chemicals. Do not store with combustible materials.

Special Shipping Information:

Transportation: Not Regulated

Pkg. Group:

Class:

P.I.N./UN:

SECTION 9 – FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. Flush with water for 15 minutes. Seek medical attention.

Eye: Flush eyes with plenty of water for 15 minutes. Seek medial attention.

Inhalation: Remove person to fresh air. Give artificial respiration if required. Seek medical attention.

Ingestion: Drink large quantities of water to dilute and contact a physician and induce vomiting.

SECTION 10 – PREPARATION DATE OF M.S.D.S.
--

Prepared by: Crystal Clear Pool and Spa

Telephone Number: 1-800-263-8250

Preparation Date: September 22, 2000

Date of Latest Revision / Review: February 1, 2018

ADDITIONAL NOTES OR REFERENCES:

While Crystal Clear Pool and Spa believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Crystal Clear Pool and Spa assumes legal responsibility. They are offered solely for your consideration, and verification. Any use of this data and information must be determined by the user in accordance with applicable Federal, Provincial/State and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Eclipse3 Enforce

WHMIS: D2B

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Chelating agent

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H316 Skin corrosion/irritation, Category 3

H319 Serious eye damage/ eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation,
Category 3

Symbol(s)



Signal Word

Warning

Hazard statements

Causes mild skin irritation and serious eye irritation. May cause respiratory tract irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If eye contact, flush eyes with copious amounts of water for 15 minutes. Avoid breathing in mists/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

MATERIAL SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Salt of 1 Hydroxyethylidene-1.1-Diphosphonic Acid	29329-71-3	3 - 7

SECTION 4 FIRST AID MEASURES

Inhalation:	If mists are inhaled, remove to fresh air and seek medical attention
Skin Contact:	Wash hands thoroughly with soap and water for 15 minutes.
Eye Contact:	Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Drink 2 or 3 glasses of water to dilute material. Contact a physician immediately.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Oxides of carbon and phosphorus.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Do not allow runoff to enter waterways.
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent entry into sewers, drains, or waterways. Dike if needed. Soak up spill with synthetic or natural absorbent and sweep into a clean, dry and labelled container for disposal.
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MATERIAL SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. Do not ingest. Avoid inhalation of chemical.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep away from acids, peroxides, metals, and easily ignitable materials. Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): None under normal conditions. Wear a NIOSH approved respirator if there isn't adequate ventilation.

Other (Specify): Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue liquid, mild odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 1.310 – 1.340

Viscosity: Not available

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

MATERIAL SAFETY DATA SHEET

Evaporation Rate	Not applicable
Boiling Point (°C):	100°C
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	56%
PH:	4 - 6
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Cyanides		
Conditions to Avoid:	High temperatures.		
Hazardous Decomposition Products:	CO, CO ₂ , and oxides of phosphorus.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Severe irritation to respiratory tract if mists are inhaled.
Skin Contact:	Product may irritate skin.
Eye Contact:	Strong eye irritant and may cause burns.
Ingestion:	Gastritis - stomach upset, nausea, and diarrhea.
CHRONIC HEALTH EFFECTS:	None known
Other Health Effects:	None known

LD 50 of Material (Specify Species and Routes): 2850 mg/kg, Oral (Rat), >5000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits):	Not established
Irritancy of Material	Skin, eye and respiratory tract irritant.
Sensitization of Material	None known
Synergistic Materials	None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity:	None known

MATERIAL SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed materials in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Clean up residual with absorbent material. Place in appropriate container and flush with water.

Disposal of Packaging: Dispose containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

MATERIAL SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: January 1, 1996

Date Revised: May 28, 2015

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

ENERGIZE

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Mixture

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Spa water treatment chemical

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H315 Skin corrosion/irritation, Category 2

H319 Serious eye damage/eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation

Label Elements

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and serious eye irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If contact with eyes, flush with copious amounts of water for 15 minutes. Avoid breathing in dusts/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

ENERGIZE

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Pentapotassium Bis(Peroxymonosulphate)		
Bis(Sulphate)	70693-62-8	60 – 100
Dipotassium Peroxodisulphate	7727-21-1	0 – 5
Sodium Carbonate	497-19-8	10 – 30

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If difficulty breathing, give artificial respiration and seek medical attention.
Skin Contact:	Wash thoroughly with soap and water.
Eye Contact:	Flush eyes with copious amounts of water and seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water or milk to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	At elevated temperatures of 100°C may liberate oxides of sulphur and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable for extinguishing surrounding fire.
Instructions to the Fire Fighters:	See below
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent material from entering drains, sewers, and waterways. Sweep up and place metal waste containers for disposal.
----------------------------------	---

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin and eyes. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Do not mix directly with other chemicals. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: General exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear air-purifying respirator with dust/mist cartridge if in a non-ventilated area.

Other (Specify): Impervious clothing if contact is likely. Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white granular, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: Not available

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

SAFETY DATA SHEET

Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not available
Freezing Point (°C):	Not available
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	Not applicable
PH:	6.5 – 7.5 (1% solution)
Coefficient Of Water/Oil Distribution:	Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Heavy metal salts, halogenated compounds, cyanides, aluminum, and sulfamic acid.		
Conditions to Avoid:	Avoid extreme heat.		
Hazardous Decomposition Products:	Oxides of sulphur and carbon.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to respiratory tract.
Skin Contact:	Prolonged skin contact will cause irritation.
Eye Contact:	Eye contact will cause irritation or burns.
Ingestion:	Severe gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) 500 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)
Dipotassium Peroxodisulphate 802 mg/kg, Oral (Rat), >10000 mg/kg, Dermal (Rabbit)
Sodium Carbonate 4090 mg/kg, Oral (Rat), 2210 mg/kg, Dermal (Mouse).

LC 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) >5 mg/l, Inhalation 4 h (Rat)

SAFETY DATA SHEET

Exposure (Limits): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate), AEL* (Dupont): 1mg/m³, 15 minute TWA, Dipotassium Peroxodisulphate, TLV (ACGIH): 0.1 mg/m³, TWA as persulphate.

Irritancy of Material Eye, skin and respiratory tract irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) – 96 h LC₅₀ Cyprinodon Variegatus (sheepshead minnow):
1.09 mg/l
- 72 h ERC₅₀ Algae: 1mg/l
- 48 h EC₅₀ Daphnia: 3.5 mg/l

Dipotassium Peroxodisulphate – 48 h LC₅₀ Daphnia Magna (water flea): 92 mg/l

Environmental Fate

Biodegradability: Readily biodegradable

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with lots of water.

Disposal of Packaging: Dispose of containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

SAFETY DATA SHEET

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: May 28, 2016
Date Revised: December 1, 2018

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Filter Free

WHMIS: E

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Filter Cleaner

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H303 Acute toxicity, oral, Category 5

H314 Skin corrosion/irritation, Category 1B

H318 Serious eye damage/eye irritation, Category 1

H335 Specific organ toxicity, single exposure, respiratory tract irritation, Category 3

H402 Hazardous to aquatic environment, acute hazard, Category 3

Symbol(s)



Signal Word

Danger

Hazard statements

May be harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful to aquatic life.

Precautionary statements

Do not ingest. If ingested, do not induce vomiting. Drink 2 or 3 glasses of water to dilute material and seek medical attention. Avoid contact with skin and eyes. Wear safety glasses and gloves when handling. Wash hands thoroughly after use. Use in a well ventilated area. If contact with eyes, flush with copious amounts of water for 15 minutes. Avoid breathing in dusts/fumes/vapours. If inhaled, remove person to fresh air and seek

Filter Free

MATERIAL SAFETY DATA SHEET

medical attention. Avoid release to the environment.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Bisulphate	7681-38-1	40 – 70
Sulphamic Acid	5329-14-6	30 - 60

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. If irritation persists, contact a physician.

Skin Contact: Wash thoroughly with soap and water. If irritation persists, contact a physician.

Eye Contact: Flush eyes with plenty of water for 20 minutes. Seek prompt medical attention.

Ingestion: Drink 2 or 3 glasses of water followed by milk of magnesia, beaten eggs or vegetable oil. Contact a physician immediately. Do not induce vomiting. If spontaneous vomiting occurs, keep head below victim's knees to prevent breathing in of vomitus.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: SO₂ and SO₃ at temperatures above 299°C

Unusual Fire or Explosion Hazards: None

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use appropriate media suitable to extinguish source of fire.

Instructions to the Fire Fighters: Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Fire Fighting Protective Equipment: See above.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Stop leak if without risk. Sweep up material and neutralize with an alkaline solution. Place in a designated labeled waster container.

Filter Free

MATERIAL SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Put on appropriate protective equipment. Avoid skin and eye contact. Avoid breathing dusts. Wash thoroughly after handling.

Ventilation Requirements: Use in well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep container tightly closed. Material is hygroscopic and will readily absorb moisture. Do not store dry product where exposed to moist conditions.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Impervious clothing if contact is likely. Eye wash and shower stations close to chemical use.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Purple beads, acidic odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: Not available

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Filter Free

MATERIAL SAFETY DATA SHEET

Vapour Density (Air-1):	Not applicable
Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not applicable
Freezing Point (°C):	Not applicable
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	Not applicable
PH:	1.7 (1% solution)
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	No	<u>X</u>
If No, Under Which Conditions?:	Product is unstable in the presence of moisture. It reacts with water to form an acidic solution.		
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Strong alkaline, water, sodium hypochlorite solution and oxidizers		
Conditions to Avoid:	Contact with strong alkaline materials such as caustic soda.		
Hazardous Decomposition Products:	If heated above 299°C; SO ₂ and SO ₃ will form.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Dust may cause burns to mucous membranes and respiratory tract.

Skin Contact: Skin irritant. May cause burns.

Eye Contact: Causes serious eye irritation and may cause burns.

Ingestion: If swallowed, may cause burns in the mouth, esophagus and stomach.

CHRONIC HEALTH EFFECTS: Repeated exposure without proper hygiene may cause skin rashes.

Other Health Effects: None

LD 50 of Material (Specify Species and Routes): Sodium Bisulphate: Oral, Rat 2800 mg/kg
Sulphamic Acid: Oral, Rat 3160 mg/kg

LC 50 of Material (Specify Species and Routes) Not available

Exposure (Limits): Not established

Irritancy of Material Skin, eye, respiratory tract irritant.

Sensitization of Material None known

Synergistic Materials None known

Filter Free

MATERIAL SAFETY DATA SHEET

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity This product readily dissolves in water to form a weak acid solution. A 0.05% or greater (by weight) solution of this product will likely be acutely harmful to aquatic life.

Environmental Fate

Biodegradability: Not applicable

Biaccumulative Potential: Not applicable

Mobility In Soil: Not applicable

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: After neutralizing with an alkaline solution, dispose in accordance with Federal, Provincial local regulations.

Safe Handling of Residues: Flush with plenty of water.

Disposal of Packaging: Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Corrosive Solid N.O.S., Sulphamic Acid

Class: 8

Packing group: III

UN: 1759

Consumer Commodity under 5 kg

US DOT CLASSIFICATION (49CFR 172.101, 172.102):

Proper shipping name: Corrosive Solid N.O.S., Sulphamic Acid

Class: 8

Packing group: III

UN: 1759

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: E

USA Not available

INTERNATIONAL Not available

Filter Free

MATERIAL SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: May 25, 2015

Date Revised: December 1, 2018

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

FILTER FREE

WHMIS: E

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Filter Cleaner

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Sulfamic Acid	30-60	5329-14-6	3160 mg/kg	Not available
Sodium Bisulphate	40-70	7681-38-1	2800 mg/kg	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, purple granular, mild odour

Odour Threshold (Ppm): Not available

Specific Gravity: Not available

Vapour Pressure (Mm): Not available

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not available

Boiling Point (C): Not available

Freezing Point (C): Not available

Solubility In Water (20c): Soluble

% Volatile (By Weight): Not applicable

Ph: 1.7 (1% solution)

Coefficient Of Water/Oil Distribution: Not available

FILTER FREE

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes X No
If Yes, Under Which Conditions?: Not applicable
Means of Extinction: Water, CO2, Foam
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products:

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Cyanides, carbides, sulphates, strong alkalines, sodium hypochlorite
And oxidizers
Reactivity And Under What Conditions: Not applicable
Hazardous Decomposition Products: Oxides of Sulphur

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact	<u>X</u>	:Skin Absorption	: Eye Contact	<u>X</u>
: Inhalation Acute		:Inhalation Chronic	: Ingestion	<u>X</u>

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Skin irritant. May cause burns
Eye: Eye irritant. May cause burns
Inhalation: Irritant. May cause burning to mucous membranes and upper respiratory tract.
Ingestion: Gastritis and possible burning and perforation of stomach and esophagus, vomiting and nausea.
Effects Of Chronic Exposure To Material: None known
Other Health Effects: None known
Ld 50 Of Material (Specify Species And Routes): See section II
Lc 50 Of Material (Specify Species And Routes): See section II
Exposure (Limits): Not available
Irritancy Of Material: Skin, eye nose and throat irritant

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MATERIAL SAFETY DATA SHEET

Sensitization Of Material: None known
Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Rubber/PVC gloves if skin contact is likely
Eye (Specify): Safety glasses/goggles if eye contact is likely
Respiratory (Specify): Wear dust filter mask if prolonged use in non-ventilated area is unavoidable.
Other (Specify): Wear face shield and protective clothing if contact is likely.
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify):
Leak And Spill Procedure: Shovel into dry, clean container. Dilute with water and neutralize with soda ash
Waste Disposal: Dispose material in accordance with Federal, Provincial and local government regulations

Handling Procedures And Equipment: Avoid eye and/or skin contact
Storage Requirements: Store in cool, dry area. Keep container tightly closed
Special Shipping Information: **Transportation:** Corrosive Solid N.O.S.
Sulphamic Acid – consumer commodity under 5kg
Class: 8
Pkg. Group: 111
P.I.N./Un: 1759

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. If irritation persists, flush skin with cold water for 20 minutes
Eye: Flush eyes with plenty of water for 20 minutes. Seek immediate medical attention
Inhalation: Remove person to fresh air. Should irritation persist, seek medical attention.
Ingestion: Drink large amounts of water or milk of magnesia, beaten eggs or vegetable oil. Contact a Physician immediately. Do not induce vomiting

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: March 30, 2014

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Formula 500

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Product Act (PCP).

Manufacturer's Name:
Street Address:
City:
Postal Code:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Pesticide
Chemical Formula: Not available
Trade Name & Synonyms: WSCP Solution
Molecular Weight: Not available
Material Use: Algaecide for swimming pools

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Acute toxicity, Oral, Category 5
Hazardous to the aquatic environment, Acute hazard, Category 1

Symbol(s)



Signal Word

Warning

Hazard statements

H303 May be harmful if swallowed.
H400 Very toxic to aquatic life.

Precautionary statements

P273 Avoid release to the environment.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulations.

Formula 500

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Poly(oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride)	31512-74-0	40

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If person experiences nausea, headaches, dizziness or has difficulty breathing, contact a physician immediately.
Skin Contact:	Wash hands thoroughly with soap and water. Should irritation occur, contact a physician.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 or 3 glasses of water to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Smoke and oxides of nitrogen and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Water fog, carbon dioxide, foam, dry chemical, water should be used to cool surrounding containers.
Instructions to the Fire Fighters:	Wear proper Protective Equipment. See below.
Fire Fighting Protective Equipment:	Wear full protective clothing and a positive pressure self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Block any potential routes to sewers, streams, lakes or rivers. Absorb with absorbent materials and dispose into metal containers. Flush residue with water. Block any potential routes to sewers, streams, lakes or rivers.
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SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Do not mix directly with other chemicals. Wear gloves and safety glasses when handling.

Ventilation Requirements: Use in well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): None

Other (Specify): Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue liquid, slight sweet odour.

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.094

Viscosity: Not available

Vapour Pressure (mm): Not available

SAFETY DATA SHEET

Vapour Density (Air-1):	Not available
Flashpoint (°C)	None
Evaporation Rate	Not available
Boiling Point (°C) :	>100°C (212°F)
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	60%
PH:	6.0 – 8.0
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Anionic polymers		
Conditions to Avoid:	See above		
Hazardous Decomposition Products:	Carbon monoxide may be formed upon burning.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	May cause irritation to the respiratory tract.
Skin Contact:	None expected on short term exposure.
Eye Contact:	Mild irritant
Ingestion:	Harmful if swallowed. No data available on human ingestion.

CHRONIC HEALTH EFFECTS: Prolonged or repeated skin contact may cause irritation.

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): ATEmix: 2774mg/kg, Oral (Rat), >2000mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Route): Not available

Exposure (Limits): Not established

Irritancy of Material Mild eye irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Poly(oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride) 60%

LC50: 0.353mg/l 48h (fathead minnow)
0.044mg/l 48h (rainbow trout)
0.660mg/l 24h (harlequinfish, red rasbora)

Environmental Fate

Biodegradability: Not available
Bioaccumulative Potential: Toxic to aquatic life. Unknown effect.
Mobility In Soil: Unknown effect.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance to federal, provincial and local regulations.
Safe Handling of Residues: Flush residue with copious amounts of water.
Disposal of Packaging: Dispose absorbed material in accordance to federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

IMDG

Proper shipping name: Not regulated
Class: Not applicable

SAFETY DATA SHEET

Packing group: Not applicable

UN: Not applicable

IATA

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

DSL and NDSL: Not Listed.

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Products Act (PCP).

USA

SARA (302 Extremely hazardous substances list): No components of this product are listed.

SARA (312 Hazard category): Immediate (acute) health hazard.

SARA (313 Toxic chemicals list): No components of this product are listed.

TSCA: Not listed.

FIFRA: This product is a registered pesticide.

INTERNATIONAL

Mexico, China, Korea and Taiwan: Listed

Australia, Japan and Philippines: Not listed.

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: May 17, 2016
Date Revised: December 1, 2018

Additional Notes Or References:

While Capco Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capco Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Formula 6000 – Algaecide 60%

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Product Act (PCP).

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Pesticide

Chemical Formula:

Not available

Trade Name & Synonyms:

WSCP Solution

Molecular Weight:

Not available

Material Use:

Algaecide for swimming pools

SECTION 2

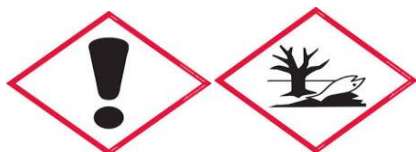
HAZARDS IDENTIFICATION

GHS classification:

Acute toxicity, Oral, Category 4

Hazardous to the aquatic environment, Acute hazard, Category 1

Symbol(s)



Signal Word

Warning

Hazard statements

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

Precautionary statements

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

SAFETY DATA SHEET

P330 Rinse mouth.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local regulations.

NFPA: 1 Health, 0 Fire, 0 Reactivity

HMIS: 1 Health, 0 Fire, 0 Reactivity

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Poly(oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride)	31512-74-0	60

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If person experiences nausea, headaches, dizziness or has difficulty breathing, contact a physician immediately.
Skin Contact:	Wash hands thoroughly with soap and water. Should irritation occur, contact a physician.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 or 3 glasses of water to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Smoke and oxides of nitrogen and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Water fog, carbon dioxide, foam, dry chemical, water should be used to cool surrounding containers.
Instructions to the Fire Fighters:	Wear proper Protective Equipment. See below.
Fire Fighting Protective Equipment:	Wear full protective clothing and a positive pressure self-contained breathing apparatus.

SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:

Block any potential routes to sewers, streams, lakes or rivers. Absorb with absorbent materials and dispose into metal containers. Flush residue with water.
Block any potential routes to sewers, streams, lakes or rivers.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Do not mix directly with other chemicals. Wear gloves and safety glasses when handling.

Ventilation Requirements:

Use in well ventilated area.

STORAGE

Ventilation Requirements:

Store in a cool, dry area.

Storage Requirements:

Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify):

Latex or rubber gloves if skin contact is likely.

Eye (Specify):

Safety glasses/goggles if eye contact is likely.

Respiratory (Specify):

None

Other (Specify):

Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:

Gas Liquid X Solid

Odour & Appearance:

Clear blue liquid, slight sweet odour.

Odour Threshold (ppm):

Not applicable

Flammability:

Yes

No

X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

SAFETY DATA SHEET

Decomposition Temp (°C)	Not available
Specific Gravity:	1.15
Viscosity:	125 CST (Kinematic)
Vapour Pressure (mm):	Not available
Vapour Density (Air-1):	Not available
Flashpoint (°C)	Closed cup: >100°C (212°F). (Tagliabue)
Evaporation Rate	Not available
Boiling Point (°C) :	>100°C (212°F)
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	40%
PH:	6.0 – 8.0
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Anionic polymers		
Conditions to Avoid:	See above		
Hazardous Decomposition Products:	Carbon monoxide may be formed upon burning.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	May cause irritation to the respiratory tract.
Skin Contact:	None expected on short term exposure.
Eye Contact:	Mild irritant
Ingestion:	Harmful if swallowed. No data available on human ingestion.

CHRONIC HEALTH EFFECTS: Prolonged or repeated skin contact may cause irritation.

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): 1850 mg/l, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Route): Not available

Exposure (Limits): Not established

Irritancy of Material Mild eye irritant.

SAFETY DATA SHEET

Sensitization of Material None known
Synergistic Materials None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

LC50: 0.353mg/l 48h (fathead minnow)
0.044mg/l 48h (rainbow trout)
0.660mg/l 24h (harlequinfish, red rasbora)

Environmental Fate

Biodegradability: Not available
Bioaccumulative Potential: Toxic to aquatic life. Unknown effect.
Mobility In Soil: Unknown effect.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance to federal, provincial and local regulations.
Safe Handling of Residues: Flush residue with copious amounts of water.
Disposal of Packaging: Dispose absorbed material in accordance to federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated
Class: Not applicable
Packing group: Not applicable
UN: Not applicable

IMDG

Proper shipping name: Not regulated

SAFETY DATA SHEET

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

IATA

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15

REGULATORY INFORMATION

CANADA

DSL and NDSL: Not Listed.

WHMIS: Not regulated under WHMIS. It is regulated under the Pest Control Products Act (PCP).

USA

SARA (302 Extremely hazardous substances list): No components of this product are listed.

SARA (312 Hazard category): Immediate (acute) health hazard.

SARA (313 Toxic chemicals list): No components of this product are listed.

TSCA: Not listed.

FIFRA: This product is a registered pesticide.

INTERNATIONAL

Mexico, China, Korea and Taiwan: Listed

Australia, Japan and Philippines: Not listed.

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: May 17, 2016
Date Revised: December 1, 2018

Additional Notes Or References:

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SAFETY DATA SHEET

Product Identifier

Manufacturer's Name: CAPO INDUSTRIES LTD.
Street Address: 1200 Corporate Drive
City: Burlington, Ontario, CANADA
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

SECTION 1. IDENTIFICATION

Product Identifier Spa Fragrance-Fun Scents

Other Means of Identification Not applicable

Recommended Use Spa fragrance

Restrictions on Use Do not use product for anything outside the above-specified uses

Initial Supplier Identifier Glycol based fluid

Emergency Telephone Number Canutec (613) 996-6666 (Collect)

SECTION 2. HAZARD IDENTIFICATION

Classification Not classified

Label Elements Signal Word: None required

Hazard Statements This substance does not meet the criteria for classification

Other Hazards No additional data available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Propylene glycol	57-55-6	95 – 100 WT.%	1,2-Dihydroxypropane	None

Notes No additional data available

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

SECTION 4. FIRST-AID MEASURES

Inhalation If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist

Skin Contact Wash off immediately with plenty of water. Remove and wash contaminated clothing before re-use. If irritation or symptoms develop, seek medical attention

Eye Contact Immediately flush eyes with running water for at least 5 to 10 minutes. If irritation persists, seek prompt medical attention

Ingestion Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Call a physician

Most Important Symptoms and Effects, Acute and Delayed May cause mild eye irritation. Symptoms may include stinging and tearing. May cause mild skin irritation. Symptoms may include mild redness and swelling. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Immediate Medical Attention and Special Treatment Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire

Specific Hazards Arising from the Product Burning may produce irritating, toxic and obnoxious fumes

Special Protective Equipment and Precautions for Fire-Fighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, Self-Contained Breathing Apparatus if necessary

Flammability classification (OSHA 29 CFR 1910.106) Not flammable

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear suitable protective equipment. Refer to protective measures listed in sections 7 and 8. Restrict access to area until completion of clean up

Methods for Containment and Cleaning Up Ensure spilled product does not enter drains, sewers, waterways, or confined spaces

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapour. Use adequate ventilation

Conditions for Safe Storage Keep container tightly closed in dry and well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	PEL	STEL
Propylene glycol	10 mg/m ³ (AIHA WEEL)	N/Av	N/Av	N/Av

Notes: The ACGIH TLV listed above for Propylene glycol is an AIHA WEEL

Appropriate Engineering Controls Good ventilation should be provided to vapour and mist concentrations below the exposure limits

Individual Protection Measures

Eye/Face Protection Splash proof chemical goggles. Face Shield

Skin Protection Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at that specific workplace

Respiratory Protection Use NIOSH approved supplied-air respirator

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Characteristic colour

Odour Pleasant fragrance

Odour Threshold No additional data available

pH Not applicable

Melting Point and Freezing Point <-59°C

Initial Boiling Point and Boiling Range 188.2°C

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

Flash Point 99°C Flash Point Method: Closed cup

Evaporation Rate (BuAe = 1) N/Av

Flammability (solid, gas) Not applicable

Upper Flammability Limit (% by vol.) 12.5 %

Lower flammable (% by vol.) 2.6%

Vapour Pressure 0.07 mm Hg

Vapour Density (air = 1) 2.6

Relative Density (water = 1) 1.04

Solubility in Water Soluble

Solubility in Other Liquids No additional data available

Partition Coefficient, n-Octanol / Water (Log Kow) -1.4 to -0.3

Auto-ignition Temperature > 400°C

Decomposition Temperature No additional data available

Viscosity No additional data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity Not normally reactive

Chemical Stability Material is stable under normal conditions

Possibility of Hazardous Reactions No additional data available

Conditions to Avoid Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight or ultraviolet sources

Incompatible Materials Strong oxidizing agents. Strong bases. Strong acids.

Hazardous Decomposition Products Carbon oxides. Organic acids. Ethers. Aldehydes

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

✓ Inhalation ✓ Skin contact ✓ Eye contact ✓ Ingestion

Acute Toxicity

LC50 ORAL-RAT-20,000 mg/kg

LD50 (oral) ORAL-RAT-20,000 mg/kg

LD50 (dermal) DERMAL-RAT->2000 mg/kg

Notes No additional data available

Skin Corrosion / Irritation May cause slight skin irritation

Serious Eye Damage / Irritation May cause mild, short lasting discomfort to eyes

STOT (Specific Target Organ Toxicity) - Single Exposure Evaluation of available data suggests that this material is not STOT-SE toxicant

Aspiration Hazard

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Respiratory and/or Skin Sensitization

Carcinogenicity

Chemical Name	IARC	ACGIH®	OSHA
Propylene glycol	Not listed as a carcinogen	Not listed as a carcinogen	Not listed as a carcinogen

Notes No additional data available

Reproductive Toxicity Not expected to cause reproductive effects

Development of Offspring No additional data available

Sexual Function and Fertility No additional data available

Effects on or via Lactation No additional data available

Germ Cell Mutagenicity No additional data available

Interactive Effects No additional data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful damaging effect on the environment

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

Persistence and Degradability Readily biodegradable

Bioaccumulative Potential No additional data available

Mobility in Soil No additional data available

Other Adverse Effects No additional data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods Contact a licensed professional waste disposal service to dispose of this material

Packaging Dispose of as unused product

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
Not regulated	None	Not regulated	Not applicable	Not regulated	None

Special Precautions None known or reported by the manufacturer

Environmental Hazards This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code Not available

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

WHMIS Classification This is not a WHMIS controlled product

HPR Compliance This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR

DSL This material is listed on the Canadian domestic substance list.

TSCA All components of this product are listed on the TSCA inventory

SECTION 16. OTHER INFORMATION

Prepared By (Group, Department): Quality Control

Telephone: (905) 332-6626

Preparation Date: February 28, 2020

Fun Scents - SPA FRAGRANCES

SAFETY DATA SHEET

Date of Latest Revision: New

Additional Notes or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Metasol

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Chelating agent

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H316 Skin corrosion/irritation, Category 3

H319 Serious eye damage/ eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation,
Category 3

Symbol(s)



Signal Word

Warning

Hazard statements

Causes mild skin irritation and serious eye irritation. May cause respiratory tract irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If eye contact, flush eyes with copious amounts of water for 15 minutes. Avoid breathing in mists/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

MATERIAL SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Salt of 1 Hydroxyethylidene-1.1-Diphosphonic Acid	29329-71-3	3 - 7

SECTION 4 FIRST AID MEASURES

Inhalation:	If mists are inhaled, remove to fresh air and seek medical attention
Skin Contact:	Wash hands thoroughly with soap and water for 15 minutes.
Eye Contact:	Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Drink 2 or 3 glasses of water to dilute material. Contact a physician immediately.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Oxides of carbon and phosphorus.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Do not allow runoff to enter waterways.
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent entry into sewers, drains, or waterways. Dike if needed. Soak up spill with synthetic or natural absorbent and sweep into a clean, dry and labelled container for disposal.
----------------------------------	---

MATERIAL SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. Do not ingest. Avoid inhalation of chemical.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep away from acids, peroxides, metals, and easily ignitable materials. Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): None under normal conditions. Wear a NIOSH approved respirator if there isn't adequate ventilation.

Other (Specify): Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue liquid, mild odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 1.310 – 1.340

Viscosity: Not available

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

MATERIAL SAFETY DATA SHEET

Evaporation Rate	Not applicable
Boiling Point (°C):	100°C
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	56%
PH:	4 - 6
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Cyanides		
Conditions to Avoid:	High temperatures.		
Hazardous Decomposition Products:	CO, CO ₂ , and oxides of phosphorus.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Severe irritation to respiratory tract if mists are inhaled.
Skin Contact:	Product may irritate skin.
Eye Contact:	Strong eye irritant and may cause burns.
Ingestion:	Gastritis - stomach upset, nausea, and diarrhea.
CHRONIC HEALTH EFFECTS:	None known
Other Health Effects:	None known

LD 50 of Material (Specify Species and Routes): 2850 mg/kg, Oral (Rat), >5000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits):	Not established
Irritancy of Material	Skin, eye and respiratory tract irritant.
Sensitization of Material	None known
Synergistic Materials	None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity:	None known

MATERIAL SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed materials in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Clean up residual with absorbent material. Place in appropriate container and flush with water.

Disposal of Packaging: Dispose containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

MATERIAL SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: May 28, 2015

Date Revised: December 1, 2018

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Natural Enzyme Descummer **WHMIS:** Not Controlled

Manufacturer's Name: **CAPO INDUSTRIES LTD**
Street Address: **1200 CORPORATE DRIVE**
City: **BURLINGTON, ONTARIO**
Postal Code: **L7L 5R6**

Emergency Telephone: **Canutec (613) 996-6666 (Collect)**

Chemical Name: Not applicable
Chemical Family: Enzyme
Chemical Formula: Proprietary blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Spa treatment

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: None
Symbol(s) None
Signal Word None
Hazard statements None
Precautionary statements None

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
No Regulated Components		

SECTION 4 FIRST AID MEASURES

Inhalation: Not applicable
Skin Contact: Wash thoroughly with soap and water.
Eye Contact: Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion: None required.
Note to physicians None

SAFETY DATA SHEET

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Not available

Unusual Fire or Explosion Hazards: None known

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: See below

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Flush into any sewage or disposal system.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: None required

Ventilation Requirements: None required

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Enzymatic activity may be lost if temperatures exceed 50°C, or if pH exposure is below 3.5 or above 9.0.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): None required

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): None required

Other (Specify): None required

SAFETY DATA SHEET

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Odourless, straw coloured liquid.

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C): Not available

Specific Gravity: 1.002

Viscosity: Not available

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C): Not applicable

Evaporation Rate: Not available

Boiling Point (°C): 100°C

Freezing Point (°C): Not available

Solubility In Water (20°C): Soluble

% Volatile (By Weight): Not available

PH: 3.1

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Oxidizing compounds

Conditions to Avoid: None known

Hazardous Decomposition Products: Not available

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None expected
Skin Contact: None expected
Eye Contact: May cause eye irritation.
Ingestion: None expected, however excessive ingestion may cause mild nausea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None expected. All tests show no inhalation, skin or ingestion toxicity.

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: Mild eye irritant

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Flush into any sewage or disposal system.

Safe Handling of Residues: Flush with plenty of water.

Disposal of Packaging: Empty packaging can be recycled if possible, or dispose in accordance with federal, provincial, and local regulations.

SAFETY DATA SHEET

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Not Controlled

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

OXY OUT/OXY CLEAR-NON- CHLORINE SHOCK **WHMIS:** D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Oxone
Chemical Family: Monopersulphate
Chemical Formula: 2KHSO5 KHSO4 K2S04
Trade Name & Synonyms: Potassium Monopersulphate
Molecular Weight: Not applicable
Material Use: Pool Water Treatment Chemical

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Potassium Peroxymono Sulphate	30-60	10058-23-8	Not available	Not available
Potassium Bisulphate	10-30	7646-93-7	Not available	Not available
Potassium Sulphate	15-40	7778-80-5	Not available	Not available
Magnesium Carbonate	1-5	546-93-0	Not available	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: **Gas** **Liquid** **Solid** **X**

Odour & Appearance: White, granular, opaque, odourless

Odour Threshold (Ppm): Not applicable

Specific Gravity: 1.1 to 1.4

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): Decomposes

Solubility In Water (20c): 25.6% @ 20 deg C

% Volatile (By Volume) Not applicable

Ph: 2.30 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No **X**

If Yes, Under Which Conditions?: Not applicable. NOTE: Grinding or intensive mixing may cause ignition or oxidizable material present.

Means Of Extinction: Use media suitable to extinguish source of fire.

Special Procedures: Wear self-contained breathing apparatus when fire fighting.

Flashpoint (Celsius) And Method: Not applicable

Autoignition Temperature (Celsius): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Hazardous Combustion Products: Not applicable

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes **X** No

If No, Under Which Conditions?: Not applicable

Incompatibility To Other Substances: Yes **X** No

If So, Which Ones: This product is an oxidizer. When mixed with halides (chlorine, bromine) or compounds containing halides, it will release the respective halogen gas. Examples: Mixture of this product and salt will emit chlorine gas. Mixture with cyanides can release hydrogen cyanide gas. Heavy metal salts such as cobalt, nickel and copper cause the evolution of oxygen.

Reactivity And Under What Conditions: See above.

Hazardous Decomposition Products: Releases oxygen gas.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact	X	: Skin Absorption	: Eye Contact	X
: Inhalation Acute		: Inhalation Chronic	: Ingestion	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Skin contact may cause irritation and burns.

Eye: Eye contact may cause irritation and burns.

Inhalation: Will cause irritation of mucosal membrane and respiratory passages.

Ingestion: Gastritis possibility progressing to necrosis or haemorrhage.

Effects Of Chronic Exposure To Material: None known.

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): Oral Rat – 2000 mg/kg, Skin absorption Rabbit - > 11,000 mg/kg

Lc 50 Of Material (Specify Species And Routes): 4 hr inhalation Rat - > 5 mg/kg

MATERIAL SAFETY DATA SHEET

Exposure (Limits): OSHA PEL particulates not otherwise classified: 15 mg/m³, 8 hr, TWA Total Dust; 5 mg/m³, 8 hr, TWA Respirable Dust.

Irritancy Of Material: Skin, eye, nose and throat.

Sensitization Of Material: None known.

Synergistic Materials: None known.

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known.

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): NIOSH/MSHA air purifying respirator if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Impervious clothing if contact is likely.

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area. Local ventilation may be required to keep particulates below OSHA-PEL.

Leak And Spill Procedure: Sweep up and collect in a metal container. Flush residue with water. Large quantities should be neutralized with soda ash.

Waste Disposal: Dispose material in accordance with federal, provincial and local government regulations.

Handling Procedures And Equipment: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly after handling.

Storage Requirements: Store in cool, dry area. Do not mix directly with other chemicals. Do not store with combustible materials.

Special Shipping Information:

Transportation:	Corrosive Solid Acidic- Inorganic N.O.S. (Monopersulphate Compound)
Class:	8
Pkg. Group:	II
P.I.N./Un:	3260 1Kg and under Ltd Qty.

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. Flush with water for 15 minutes.

Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

Inhalation: Remove person to fresh air. Give artificial respiration if required. Seek medical attention.

Ingestion: Drink large quantities of water and contact a physician.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist Telephone: (905) 332-6626

Preparation Date: July 16, 1999
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

OXY OUT/OXY CLEAR-NON- CHLORINE SHOCK WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6
Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Oxone
Chemical Family: Monopersulphate
Chemical Formula: 2KHSO5 KHSO4 K2S04
Trade Name & Synonyms: Potassium Monopersulphate
Molecular Weight: Not applicable
Material Use: Pool Water Treatment Chemical

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Potassium Peroxymono Sulphate	30-60	10058-23-8	Not available	Not available
Potassium Bisulphate	10-30	7646-93-7	Not available	Not available
Potassium Sulphate	15-40	7778-80-5	Not available	Not available
Magnesium Carbonate	1-5	546-93-0	Not available	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X
Odour & Appearance: White, granular, opaque, odourless
Odour Threshold (Ppm): Not applicable
Specific Gravity: 1.1 to 1.4
Vapour Pressure (Mm): Not applicable
Vapour Density (Air-1): Not applicable
Evaporation Rate: Not applicable
Boiling Point (C): Not applicable
Freezing Point (C): Decomposes
Solubility In Water (20c): 25.6% @ 20 deg C
% Volatile (By Volume) Not applicable
Ph: 2.30 (1% solution)
Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No **X**

If Yes, Under Which Conditions?: Not applicable. NOTE: Grinding or intensive mixing may cause ignition or oxidizable material present.

Means Of Extinction: Use media suitable to extinguish source of fire.

Special Procedures: Wear self-contained breathing apparatus when fire fighting.

Flashpoint (Celsius) And Method: Not applicable

Autoignition Temperature (Celsius): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Hazardous Combustion Products: Not applicable

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes **X** No

If No, Under Which Conditions?: Not applicable

Incompatibility To Other Substances: Yes **X** No

If So, Which Ones: This product is an oxidizer. When mixed with halides (chlorine, bromine) or compounds containing halides, it will release the respective halogen gas. Examples: Mixture of this product and salt will emit chlorine gas. Mixture with cyanides can release hydrogen cyanide gas. Heavy metal salts such as cobalt, nickel and copper cause the evolution of oxygen.

Reactivity And Under What Conditions: See above.

Hazardous Decomposition Products: Releases oxygen gas.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact	X	: Skin Absorption	: Eye Contact	X
: Inhalation Acute		: Inhalation Chronic	: Ingestion	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Skin contact may cause irritation and burns.

Eye: Eye contact may cause irritation and burns.

Inhalation: Will cause irritation of mucosal membrane and respiratory passages.

Ingestion: Gastritis possibility progressing to necrosis or haemorrhage.

Effects Of Chronic Exposure To Material: None known.

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): Oral Rat – 2000 mg/kg, Skin absorption Rabbit - > 11,000 mg/kg

Lc 50 Of Material (Specify Species And Routes): 4 hr inhalation Rat - > 5 mg/kg

MATERIAL SAFETY DATA SHEET

Exposure (Limits): OSHA PEL particulates not otherwise classified: 15 mg/m³, 8 hr, TWA Total Dust; 5 mg/m³, 8 hr, TWA Respirable Dust.

Irritancy Of Material: Skin, eye, nose and throat.

Sensitization Of Material: None known.

Synergistic Materials: None known.

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known.

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): NIOSH/MSHA air purifying respirator if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Impervious clothing if contact is likely.

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area. Local ventilation may be required to keep particulates below OSHA-PEL.

Leak And Spill Procedure: Sweep up and collect in a metal container. Flush residue with water. Large quantities should be neutralized with soda ash.

Waste Disposal: Dispose material in accordance with federal, provincial and local government regulations.

Handling Procedures And Equipment: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly after handling.

Storage Requirements: Store in cool, dry area. Do not mix directly with other chemicals. Do not store with combustible materials.

Special Shipping Information:

Transportation:	Corrosive Solid Acidic- Inorganic N.O.S. (Monopersulphate Compound)
Class:	8
Pkg. Group:	II
P.I.N./Un:	3260 1Kg and under Ltd Qty.

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. Flush with water for 15 minutes.

Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

Inhalation: Remove person to fresh air. Give artificial respiration if required. Seek medical attention.

Ingestion: Drink large quantities of water and contact a physician.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist Telephone: (905) 332-6626

Preparation Date: July 16, 1999
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

PH UP/PH BOOSTER/PH PLUS

WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Sodium Carbonate
Chemical Family: Sodium Salt
Chemical Formula: Na_2CO_3
Trade Name & Synonyms: Soda ash
Molecular Weight: Not applicable
Material Use: Ph Booster

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Carbonate	60-100	497-19-8	3160-4090 mg/kg	2300mg/m ³ , 2hrs
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SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: White , granular solid odourless

Odour Threshold (Ppm): Not applicable

Specific Gravity: 2.532

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): Not applicable

Solubility In Water (20c): 17.5% by weight

% Volatile (By Weight) Not applicable

Ph: 11.3 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: Evolves CO₂ above 400 deg C

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Acids, Aluminum. D2 O5, Sulphuric Acid, F2 Lithium and 2,4,6-Trinitro Toluene
Reactivity And Under What Conditions: may react with acids causing CO₂ evolution and severe splattering
Hazardous Decomposition Products: Carbon dioxide when burned

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact <u>X</u>	: Skin Absorption	: Eye Contact <u>X</u>
: Inhalation Acute <u>X</u>	: Inhalation Chronic	: Ingestion <u>X</u>

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Skin contact may cause irritation
Eye: Eye contact may cause irritation and burns
Inhalation: Dust may cause irritation to throat and nose, chest tightening and difficulty breathing.
Ingestion: Severe gastrointestinal irritation, nausea, vomiting and diarrhea.

Effects Of Chronic Exposure To Material: May lead to irritation and or sensitivity of the skin.

Other Health Effects: Skin irritation may be aggravated in persons with existing skin lesions. Breathing Of dust may aggravate acute or chronic asthma and other pulmonary diseases.

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): None specifically – particulates not otherwise classified
 ACGIH – TLV = 10mg/m³ total dust OSHA – TWA = 15mg/m³ total dust, 5mg/m³ respirable

PH UP/PH BOOSTER/PH PLUS

MATERIAL SAFETY DATA SHEET

Irritancy Of Material: Skin, eye, nose and throat irritant
Sensitization Of Material: None known
Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely
Eye (Specify): Safety glasses/goggles if eye contact is likely
Respiratory (Specify): Wear dust mask if prolonged use in non-ventilated area is unavoidable
Other (Specify): Wear protective clothing if contact is likely
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area
Leak And Spill Procedure: Sweep up material for disposal. This product may be neutralized with a Weak acid to ph of 6 to 9
Waste Disposal: Dispose absorbed material at an approved landfill site in accordance with Federal, Provincial and local regulations
Handling Procedures And Equipment: Avoid prolonged skin contact
Storage Requirements: Store in cool, dry area..
Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.
Eye: Flush eyes with plenty of water for 15minutes. Seek medical attention
Inhalation: Remove person to fresh air. Obtain medical attention. Administer artificial respiration or CPR as Required.
Ingestion: Drink 2 or 3 glasses and/or milk. Contact a physician immediately

Note to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that over exposure to materials other than this Material may have occurred. If burns result from over exposure, treat in the following manner:
Ingestion – Treat asphyxia from glottal edema by maintaining an adequate airway. Treat shock, Maintain normal blood pressure by transfusion and by the administration of 5% dextrose in Saline. If symptoms are severe and perforation of the stomach or esophagus is suspected, give Nothing by mouth until endoscopic examination has been done. Maintain nutrition by giving Carbohydrate or hyperalimentation fluid intravenously. Give prednisolone 2mg/kg/d in Divided doses for 10 days, to reduce progression of fibrocystic and hyaline lung disease. Esophageal stricture may require dilation.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist Telephone: (905) 332-6626

Preparation Date: January 1, 1996

Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

PH DOWN/PH REDUCER/PH MINUS

WHMIS: E

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Sodium Bisulphate
Chemical Family: Sodium Salt
Chemical Formula: NA HS04
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Pool water ph reducer

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Bisulphate	60-100	2800 mg/kg	Not available	
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SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque white beads, acidic odour

Odour Threshold (Ppm): Not applicable

Specific Gravity: 83 lbs/foot3

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): 176.7 deg C

Solubility In Water (20c): Soluble

% Volatile (By Weight) Not applicable

Ph: 1.4 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

PH DOWN/PH REDUCER/PH MINUS

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use appropriate media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: SO₂, SO₃ at temperature above 299 deg C

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes No X
If No, Under Which Conditions?: Product is unstable in the presence of moisture. It reacts with water To form an acidic solution
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Strong alkaline, water, sodium hypochlorite solution and oxidizers
Reactivity And Under What Conditions: Contact with strong alkaline materials such as caustic soda
Hazardous Decomposition Products: If heated above 299 deg c SO₂ AND SO₃ will foam

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact <u>X</u>	: Skin Absorption	: Eye Contact <u>X</u>
: Inhalation Acute	: Inhalation Chronic	: Ingestion <u>X</u>

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Mild irritant
Eye: May cause burns
Inhalation: Dust may cause burns to mucous membranes and respiratory tract.
Ingestion: If swallowed, may cause burns in the mouth, esophagus and stomach

Effects Of Chronic Exposure To Material: Repeated exposure without proper hygiene may cause skin rashes

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): Not established

Irritancy Of Material: Skin, eye, nose and throat irritant

Sensitization Of Material: None known

PH DOWN/PH REDUCER/PH MINUS

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely
Eye (Specify): Safety glasses/goggles if eye contact is likely
Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable
Other (Specify): Impervious clothing if contact is likely
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area
Leak And Spill Procedure: Sweep up spill, Neutralize with alkaline solution
Waste Disposal: After neutralizing with alkaline solution, dispose in accordance with Federal, Provincial and local regulations
Handling Procedures And Equipment: Avoid skin contact
Storage Requirements: Store in cool, dry area. Keep away from strong alkalines.
Special Shipping Information: **Transportation:** Not regulated (amended October 1994)
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. If irritation persists, contact a physician
Eye: Flush eyes with plenty of water for 20 minutes. Seek prompt medical attention
Inhalation: Remove person to fresh air. If irritation persists, contact a physician.
Ingestion: Drink 2 or 3 glasses of water followed by milk of magnesia, beaten eggs or vegetable oil. Contact A physician immediately. Do not induce vomiting. If spontaneous vomiting occurs, keep head Below victims knees to prevent breathing in of vomitus

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

PH DOWN/PH REDUCER/PH MINUS

WHMIS: E

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Sodium Bisulphate
Chemical Family: Sodium Salt
Chemical Formula: NA HS04
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Pool water ph reducer

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Bisulphate	60-100	2800 mg/kg	Not available	
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SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque white beads, acidic odour

Odour Threshold (Ppm): Not applicable

Specific Gravity: 83 lbs/foot3

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): 176.7 deg C

Solubility In Water (20c): Soluble

% Volatile (By Weight) Not applicable

Ph: 1.4 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

PH DOWN/PH REDUCER/PH MINUS

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use appropriate media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: SO₂, SO₃ at temperature above 299 deg C

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes No X
If No, Under Which Conditions?: Product is unstable in the presence of moisture. It reacts with water To form an acidic solution
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Strong alkaline, water, sodium hypochlorite solution and oxidizers
Reactivity And Under What Conditions: Contact with strong alkaline materials such as caustic soda
Hazardous Decomposition Products: If heated above 299 deg c SO₂ AND SO₃ will foam

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact	<u>X</u>	: Skin Absorption	: Eye Contact	<u>X</u>
: Inhalation Acute		: Inhalation Chronic	: Ingestion	<u>X</u>

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Mild irritant
Eye: May cause burns
Inhalation: Dust may cause burns to mucous membranes and respiratory tract.
Ingestion: If swallowed, may cause burns in the mouth, esophagus and stomach

Effects Of Chronic Exposure To Material: Repeated exposure without proper hygiene may cause skin rashes

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): Not established

Irritancy Of Material: Skin, eye, nose and throat irritant

Sensitization Of Material: None known

PH DOWN/PH REDUCER/PH MINUS

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely
Eye (Specify): Safety glasses/goggles if eye contact is likely
Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable
Other (Specify): Impervious clothing if contact is likely
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area
Leak And Spill Procedure: Sweep up spill, Neutralize with alkaline solution
Waste Disposal: After neutralizing with alkaline solution, dispose in accordance with Federal, Provincial and local regulations
Handling Procedures And Equipment: Avoid skin contact
Storage Requirements: Store in cool, dry area. Keep away from strong alkalines.
Special Shipping Information: **Transportation:** Not regulated (amended October 1994)
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. If irritation persists, contact a physician
Eye: Flush eyes with plenty of water for 20 minutes. Seek prompt medical attention
Inhalation: Remove person to fresh air. If irritation persists, contact a physician.
Ingestion: Drink 2 or 3 glasses of water followed by milk of magnesia, beaten eggs or vegetable oil. Contact A physician immediately. Do not induce vomiting. If spontaneous vomiting occurs, keep head Below victims knees to prevent breathing in of vomitus

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

pH Stable **WHMIS:** Not Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable

Chemical Family: Mixture

Chemical Formula: Not applicable

Trade Name & Synonyms: Not applicable

Molecular Weight: Not applicable

Material Use: PH buffer

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: None

Symbol(s) None

Signal Word None

Hazard statements None

Precautionary statements None

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Keep warm and at rest. Seek medical attention if cough or other symptoms develop.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if necessary.

Ingestion: Drink 2 or 3 glasses of water. Do not induce vomiting and seek medical attention.

Note to physicians None

SAFETY DATA SHEET

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Not applicable
Unusual Fire or Explosion Hazards: None known
Sensitivity to Mechanical Impact: None
Rate of Burning: Not applicable
Explosive Power: Not applicable
Sensitivity to Static Discharge: None
Fire Extinguishing Media: Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters: See below
Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Absorb with synthetic or natural absorbent and place into a clean, dry labelled container for disposal.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Wear gloves and safety glasses when handling. Wash hands thoroughly after use.
Ventilation Requirements: None required

STORAGE

Ventilation Requirements: Store in a cool, dry area.
Storage Requirements: If product freezes, allow to return to room temperature and mix to dissolve solids.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex gloves if skin contact is likely.
Eye (Specify): Safety glasses/goggles if eye contact is likely.
Respiratory (Specify): None
Other (Specify): Eye wash and shower stations are close to work area if needed.

SAFETY DATA SHEET

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Odourless, clear colourless liquid.

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 1.350

Viscosity: Not available

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C) Not applicable

Evaporation Rate Not available

Boiling Point (°C): Not available

Freezing Point (°C): 0°C

Solubility In Water (20°C): Soluble

% Volatile (By Weight) 60%

PH: 7.4

Coefficient Of Water/Oil Distribution: Not available

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes No X

If So, Which Ones:

Conditions to Avoid: None under normal conditions.

Hazardous Decomposition Products: Not available

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Not expected to cause irritation to the lungs, upper respiratory tract or nose.

Skin Contact: Not expected to cause irritation to the skin.

Eye Contact: Not expected to cause irritation to the eyes.

Ingestion: Not expected to cause irritation to the digestive tract.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: None

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance to federal, provincial and local regulations.

Safe Handling of Residues: Flush with plenty of water.

Disposal of Packaging: Empty containers should be disposed in accordance to federal, provincial and local regulations.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SAFETY DATA SHEET

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Not controlled

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: June 2, 2015
Date Revised: December 1, 2020

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

PH Up

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Sodium Carbonate

Chemical Family:

Sodium Salt

Chemical Formula:

Na₂ CO₃

Trade Name & Synonyms:

Soda Ash

Molecular Weight:

Not applicable

Material Use:

Pool chemical to boost pH

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 2A

Symbol(s)



Signal Word

Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash hands thoroughly after handling.

P280 Wear protective clothes/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

MATERIAL SAFETY DATA SHEET

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off all contaminated clothing and wash it before reuse.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Carbonate	497-19-8	60 - 100

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Obtain medical attention. Administer artificial respiration or CPR as required.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

Ingestion: Drink 2 or 3 glasses of milk. Contact a physician immediately.

Note to physicians Treat symptomatically. Medical conditions that may be aggravated by exposure to this product include diseases of the skin, eyes and respiratory tract.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: None in normal use.

Unusual Fire or Explosion Hazards: None

Sensitivity to Mechanical Impact: None

Rate of Burning: None

Explosive Power: None

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Carbon dioxide, dry chemical, alcohol foam, water fog, dry sand..

Instructions to the Fire Fighters: Isolate materials that are not involved in the fire and protect personnel. Use water spray to cool fire exposed containers or structures. Use water to disperse vapours. Spilled material may cause floors and contact surfaces to become slippery.

Fire Fighting Protective Equipment: Use self-contained breathing apparatus and protective clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Neutralize with a weak acid to a pH of 6 to 9. Sweep up material and place in a labeled container for disposal.

MATERIAL SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Use normal industrial hygiene and housekeeping practices. In the presence of moisture, soda ash and lime dusts combine to form corrosive caustic soda which may cause burns.

Ventilation Requirements:

Use in a well ventilated area.

Other Precautions:

Avoid breathing dusts. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing before reuse.

STORAGE

Ventilation Requirements:

Ventilation should be corrosion proof. Store in a cool, dry area.

Storage Requirements:

Keep away from heat, sparks or flames. Keep containers closed. Avoid moisture contamination. Prolonged storage may result in lumping or caking. Product should not be stored in aluminum, lead or tin. Attacks some types of rubber, plastics and coatings. Confirm suitability of any packaging before using.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Local exhaust ventilation. Ventilation should be corrosion and explosion proof. Make up air should be supplied to balance air that is removed by local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify):

Latex or rubber gloves if skin contact is likely.

Eye (Specify):

Safety glasses/goggles if eye contact is likely.

Respiratory (Specify):

Wear dust mask if prolonged use in a non-ventilated area is unavoidable.

Other (Specify):

Wear protective clothing if contact is likely. Eye wash stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:**Gas****Liquid****Solid****X****Odour & Appearance:**

White granular solid, odourless

Odour Threshold (ppm):

Not applicable

MATERIAL SAFETY DATA SHEET

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) 400°C

Specific Gravity: 2.532

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): Not applicable

Solubility In Water (20°C): 17.5% by weight

% Volatile (By Weight) Not applicable

PH: 11.3 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Acids, lime dust, heat.

Conditions to Avoid: May react with acids causing carbon dioxide evolution and severe splattering. Contact with lime dust in the presence of moisture can produce sodium hydroxide.

Hazardous Decomposition Products: Carbon dioxide when burned.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Dust may cause irritation to throat and nose, and respiratory tract.

MATERIAL SAFETY DATA SHEET

Skin Contact: Skin contact may cause irritation.

Eye Contact: Eye contact may cause irritation and burns.

Ingestion: Severe gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: May lead to irritation and/or sensitivity of the skin.

Other Health Effects: Skin irritation may be aggravated in persons with existing skin lesions. Breathing of dust may aggravate acute or chronic asthma and other pulmonary diseases.

LD 50 of Material (Specify Species and Routes) 4090 mg/kg, Oral (Rat), >2000 mg/kg,

LC 50 of Material (Specify Species and Routes) 2.3 mg/l, Inhalation, 2 h (Rat)

Exposure (Limits: Not available

Irritancy of Material Skin, eyes, nose and throat irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

Daphnia Magnia LC50, 96hr: 265-565mg/l

Blue Gill Sunfish LC50, 96hr: 300-320mg/l

Daphnia Magnia EC50, 48hr: 1200mg/l

Environmental Fate

Biodegradability: Not applicable

Bioaccumulative Potential: Not available

Mobility In Soil: Considerable solubility and mobility. Soil/sediments.

SECTION 13

DISPOSAL CONSIDERATIONS

Deactivating Chemicals: Neutralize with a weak acid to a pH of 6 to 9.

Waste Disposal: Dispose absorbed material at an approved landfill site in accordance with Federal, Provincial and local regulations.

Safe Handling of Residues: See above

Disposal of Packaging: Dispose absorbed material at an approved landfill site in accordance with Federal, Provincial and local regulations.

MATERIAL SAFETY DATA SHEET

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION: Not Regulated

US DOT CLASSIFICATION (49CFR 172.101, 172.102): Not Regulated

SECTION 15 REGULATORY INFORMATION

WHMIS: D2B,

HPR COMPLIANCE: This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2016

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

POOL SHOCK / SURE SHOCK **WHMIS:** Not Regulated (C, E, F) Controlled by the PCP Act

MANUFACTURER'S NAME: **CAPO INDUSTRIES LTD**
STREET ADDRESS: **1200 CORPORATE DRIVE**
CITY: **BURLINGTON, ONTARIO**
POSTAL CODE: **L7L 5R6**

EMERGENCY TELEPHONE: **CANUTEC (613) 996-6666 (COLLECT)**

CHEMICAL NAME: Calcium Hypochlorite
CHEMICAL FAMILY: Hypochlorites
CHEMICAL FORMULA: Ca (OCL)₂
TRADE NAME & SYNONYMS: Pool Shock
MOLECULAR WEIGHT: 142
MATERIAL USE: Pool Water Disinfectant

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Calcium Hypochlorite	60-100	7778-54-3	850 mg/kg	2-20 mg/litre of air/hour

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X

ODOUR & APPEARANCE: Free flowing white granules; chlorine odour

ODOUR THRESHOLD (PPM): Not applicable

SPECIFIC GRAVITY: 0.800 – 0.960

VAPOUR PRESSURE (MM): Not applicable

VAPOUR DENSITY (AIR-1): Not applicable

EVAPORATION RATE: Not applicable

BOILING POINT (C): Decomposes at 180 deg C

FREEZING POINT (C): Not applicable

SOLUBILITY IN WATER (20C): 20%

% VOLATILE (BY VOLUME) Not applicable

PH: (1% solution) 10.5 – 11.5

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES **X** NO

IF YES, UNDER WHICH CONDITIONS?: Fire conditions – material supplies oxygen to aid combustion.

MEANS OF EXTINCTION: Use water only. Smothering is ineffective because the product can supply oxygen for combustion.

SPECIAL PROCEDURES: Use water spray to cool fire exposed containers or structures. Use water spray to disperse vapours. Use self-contained breathing apparatus and special protective clothing.

FLASHPOINT (CELSIUS) AND METHOD: Not available

AUTOIGNITION TEMPERATURE (CELSIUS): Not available

LOWER EXPLOSION LIMIT (% BY VOLUME): Not available

UPPER EXPLOSION LIMIT (% BY VOLUME): Not available

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products are toxic and may include oxygen, chloride ions, hydrochloric acid and oxides of calcium, acid or ammonia. Contamination will release toxic gases. Excessive heat will cause decomposition.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES **X** NO

IF NO, UNDER WHICH CONDITIONS?: Not applicable

INCOMPATIBILITY TO OTHER SUBSTANCES: YES **X** NO

IF SO, WHICH ONES: Acids, ammonia, organic material, urea, similar nitrogen containing compounds may initiate a fire.

REACTIVITY AND UNDER WHAT CONDITIONS: Avoid heat, moisture and organic compounds. May initiate a fire.

HAZARDOUS DECOMPOSITION PRODUCTS: See hazardous combustion products (section IV).

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	X	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC		: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Strong irritant, may cause burns.

EYE: Strong irritant, may cause burns or permanent damage (glaucoma, cataracts, corneal scarring, clouding, permanent blindness).

INHALATION: Severe irritation or nose, throat and respiratory tract. Repeated/prolonged exposures may cause productive cough, running nose, bronchia pneumonia, pulmonary edema (fluid build up in lungs) and reduction of pulmonary function.

MATERIAL SAFETY DATA SHEET

INGESTION: Severe pain in mouth, throat and abdomen. Vomiting, diarrhea and perforation of the esophagus and stomach lining may occur.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: Corrosive effects on the skin and eyes may be delayed and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential.

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Chlorine – TWAEW – 1 ppm, 3mg/m³, STEV – .3 ppm, 9mg/m³, Nuisance particulate not otherwise classified – ACCGIH TLV – 10 MG/M³

IRRITANCY OF MATERIAL: Strong eye and skin irritant

SENSITIZATION OF MATERIAL: Not available

SYNERGISTIC MATERIALS: Not available

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Natural rubber or neoprene if skin contact is likely.

EYE (Specify): Chemical workers goggles/glasses with side shields if eye contact is likely.

RESPIRATORY (Specify): Wear NIOSH/MSHA respirator for dust up to 25 mg/kg particulate and chlorine if TWAEV, STEV are to be exceeded.

OTHER (Specify): Safety shower and eye wash station near exposure is recommended.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Local exhaust. Use only in a well ventilated area..

LEAK AND SPILL PROCEDURE: Clean up spillage and equipment at once. Place spilled material into clean, dry container. Rinse residue with plenty of water. Do not throw in regular garbage. Never return spilled material into original container..

WASTE DISPOSAL: Dispose in accordance to all applicable federal, provincial and local regulations.

HANDLING PROCEDURES AND EQUIPMENT: Avoid contact with eyes, skin and clothing. Avoid breathing vapours. and dust.

STORAGE REQUIREMENTS: Store in cool (less than 40 deg C) area. Keep away from open flames, organic acids and combustible materials.

SPECIAL SHIPPING INFORMATION:

Transportation:	Calcium Hypochlorite Hydrated
Class:	5.1
Pkg. Group:	II
P.I.N./UN:	2880

MATERIAL SAFETY DATA SHEET

SECTION VIII

FIRST AID MEASURES

- SKIN:** Wash thoroughly with soap and water for a minimum of 20 minutes. Obtain medical attention.
- EYE:** Flush eyes thoroughly with water for a minimum of 20 minutes. Seek medical attention immediately.
- INHALATION:** Remove person to fresh air. Give artificial respiration only if breathing has stopped. Give cardio-pulmonary resuscitation (CPR) if there is no breathing and no pulse. Obtain medical attention immediately.
- INGESTION:** Rinse mouth. Give ½ to 1 glass of water to dilute material. Immediately contact poison control center. Vomiting should only be induced under the direction of a physician or poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomit us. Rinse mouth and administer more water. Immediately transport victim to emergency facility.

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996

DATE OF LATEST REVISION/REVIEW: September 2, 2008

ADDITIONAL NOTES OR REFERENCES:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

QUICK CLEAR

WHMIS: Not 'Regulated

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Cationic Poly electrolyte
Chemical Formula: Proprietary Blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Water clarifier/coagulant

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: odour mild, clear blue liquid

Odour Threshold (Ppm): Not applicable

Specific Gravity: 1.014

Vapour Pressure (Mm): Not available

Vapour Density (Air-1): Not available

Evaporation Rate: Same as water

Boiling Point (C): 100 deg c

Freezing Point (C): 0 deg C

Solubility In Water (20c): Soluble

% Volatile (By Weight) 94%

Ph: 7.0

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: Oxides of carbon & nitrogen

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Strong oxidizers and strong alkalis e.g. ammonia, caustic soda
Reactivity And Under What Conditions: None
Hazardous Decomposition Products: None

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact X : Skin Absorption : Eye Contact X
: Inhalation Acute : Inhalation Chronic : Ingestion X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Mild irritation
Eye: Mild irritation
Inhalation: None
Ingestion: This product may be harmful if swallowed. Possible gastritis

Effects Of Chronic Exposure To Material: None known

Other Health Effects: A review of available data does not identify any symptoms of exposure

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): None established

Irritancy Of Material: Mild skin and eye irritant

Sensitization Of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

MATERIAL SAFETY DATA SHEET

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Rubber, PVC or latex gloves if skin contact is likely

Eye (Specify): Safety glasses if eye contact is likely

Respiratory (Specify): None

Other (Specify): None

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): None

Leak And Spill Procedure: Soak up with absorbent material. Collect and dispose in garbage. Wash spill area with water. Due to the slippery nature of this product, clean up spills immediately and completely

Waste Disposal: Dispose absorbed material in accordance with Federal, Provincial and local government regulations

Handling Procedures And Equipment: No special requirements

Storage Requirements: Store in cool, dry area. Do no freeze

Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water. for 15 minutes

Eye: Flush eyes with plenty of water for 15minutes. Seek medical attention if irritation persists

Inhalation: If mists are inhaled, seek immediate medical attention

Ingestion: do not induce vomiting. Give water to dilute. Contact a physician

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Of Latest Revision/Review: September 2, 2008

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Quick Clear **WHMIS:** Non Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Cationic Polyelectrolyte
Chemical Formula: Proprietary Blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Water clarifier/coagulant

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H412 Hazardous to the aquatic environment, Long term hazard, Category 3
Symbol(s): None
Signal Word None
Hazard statement Harmful to aquatic life with long lasting effects.
Precautionary statement Avoid release into the environment.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air if having difficulty breathing.
Skin Contact: Wash thoroughly with soap and water for 15 minutes.
Eye Contact: Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion: Do not induce vomiting. Give water to dilute. Contact a physician if a large quantity of the product

MATERIAL SAFETY DATA SHEET

has been consumed.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Oxides of carbon and nitrogen.

Unusual Fire or Explosion Hazards: Not applicable

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: See below

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Prevent entry into drains, sewers and waterways. Soak up spill with absorbent material. Sweep up and put into dry, clean and labelled containers for disposal. Due to the slippery nature of this product, clean up spills immediately and completely.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: None required.

STORAGE

Ventilation Requirements: Store in a cool, dry area. Do not freeze.

Storage Requirements: Store at room temperature. Keep containers tightly closed when not in use.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Rubber, PVC or latex gloves if skin contact is likely.

MATERIAL SAFETY DATA SHEET

Eye (Specify): Safety glasses if eye contact is likely.
Respiratory (Specify): None
Other (Specify): Eye wash and shower stations are close to work area if needed.

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid
Odour & Appearance: Clear thick blue liquid, mild odour
Odour Threshold (ppm): Not applicable
Flammability: Yes No X
If Yes, Under Which Conditions?:
Auto Ignition Temperature (Celsius): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Decomposition Temp (°C) Not applicable
Specific Gravity: 1.010
Viscosity: 1300 cps min.
Vapour Pressure (mm): Not available
Vapour Density (Air-1): Not available
Flashpoint (°C) Not applicable
Evaporation Rate Not available
Boiling Point (°C): 100°C
Freezing Point (°C): 0°C
Solubility In Water (20°C): Soluble
% Volatile (By Weight) 94%
PH: 8 - 10
Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Strong oxidizers and strong alkalis e.g. ammonia and caustic soda.
Conditions to Avoid: Contact with incompatible materials.
Hazardous Decomposition Products: Oxides of carbon and nitrogen.

MATERIAL SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None
Skin Contact: May cause mild irritation.
Eye Contact: May cause mild irritation.
Ingestion: May cause gastritis – stomach upset, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): None established

Irritancy of Material Mild skin and eye irritant

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

ALGAE TEST RESULTS: Acute Toxicity, Seawater (ISO 10253)

72 h, Marine Algae (Skeletonema Costatum): 0.75 mg/l IC50

Growth Inhibition (OECD 201)

96 h, Green Algae (Selenastrum Capricornutum): >10-100 mg/l IC50

FISH TEST RESULTS: Acute Toxicity, Freshwater (OECD 203)

Zebra Fish (Brachydanio Rerio): >10-100 mg/l LC50

Acute Toxicity, Seawater (Parcom)

Juvenile Turbot (Scophthalmus Maximus): 1769 mg/l LC50

INVERTEBRATE TEST RESULTS: Acute Immobilization (OECD 202)

Water Flea (Daphnia Magna) : >10-100 mg/l EC50

Acute Invertebrate Toxicity, Seawater (Parcom)

Marine Copepod (Acartia Tonsa): 204 mg/l EC50 Immobilization

MATERIAL SAFETY DATA SHEET

Environmental Fate

Biodegradability: This material is not readily biodegradable.

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Remove residues by scrubbing.

Disposal of Packaging: Dispose of containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Non Controlled

CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

USA Not available

INTERNATIONAL Not available

MATERIAL SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: May 29, 2015

Date Revised: December 1, 2018

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Salt Balancer

WHMIS: E

Manufacturer's Name:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Sodium Bisulphate

Chemical Family:

Sodium Salt

Chemical Formula:

Na HSO₄

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Pool water pH reducer

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Serious eye damage/eye irritation, Category 1

Symbol(s)



Signal Word

Danger

Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

Salt Balancer

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Bisulphate	7681-38-1	60 – 100

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If irritation persists, contact a physician.
Skin Contact:	Wash thoroughly with soap and water. If irritation persists, contact a physician.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek prompt medical attention.
Ingestion:	Drink 2 or 3 glasses of water followed by milk of magnesia, beaten eggs or vegetable oil. Contact a physician immediately. Do not induce vomiting. If spontaneous vomiting occurs, keep head below victims knees to prevent breathing in of vomitus.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	SO ₂ and SO ₃ at temperatures above 299°C
Unusual Fire or Explosion Hazards:	None
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use appropriate media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Fire Fighting Protective Equipment:	See above.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Stop leak if without risk. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Sweep up material and neutralize with an alkaline solution. Place in a designated labeled waste container.
----------------------------------	---

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Put on appropriate protective equipment. Avoid breathing dusts. Wash thoroughly after handling.

Ventilation Requirements: Use in well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep container tightly closed. Material is hygroscopic and will readily absorb moisture. Do not store dry product where exposed to moist conditions.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear appropriate dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Impervious clothing if contact is likely. Eye wash stations close to chemical use.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque white beads, acidic odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 1.28

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Salt Balancer

SAFETY DATA SHEET

Vapour Density (Air-1):	Not applicable
Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not applicable
Freezing Point (°C):	176.7°C
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	Not applicable
PH:	1.4 (1% solution)
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Strong alkaline, acids, water, sodium hypochlorite solution and oxidizers		
Conditions to Avoid:	Do not mix dry or concentrated solutions of this product with concentrated solutions of chlorine bleach, ammonia cleansers or similar products.		
Hazardous Decomposition Products:	If heated above 299°C; SO ₂ and SO ₃ will form.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause burns to mucous membranes and respiratory tract.
Skin Contact:	Mild irritant
Eye Contact:	Causes serious eye irritation and may cause burns.
Ingestion:	If swallowed, may cause burns in the mouth, esophagus and stomach.

CHRONIC HEALTH EFFECTS: Repeated exposure without proper hygiene may cause skin rashes.

Other Health Effects: None

LD 50 of Material (Specify Species and Routes) Oral, Rat 2800 mg/kg

LC 50 of Material (Specify Species and Routes) Not available

Exposure (Limits): Not established

Irritancy of Material Skin, eye, nose and throat irritant

Salt Balancer

SAFETY DATA SHEET

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity This product readily dissolves in water to form a weak acid solution. A 0.05% or greater (by weight) solution of this product will likely be acutely harmful to aquatic life.

Environmental Fate

Biodegradability: Not available

Biaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: After neutralizing with an alkaline solution, dispose in accordance with Federal, Provincial local regulations.

Safe Handling of Residues: Flush with plenty of water.

Disposal of Packaging: Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION: Not regulated

US DOT CLASSIFICATION (49CFR 172.101, 172.102): Not regulated

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: E

NPRI: None of the components are listed.

CEPA: None of the components are listed.

Canada Inventory: All components are listed or exempted.

USA

U.S. Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304 emergency planning and notification: No products were found.

Salt Balancer

SAFETY DATA SHEET

SARA 311/312 MSDS distribution – chemical inventory – hazard identification: Sodium bisulphate: Acute health hazard

State Regulations: None of the products are listed.

California Prop. 65: No products were found.

INTERNATIONAL

Australia, China, Europe, Japan, Malaysia, Korea, New Zealand, and Philipines: All components are listed or exempted.

Taiwan: Not determined.

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: May 5, 2016

Date Revised: December 1, 2020

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Salt Cell Cleaner

WHMIS: E

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Proprietary blend

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Spa cell cleaner

SECTION 2

HAZARDS IDENTIFICATION

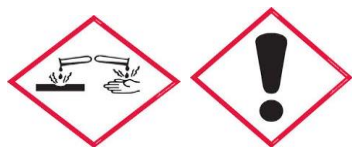
GHS classification:

H314 Skin corrosion/irritation, Category 1B

H318 Serious eye damage/eye irritation, Category 1

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation,
Category 3

Symbol(s)



Signal Word

Danger

Hazard statements

Causes severe skin burns and eye damage. May cause respiratory tract irritation.

Precautionary statements

Avoid contact with skin and eyes. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If eye contact, flush eyes with copious amounts of water for 20 minutes, and seek medical attention. Use in a well ventilated area. Avoid breathing in mists/vapours/fumes. If inhaled, remove person to fresh air and seek medical attention.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Citric Acid	77-92-9	40 - 70

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. Administer artificial respiration or CPR if necessary. Contact a physician immediately.
Skin Contact:	Wash thoroughly with soap and water for 20 minutes. Contact a physician.
Eye Contact:	Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 or 3 glasses of water or milk. Do not induce vomiting. Immediately contact a physician.
Note to physicians	Product is corrosive. May cause stricture, if lavage is performed. Suggest end tracheal and/or esophagoscopy control. If burn is present, treat as any thermal burn, after decontamination no specific antidote. Supportive care, treatment based on judgement of the physician in response to reactions of the patient.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Not available
Unusual Fire or Explosion Hazards:	There is a latent fire or explosion hazard due to hydrogen gas generated when the product is in contact with metals.
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	See below
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Isolate hazard area and restrict access. Prevent spill from entering sewers and waterways. Neutralize spill with soda ash and absorb with absorbent material. Place into a clean, dry and labelled plastic container for disposal.
----------------------------------	--

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with eyes, skin and clothing. Wear gloves and glasses when handling.
Wash hands thoroughly after handling.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep away from incompatible materials. Keep from freezing. Keep containers tightly closed when not in use. Keep away from excessive heat.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Neoprene or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): If vapours or mists are present wear a mask for acid gases/mists.

Other (Specify): Acid resistant slicker suit with rubber apron and boots. If splashing is unavoidable wear a face shield. Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clean green liquid, pungent irritating odour.

Odour Threshold (ppm): Not available

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.240

Viscosity: Not available

Vapour Pressure (mm): Not available

SAFETY DATA SHEET

Vapour Density (Air-1): Not available
Flashpoint (°C): Not applicable
Evaporation Rate: Not available
Boiling Point (°C): 100°C
Freezing Point (°C): 0°C
Solubility In Water (20°C): Soluble
% Volatile (By Weight): 50%
PH: 1.0
Coefficient Of Water/Oil Distribution: Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Avoid contact with metals. May cause the generation of flammable hydrogen gas. Avoid bases, corrosive materials and oxidizers.
Conditions to Avoid: None known
Hazardous Decomposition Products: None known

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: May cause irritation of the respiratory tract.
Skin Contact: Corrosive – will cause burns.
Eye Contact: Corrosive – will cause burns.
Ingestion: Burning of mouth, throat and other tissue that it contacts may also cause abdominal pain, nausea and vomiting.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: Strong irritant of all body tissue.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

LC50, 96 h, Fish (goldfish): 440 – 706 mg/l

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Deactivating Chemicals: Neutralize with soda ash to get a neutral pH.

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with copious amounts of water.

Disposal of Packaging: Empty containers should be recycled or disposed of through an approved waste facility.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Corrosive Liquid, Acidic, Organic, N.O.S. (Citric Acid)

Class: 8

Packing group: III

UN: 3265

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Corrosive Liquid, Acidic, Organic, N.O.S. (Citric Acid)

Class: 8

Packing group: III

UN: 3265

SECTION 15 REGULATORY INFORMATION

CANADA

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

WHMIS: E

SAFETY DATA SHEET

USA

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

CERCLA/SARA – Section 302: Not Listed

SARA (311, 312) Hazard Class: Not Listed

CERCLA/SARA – Section 313: Not Listed

California Prop 65, MA, New Jersey, and Pennsylvania Right to Know Lists: Not Listed

INTERNATIONAL Not available

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: April 25, 2013

Date Revised: December 3, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

Product Identifier

Manufacturer's Name: CAPO INDUSTRIES LTD.
Street Address: 1200 Corporate Drive
City: Burlington, Ontario, CANADA
Postal Code: L7L 5R6
Emergency Telephone: Canutec (613) 996-6666 (Collect)

SECTION 1. IDENTIFICATION

Product Identifier

Salt No Phos

Other Means of Identification

No Phos Phosphate Remover

Recommended Use

Precipitation and removal of phosphates from water.

Restrictions on Use

Do not use product for anything outside of the above-specified uses.

Initial Supplier Identifier

Capo Industries Ltd.

Emergency Telephone Number

Canutec (613) 996-6666 (Collect)
Chemtrec 1-800-424-9300
Chemtrec Int'l +1 703-527-3887

SECTION 2. HAZARD IDENTIFICATION

Classification

Skin corrosion/irritation Category 3

Label Elements

None required

Signal Word

Warning

Hazard Statement(s)

H316 Causes mild skin irritation

Precautionary Statement(s)

SAFETY DATA SHEET

P332+P313

If skin irritation occurs: Get medical advice/attention.

Other Hazards

No additional data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms
Lanthanum chloride solution	Not available	10-30%	Not available

Notes

No additional data available.

SECTION 4. FIRST-AID MEASURES

Inhalation

In the improbable event of mist inhalation, remove the person to fresh air and provide artificial respiration as required. Obtain medical attention.

Skin Contact

Wash hands thoroughly with soap and water for 15 minutes. Seek medical attention if irritation persists.

Eye Contact

Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists.

Ingestion

Give 2 or 3 glasses of water to dilute material. Do not induce vomiting. Contact a physician.

Most Important Symptoms and Effects, Acute and Delayed

No data available.

Note to Physicians

Under normal use and human exposure conditions, the product is considered non-toxic.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use media suitable to extinguish source of fire.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Product

Thermal oxidative decomposition of the product may release toxic fumes of hydrogen chloride and metal oxide.

SAFETY DATA SHEET

Special Protective Equipment and Precautions for Fire-Fighters

Wear protective clothing and a self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

See "Methods for Containment and Cleaning Up" below.

Methods for Containment and Cleaning Up

Soak up spill with absorbent material. Collect and dispose. Wash spill area with water. Do not release into sewers or waterways. Due to the slippery nature of this product, clean up spills immediately and completely.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear appropriate eye and glove protection to minimize exposure.

Conditions for Safe Storage

Store in a cool, dry area. Keep containers sealed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
No data available				

Notes

No additional data available

Appropriate Engineering Controls

General or local exhaust ventilation system(s) to minimize airborne concentrations.

Individual Protection Measures

Eye/Face Protection

Safety glasses/goggles if eye contact is likely.

Skin Protection

Rubber, PVC or latex gloves if prolonged skin contact is likely.

Respiratory Protection

None

SAFETY DATA SHEET

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Clear, colourless liquid

Odour

Mild, characteristic

Odour Threshold

No data available.

pH

3-5

Melting Point and Freezing Point

0°C

Initial Boiling Point and Boiling Range

100°C

Flash Point

Not applicable.

Evaporation Rate

No data available.

Flammability (solid, gas)

Not flammable

Upper and Lower Flammability or Explosive Limit

Not applicable

Vapour Pressure

No data available.

Vapour Density (air = 1)

No data available.

Relative Density (water = 1)

1.060

Solubility in Water

Miscible

SAFETY DATA SHEET

Solubility in Other Liquids

No data available.

Partition Coefficient, n-Octanol / Water (Log Kow)

No data available.

Auto-ignition Temperature

Not applicable

Decomposition Temperature

No data available.

Viscosity

No data available.

% Volatile (by weight)

90%

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of storage in closed container(s).

Chemical Stability

Stable under normal conditions of storage in closed container(s).

Possibility of Hazardous Reactions

Unlikely under normal conditions of storage in closed container(s).

Conditions to Avoid

None

Incompatible Materials

No data available.

Hazardous Decomposition Products

None

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

☐ Inhalation ☒ Skin contact ☐ Eye contact ☒ Ingestion

Acute Toxicity

LC₅₀

SAFETY DATA SHEET

No data available.

LD₅₀ (oral)

No data available.

LD₅₀ (dermal)

No data available.

Notes

No additional data available.

Skin Corrosion / Irritation

Mild skin irritant.

Serious Eye Damage / Irritation

Mild and temporary eye irritant.

Ingestion

Possible gastrointestinal irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

No data available

Aspiration Hazard

None known

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No data available.

Respiratory and/or Skin Sensitization

None known.

Carcinogenicity

IARC, NTP and OSHA do not list active material as a carcinogen.

Reproductive Toxicity

None known.

Germ Cell Mutagenicity

None known.

Interactive Effects

None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available.

SAFETY DATA SHEET

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No additional data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose absorbed material in accordance with federal, provincial/state and local regulations. Flush residue with copious amounts of water. Thoroughly clean empty containers with water and recycle.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
Canadian TDG Act	None	Chemicals NOI	Not applicable	Non-hazardous	n/a
US DOT Classification (49CFR 172.101, 172.102)	None	Chemicals NOI		Non-hazardous	n/a

Special Precautions

None

Environmental Hazards

None known.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations**CANADA**

WHMIS: Non-controlled

USA**EPA Regulations:**

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

CERCLA Hazardous Substance (40 CFR 302.4): unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b) (4); CWA, Sec. 307 (a), CAA, Sec. 112

SAFETY DATA SHEET

CERCLA Reportable Quantity (RQ): None

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning
Quantity (TPQ)

OSHA Regulations:

Air Contaminant (CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29 CFR 1910): Not listed

State Regulations: None

INTERNATIONAL Not available

SARA 311/312 Codes: None

SECTION 16. OTHER INFORMATION

Prepared By (Group, Department): Quality Control

Telephone: (905) 332-6626

Preparation Date: 15-January-2019

Date of Latest Revision: 1-December-2020

Additional Notes or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial/State and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

SALT OXYGEN SHOCK

WHMIS: D2B

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Mixture

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Spa water treatment chemical

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H315 Skin corrosion/irritation, Category 2

H319 Serious eye damage/eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation

Label Elements

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and serious eye irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If contact with eyes, flush with copious amounts of water for 15 minutes. Avoid breathing in dusts/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Pentapotassium Bis(Peroxymonosulphate)		
Bis(Sulphate)	70693-62-8	60 – 100
Dipotassium Peroxodisulphate	7727-21-1	0 – 5
Sodium Carbonate	497-19-8	10 – 30

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If difficulty breathing, give artificial respiration and seek medical attention.
Skin Contact:	Wash thoroughly with soap and water.
Eye Contact:	Flush eyes with copious amounts of water and seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water or milk to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	At elevated temperatures of 100°C may liberate oxides of sulphur and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable for extinguishing surrounding fire.
Instructions to the Fire Fighters:	See below
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent material from entering drains, sewers, and waterways. Sweep up and place metal waste containers for disposal.
----------------------------------	---

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin and eyes. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Do not mix directly with other chemicals. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: General exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear air-purifying respirator with dust/mist cartridge if in a non-ventilated area.

Other (Specify): Impervious clothing if contact is likely. Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white granular, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: Not available

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

SAFETY DATA SHEET

Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not available
Freezing Point (°C):	Not available
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	Not applicable
PH:	6.5 – 7.5 (1% solution)
Coefficient Of Water/Oil Distribution:	Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Heavy metal salts, halogenated compounds, cyanides, aluminum, and sulfamic acid.		
Conditions to Avoid:	Avoid extreme heat.		
Hazardous Decomposition Products:	Oxides of sulphur and carbon.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to respiratory tract.
Skin Contact:	Prolonged skin contact will cause irritation.
Eye Contact:	Eye contact will cause irritation or burns.
Ingestion:	Severe gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) 500 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)
Dipotassium Peroxodisulphate 802 mg/kg, Oral (Rat), >10000 mg/kg, Dermal (Rabbit)
Sodium Carbonate 4090 mg/kg, Oral (Rat), 2210 mg/kg, Dermal (Mouse).

LC 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) >5 mg/l, Inhalation 4 h (Rat)

SAFETY DATA SHEET

Exposure (Limits): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate), AEL* (Dupont): 1mg/m³, 15 minute TWA, Dipotassium Peroxodisulphate, TLV (ACGIH): 0.1 mg/m³, TWA as persulphate.

Irritancy of Material Eye, skin and respiratory tract irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) – 96 h LC₅₀ Cyprinodon Variegatus (sheepshead minnow):
1.09 mg/l
- 72 h ERC₅₀ Algae: 1mg/l
- 48 h EC₅₀ Daphnia: 3.5 mg/l

Dipotassium Peroxodisulphate – 48 h LC₅₀ Daphnia Magna (water flea): 92 mg/l

Environmental Fate

Biodegradability: Readily biodegradable

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with lots of water.

Disposal of Packaging: Dispose of containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

SAFETY DATA SHEET

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996

Date Revised: December 1, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Salt Prevent

WHMIS: D2B

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Not applicable

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Chelating agent

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H316 Skin corrosion/irritation, Category 3

H319 Serious eye damage/ eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation,
Category 3

Symbol(s)



Signal Word

Warning

Hazard statements

Causes mild skin irritation and serious eye irritation. May cause respiratory tract irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If eye contact, flush eyes with copious amounts of water for 15 minutes. Avoid breathing in mists/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Salt of 1 Hydroxyethylidene-1.1-Diphosphonic Acid	29329-71-3	10 - 30

SECTION 4 FIRST AID MEASURES

Inhalation:	If mists are inhaled, remove to fresh air and seek medical attention
Skin Contact:	Wash hands thoroughly with soap and water for 15 minutes.
Eye Contact:	Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Drink 2 or 3 glasses of water to dilute material. Contact a physician immediately.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Oxides of carbon and phosphorus.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Do not allow runoff to enter waterways.
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent entry into sewers, drains, or waterways. Dike if needed. Soak up spill with synthetic or natural absorbent and sweep into a clean, dry and labelled container for disposal.
----------------------------------	---

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. Do not ingest. Avoid inhalation of chemical.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep away from acids, peroxides, metals, and easily ignitable materials. Keep containers closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): None under normal conditions. Wear a NIOSH approved respirator if there isn't adequate ventilation.

Other (Specify): Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue liquid, mild odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not applicable

Specific Gravity: 1.300

Viscosity: Not available

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

SAFETY DATA SHEET

Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	100°C
Freezing Point (°C):	0°C
Solubility In Water (20°C):	Soluble
% Volatile (Weight)	56%
PH:	8 - 10
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones: Cyanides			
Conditions to Avoid:	High temperatures.		
Hazardous Decomposition Products:	CO, CO2, and oxides of phosphorus.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Severe irritation to respiratory tract if mists are inhaled.
Skin Contact:	Product may irritate skin.
Eye Contact:	Strong eye irritant and may cause burns.
Ingestion:	Gastritis - stomach upset, nausea, and diarrhea.
CHRONIC HEALTH EFFECTS:	None known
Other Health Effects:	None known
LD 50 of Material (Specify Species and Routes):	2850 mg/kg, Oral (Rat), >5000 mg/kg, Dermal (Rabbit)
LC 50 of Material (Specify Species and Routes):	Not available
Exposure (Limits):	Not established
Irritancy of Material	Skin, eye and respiratory tract irritant.
Sensitization of Material	None known
Synergistic Materials	None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity:	None known

SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed materials in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Clean up residual with absorbent material. Place in appropriate container and flush with water.

Disposal of Packaging: Dispose containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: May 28, 2016

Date Revised: December 1, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Salt Saver

WHMIS: D2A

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Borates
Chemical Formula: Proprietary Blend
Trade Name & Synonyms: None
Molecular Weight: Not applicable
Material Use: Pool Salt Supplement

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H302 Acute toxicity, Oral, Category 4
H335 Specific target organ toxicity, Single Exposure, Respiratory tract irritation, Category 3
H401 Hazardous to the aquatic environment, Acute hazard, Category 2

Symbol(s)



Signal Word

Warning

Hazard statements

Harmful if swallowed. May cause respiratory tract irritation. Toxic to aquatic life.

Precautionary statements

Do not ingest. If ingested, do not induce vomiting, drink 2 or 3 glasses of water and seek medical attention. Avoid breathing in dusts/vapours/fumes. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Boric Acid	10043-35-3	15 – 40
Sodium Bisulphate	7681-38-1	1 - 5

SAFETY DATA SHEET

SECTION 4

FIRST AID MEASURES

- Inhalation:** Remove person to fresh air. Administer artificial respiration if person is having difficulty breathing and seek medical attention.
- Skin Contact:** Wash thoroughly with soap and water. Seek medical attention if redness or irritation develops.
- Eye Contact:** Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation develops.
- Ingestion:** Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing rinse mouth with water and give ½ to 1 glass of water to dilute material. Immediately contact local poison control centre. Vomiting should only be induced on the advice of a poison control centre or physician. If spontaneous vomiting occurs, have victim lean forward with head down to avoid inhaling in of vomitus. Rinse mouth and give more water. Immediately transport victim to an emergency facility.
- Note to physicians** For Borate ingestion or overexposure: Treat for Alkaline exposure or ingestion. Give vinegar in large amounts or water or diluted orange or lemon juice. Follow with demulcent. Do not use emetics or stomach tube. Assure adequate hydration. After ingestion or absorption into the blood stream of large amounts (15g or more), symptoms may appear after 24 to 72 hours. Borates are readily dissipated through the urine (20% in the first 24 hours). Observation only is required for adult ingestion of less than 6g of product. For ingestion in excess of 6g, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron assay of urine or blood is only useful for documenting exposure and should not be used to evaluate severity poisoning or to guide treatment.

SECTION 5

FIRE – FIGHTING MEASURES

- Hazardous Combustion Products:** Not applicable
- Unusual Fire or Explosion Hazards:** None known
- Sensitivity to Mechanical Impact:** None
- Rate of Burning:** Not applicable
- Explosive Power:** Not applicable
- Sensitivity to Static Discharge:** None
- Fire Extinguishing Media:** Use media suitable to extinguish source of fire.
- Instructions to the Fire Fighters:** See below
- Fire Fighting Protective Equipment:** Wear full protective clothing and a self-contained breathing apparatus.

SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Sweep up material and place in clean, dry labelled container for disposal. Do not allow product to enter sewers or waterways. This material is toxic to aquatic life. The product can be toxic to plants.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid prolonged skin contact. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Do not store sealed containers at temperatures above 40°C. Avoid moisture contamination.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex, PVC or rubber gloves if prolonged skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Wear a NIOSH/MSA approved dust mask for concentrations of nuisance dust up to 100 mg/m³. An air supplied respirator of concentrations higher or unknown.
Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: White powder, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

SAFETY DATA SHEET

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.095

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): 200°C

Solubility In Water (20°C): 60% by weight

% Volatile (By Weight) Not applicable

PH: 3.25 (10% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Elemental zirconium, base metals, alkali metals, reducing agents, and metal hydrides.

Conditions to Avoid: Reacts with strong reducing agents such as metal hydrides or alkali metals to generate flammable and explosive hydrogen gas.

Hazardous Decomposition Products: None known

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Dust may cause irritation to throat and nose and respiratory tract.

Skin Contact: Not expected to cause irritation under normal conditions. Skin contact may cause irritation due to abrasive action. May cause defatting, drying and cracking of the skin. May be readily absorbed through broken or damaged skin. Toxic effects may be delayed.

Eye Contact: Eye contact may cause irritation and possible damage due to abrasion.

Ingestion: Ingestion of large amounts may cause nausea, gastrointestinal upset and abdominal pain. May cause diarrhea, circulatory collapse, cyanosis, convulsions, coma, nausea,

SAFETY DATA SHEET

vomiting and death.

CHRONIC HEALTH EFFECTS: May lead to irritation and/or sensitivity of the skin.

Other Health Effects: Boric acid may cause cyanosis. Cyanosis is characterized by navy blue, almost black Lips, tongue and mucous membranes with skin colour being slate grey. Further Manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, Respiratory distress and death due to anoxia.

LD 50 of Material (Specify Species and Routes): Boric Acid (40%): 6650 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

Sodium Bisulphate (5%): 56000 mg/kg, Oral (Rat)

LC 50 of Material (Specify Species and Routes): Boric Acid (40%): >2.0 mg/l, Inhalation (Rat)

Sodium Bisulphate (5%): Not available

Exposure (Limits): Boric Acid ACGIH TLV, Inhalable fraction TWA: 2 mg/m³, 8 h, STEL: 6 mg/m³, 15 min.
Sodium Bisulphate: Not available

Irritancy of Material Skin, eye, nose and throat irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity None known

Reproductive Effects Boric acid and borates may cause reproductive effects based on laboratory animal studies. Animal studies show that ingestion of large amounts of borates over prolonged periods causes a decrease in sperm production and testicle size in male laboratory animals. No symptoms have been noted in humans.

Teratogenicity: Boric acid and borates may cause teratogenic/embryo toxic effects based on studies on laboratory animals. Animal studies show that ingestion of large amount of borates over prolonged periods cause developmental effects in fetuses of pregnant female animals.

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

BORIC ACID (40%): LC50 2750 mg/l, Fish (*Oncorhynchus mykiss*), 96 h

LC50 132.5mg/l, Daphnia (*Daphnia magna*), 21 days

Environmental Fate

Biodegradability: Boric acid decomposes in the environment to natural borate.

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SAFETY DATA SHEET

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with copious amounts of water.

Disposal of Packaging: Empty containers should be recycled or disposed through an approved waste management facility.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15

REGULATORY INFORMATION

CANADA All components of this product are either on the DSL or exempt.

WHMIS: D2A

CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

USA Not available

INTERNATIONAL Not available

SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: April 6, 2006

Date Revised: June 3, 2020

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Salt Sun Block WHMIS: Non Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Cyanuric Acid
Chemical Family: Organic acid
Chemical Formula: $C_3H_3N_3O_3$
Trade Name & Synonyms: Not available
Molecular Weight: 129.07
Material Use: Pool water stabilizer

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: None
Symbol(s): None
Signal Word: None
Hazard statements: None
Precautionary statements: None

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: No effects expected. If adverse effects occur, remove person to fresh air. If symptoms of overexposure occur, get medical attention.

Skin Contact: Wash hands thoroughly with soap and water. If irritation persists, get medical attention.

Eye Contact: Solids should be removed. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs, get medical attention.

Ingestion: No effects expected. If large amounts are ingested, get medical attention.

SAFETY DATA SHEET

Note to physicians: This material causes mild irritation to skin and eyes. Removing the material via irrigation is usually sufficient. There is no anecdote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Cyanic acid, ammonia, oxides of carbon and oxides of nitrogen.

Unusual Fire or Explosion Hazards: Not applicable

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Instructions to the Fire Fighters: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Fire Fighting Protective Equipment: Wear NIOSH approved positive-pressure self-contained breathing apparatus in pressure demand mode.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Avoid contact with eyes. Avoid generating dust. When handling this material, wear appropriate personal protective equipment. Sweep up material and place in a clean, labelled container and seal. Keep out of water supplies and sewers.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid generating dust. Wash hands thoroughly after handling. Wear personal protective equipment.

Ventilation Requirements: Local exhaust ventilation.

STORAGE

Ventilation Requirements: Store in a cool, dry place.

Storage Requirements: Keep separated from incompatible substances. Keep container closed when not in use.

SAFETY DATA SHEET

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Butyl rubber, natural rubber, neoprene, nitrile or PVC gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear NIOSH approved dust respirator.

Other (Specify): Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Mild odour, white, granular, free flowing

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) 350 – 360°C (662 – 680°F)

Specific Gravity: 1.77

Viscosity: Not applicable

Vapour Pressure : 0.000001 Pa@25°C

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): Not applicable

Solubility In Water (20°C): 0.20 g/100 g water @ 25°C

% Volatile (By Weight) Not applicable

PH: Not available

Coefficient Of Water/Oil Distribution: Not applicable

SAFETY DATA SHEET

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Oxidizing agents.
Conditions to Avoid: None known
Hazardous Decomposition Products: Cyanic acid, ammonia, oxides of carbon and oxides of nitrogen.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None expected. Inhalation of powder or fine particulates may cause irritation, cough.
Skin Contact: May cause slight skin irritation.
Eye Contact: May cause mild eye irritation.
Ingestion: No known effects.

CHRONIC HEALTH EFFECTS: None

Other Health Effects: May aggravate pre-existing conditions such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders.

LD 50 of Material (Specify Species and Routes): 3400 mg/kg, Oral (Mouse), 7700 mg/kg, Oral (Rat),
>5 g/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): >5.25 mg/l, Inhalation 4h (Rat)

Exposure (Limits): Not available

Irritancy of Material Mild skin and eye irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SAFETY DATA SHEET

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity

This material is believed to be practically non-toxic to aquatic life.

Fish Toxicity

LC50 Bluegill sunfish: >1000 mg/l (96 hour)

LC50 Rainbow trout: >2100 mg/l (96 hour)

LC50 Fathead minnow: >2100 mg/l (96 hour)

LC50 Inland silversides: >8000 mg/l (96 hour)

Invertebrate Toxicity

LC50 Water flea: >1000 mg/l (48 hour)

LC50 Mysid shrimp: 4438 mg/l (96 hour)

Algae Toxicity

EC50 Green algae: 655 – 712 mg/l (96 hour)

EC50 Navicula pelliculosa: >3780 mg/l (96 hour)

Environmental Fate

Biodegradability:

Cyanuric acid biodegrades readily under a wide variety of natural conditions, and particularly well in systems of either low or zero dissolved-oxygen levels.

Bioaccumulative Potential:

Not expected to bioaccumulate.

Mobility In Soil:

Cyanuric acid will have a high soil mobility based on KOC values ranging from 66 to 124.

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal:

Reuse or recycle if possible. Dispose of material in accordance with federal, provincial and local regulations.

Safe Handling of Residues:

See above.

Disposal of Packaging:

Dispose of container in accordance with federal, provincial and local regulations.

SAFETY DATA SHEET

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Not regulated

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Not regulated

SECTION 15 REGULATORY INFORMATION

CANADA Listed on DSL and Canada's Ingredient Disclosure List.

WHMIS: Not regulated.

USA Listed on the TSCA inventory.

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: December 1, 2015

Date Revised: December 1, 2020

Additional Notes Or References:

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SAFETY DATA SHEET

Page 1 of 7

#108 Sea Breeze

Date Issued: 6/3/2015

#108 SEA BREEZE

SECTION 1 - IDENTIFICATION

Product Description: #108 SEA BREEZE

Chemical Formula: Fragrance

Manufactured By: Paint Scentsations, LLC., 21021 Heron Way, Suite 106, Lakeville, MN 55044

For Information Call: 952-469-3659

Shelf Life: One year after manufactured date @ ambient temperature.

Date of Revision: 6/01/2015

Product Use: Fragrance

Not Recommended for: Consumption

Recommended Restrictions: For Manufacturing Use Only

For Transportation Emergencies Call Chemtrec: 800-424-9300

SECTION 2 - HAZARD (s) IDENTIFICATION

Physical Hazards

Skin irritation

Category: 2

Eye irritation

Category: 2

Label Elements



Signal Word

Warning

Hazard Statement

Causes skin irritation.

Causes serious eye irritation

Precautionary Statements

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention

If skin irritation occurs: Get medical advice/attention

Wash thoroughly after handling

Take off contaminated clothing and wash before reuse.

Wear protective gloves/protective clothing/eye protection/face protection.



SAFETY DATA SHEET

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#108 Sea Breeze

Date Issued: 6/3/2015

Precautionary Statement

Prevention	Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves. Wear eye/face protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

The composition of this proprietary blend is being withheld in compliance with the trade secret provisions of The Hazard Communication Standard (29 CFR 1910.1200(i))

SECTION 4 - FIRST-AID MEASURES

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
Skin Contact	Remove product and immediately wash affected area with soap and water. Discard or launder contaminated clothing before reuse. Contaminated leatherwear should be discarded. If irritation persists, see a physician.
Ingestion	If swallowed, do not induce vomiting. Administer 2 glasses of water immediately. Obtain medical care and hospital treatment.
After First-Aid	Get appropriate in-plant, paramedic, or community medical support.
Note to Physicians	No specific antidote. Supportive care, treatment based on judgment of the physician in response to reactions of the patient.

SECTION 5 - FIRE-FIGHTING MEASURES

Burning Rate	N/A
Autoignition Temperature	Unknown
Flammability Classification	N/A
Extinguishing Media	Use extinguishing media appropriate for surrounding fire.
Unusual Fire or Explosion	
Hazards	N/A



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#108 Sea Breeze

Date Issued: 6/3/2015

Fire-Fighting Instructions Do not enter any enclosed or confined fire space without full protective equipment, including self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) to protect against the hazardous effects of combustion products and oxygen deficiency.

Fire-Fighting Equipment Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures

Small Spills Contain spills immediately with inert materials (e.g. sand, earth). If material is spilled in a confined area, ventilate the area well. Keep spectators away. Floor may be slippery; use care to avoid falling. Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. **CAUTION:** keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Large Spills Use same procedure as small spill.

Containment For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

SECTION 7 - HANDLING & STORAGE

Handling Precautions Store in a cool, dry place. Do not freeze. Spilled material is slippery. Wash thoroughly after handling.

Storage Requirements Avoid subjecting this product to extreme temperature variations. Keep product containers tightly closed when not in use.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Good general ventilation should be used.

Eye/Face Protection Avoid contact with eyes. Wear chemical goggles. Provide an emergency eye wash station.

Respiratory Protection Use only with adequate ventilation. For situations where high concentrations of vapors may be present, use an approved supplied air respirator operated in positive pressure mode.

Protective Clothing/Equipment Wear chemically protective gloves, boots, aprons, and gauntlets to prevent pro-



SAFETY DATA SHEET

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#108 Sea Breeze

Date Issued: 6/3/2015

longed or repeated skin contact is optional. Wear protective eyeglasses or chemical safety goggles, per OSHA eye and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment Launder before reuse.

Comments Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9 - PHYSIAL AND CHEMICAL PROPERTIES

Flash Point	>200° F
Flash Point Method	Closed Cup
Appearance	
Physical State	Liquid
Form	Liquid
Color	Water White
Odor	Fresh Floral
Vapor Density (Air = 1)	>1
Formula Weight	N/A
Density	N/A
Specific Gravity @ 20° C	0.870-0.970
Refractive Index	N/A
Water Solubility	Not Soluble
Other Solubilities	N/A
Boiling Point	N/A
Freezing/Melting Point	N/A
Viscosity	N/A
Surface Tension	N/A
**% VOC	0.00%

**In accordance with Title 17, California Code of Regulations, Article 2, Section 94507-94517, Consumer Products, this product is a fragrance, as defined by Section 94508 (a) (36) and qualified under the Exemption, as specified in Section 94501 (f) .



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#108 Sea Breeze

Date Issued: 6/3/2015

SECTION 10 - STABILITY AND REACTIVITY

Stability	Stable at room temperature in closed containers under normal storage and Handling conditions.
Polymerization	Hazardous polymerization will not occur.
Chemical Incompatibilities	This product is considered stable under normal conditions of storages, shipment and/or use. Present no significant reactivity hazards by itself or in contact with water.
Conditions to Avoid	Excessive heat/cold
Hazardous Decomposition Products	N/A

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity Estimate

Oral	LD50 Rat: 3700 mg/kg
Dermal	LD50 Rabbit: 7890 mg/kg
Inhalation	LC50 Rat: >310 mg/m ³ /1 hr

Skin Corrosion/Irritation Causes skin irritation.

Serious Eye Irritation Contact with eyes may cause redness and pain. Permanent damage is not expected to occur.

Respiratory Sensitization Not available

Inhalation Inhalation of this material may cause cough and sore throat.

Ingestion Ingestion of this material may be harmful.

Chronic Effects Long term or repeated exposure to this material may cause dermatitis.

Carcinogenicity This material is not carcinogenic according to IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), or OSHA (U.S. Occupational Health and Safety Administration) .

Routes of Exposure Likely routes of exposure include: inhalation, eye and skin contact

Target Organs: Not classified

SECTION 12 - ECOLOGICAL INFORMATION

This material is expected to readily biodegrade. The potential for bioconcentration of this material in aquatic organisms is low. This material is expected to have mobility in soil.



SAFETY DATA SHEET

Page 6 of 7

#108 Sea Breeze

Date Issued: 6/3/2015

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

SECTION 14 - TRANSPORT INFORMATION

Regulation	Proper Shipping Name	UN #	Hazard Class	Packing Group
DOT	Not regulated, Non Hazardous			
IATA	Not regulated, Non Hazardous			
IMDG	Not regulated, Non Hazardous			

SECTION 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Federal EPA: Comprehensive environmental response, compensation and liability act of 1980 (CERCLA) requires notification of the national response center of release of quantities of hazardous substances equal to or greater than the reportable quantities.

(r q s) in 40 CFR 302.4.

Components present in this product at a level that could require reporting under the statute of None known.

This mixture contains no suspected carcinogens are reported by NTP, ACGIH, OSHA or IARC at 0.1% or greater.



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#108 Sea Breeze

Date Issued: 6/3/2015

Superfund amendments and reauthorization act of 1986 (SARA) Title III.

Requires emergency planning based on threshold planning quantities (tpqs) and release reporting based on reportable (rqs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level that could require reporting under the statute are: See Sect. II

Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

This must be included in all MSDS ' s that are copied and distributed for this material. Components present in this product at a level that could require reporting under the statute are: See Sect. II

Canadian WHMIS: This product is not listed in any Division, Class, or Subdivision.

Canadian Environmental Protection Act (CEPA): None known

EINECS: No information

State Regulations:

California Proposition 65: This product contains no listed substances known to the State of California to cause cancer, birth defects, or other reproductive harm, at levels which would require a warning under the statute.

Pennsylvania: None known

New Jersey: None known

SECTION 16 - OTHER INFORMATION

Revision Date 06/01/2015

HMIS® Ratings **HMIS® Ratings**

Health 2

Flammability 1

Physical 0

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

BROMINE TABS – BROMINATING TABLETS WHMIS: Not regulated under WHMIS. It is regulated under Pest Control Product Act (PCP)

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: 1-Bromo-3-Chloro-5,5-Dimethylhydantoin
Chemical Family: Not Applicable
Chemical Formula: Not Applicable
Trade Name & Synonyms: Not Applicable
Molecular Weight: Not Applicable
Material Use: Pool water disinfectant

SECTION 2

HAZARDS IDENTIFICATION

GHS classification: Oxidizing solid, Category 2
Acute toxicity, oral, Category 4
Skin corrosion/irritation, Category 1C
Skin Sensitization, Category 1
Hazardous to the aquatic environment, acute hazard, Category 1

Symbol(s):



Signal Word: Danger

Hazard statements: H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause allergic skin reaction.
H400 Very toxic to aquatic life.

SAFETY DATA SHEET

Precautionary statements:

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep away from clothing and other combustible materials.
- P221 Take any precaution to avoid mixing with combustibles.
- P260 Do not breathe dust.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 IF SWALLOWED Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P321 Specific treatment (see first aid on this label).
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use water spray for extinction.
- P391 Collect spillage.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local regulations.

HMIS: 3 Health hazard, 0 Flammability, 1 Reactivity

NFPA: 3 Health hazard, 0 Flammability, 1 Instability

SECTION 3	COMPOSITION, INFORMATION ON INGREDIENTS
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Ingredient	CAS#	% Concentration
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SAFETY DATA SHEET

1-Bromo-3-Chloro-5,5-Dimethylhydantoin

16079-88-2

60-100

SECTION 4

FIRST AID MEASURES

Inhalation: Remove person to fresh air. Obtain medical aid. Administer artificial respiration if required.

Skin Contact: Flush with plenty of water, then wash with soap and water. Wash contaminated clothing before reuse.

Eye Contact: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

Ingestion: Drink 2 to 3 glasses of water. Obtain medical assistance immediately. Do not induce vomiting. If vomiting occurs, give fluids again. Have physician determine if patient's condition allows the induction of vomiting.

Note to physicians: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5

FIRE – FIGHTING MEASURES

Hazardous Combustion Products: If fire is fueled by other materials, may release bromine gas.

Unusual Fire or Explosion Hazards: None known.

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Flood with large amounts of water.

Instructions to the Fire Fighters: In large fires fueled by other materials, this product may smolder for prolonged periods emitting a dense black smoke. Do not let fire burn.

Fire Fighting Protective Equipment: In the event of fire, wear self-contained breathing apparatus. Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Using appropriate protective clothing and safety equipment, contain spilled Material. Do not add water to spilled material. Using clean dedicated equipment, Sweep and scoop all spilled material into clean container for disposal. Do not close Containers containing wet or damp material. They should be left open to disperse Any hazardous gases that may form. Wash spill area with copious amounts of water. Wet spills should be collected and the Halogen neutralized.

SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Strong oxidizing agent. Avoid contact with skin, eyes and clothing. Do not mix with anything except water.

Ventilation Requirements: General exhaust ventilation.

Other Precautions: Contamination with moisture, organic matter or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.

STORAGE

Ventilation Requirements: Cool and well ventilated area away from heat and sunlight.

Storage Requirements: Store in original container. Keep out of reach of children and keep away from animals.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust to remove dust.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Neoprene or rubber gloves.

Eye (Specify): Safety glasses.

Respiratory (Specify): Organic vapour mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Wear protective clothing to minimize skin contact.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white, mild bromine odour.

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not available

Lower Explosion Limit (% By Volume): Not applicable.

Upper Explosion Limit (% By Volume): Not applicable

Decomposition Temperature (°C): Decomposes at 165°C

Specific Gravity: Not applicable

Viscosity (cps): Not applicable

Vapour Pressure (mm): Not applicable

SAFETY DATA SHEET

Vapour Density (Air-1):	Not applicable
Flashpoint (°C)	Not flammable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not applicable
Freezing Point (°C):	120 - 148°C
Solubility In Water (20°C):	0.54 g/100 g @ 24°C
% Volatile (By Weight)	<0.5%
PH:	Not available
Coefficient Of Water/Oil Distribution:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:	Not applicable		
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Strong acids and alkalis, high storage temperatures, organic materials Ammonia bearing compounds, strong reducing agents and moisture.		
Conditions to Avoid:	Do not mix with anything other than water.		
Hazardous Decomposition Products:	CO, CO2, Bromine gas plus unknown toxic gases.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Causes respiratory tract irritation.
Skin Contact:	Causes skin burns. On contact with moisture, this material readily hydrolyzes to acid which may result in burns if not promptly removed.
Eye Contact:	Causes serious eye damage.
Ingestion:	Harmful if swallowed.
Chronic Exposure:	None known.
Other Health Effects:	None known.
LD 50 of Material (Specify Species and Routes)	Oral, Rat: 578 mg/kg, Dermal, Rabbit: >2000 mg/kg
LC 50 of Material (Specify Species and Routes)	Inhalation, Rat: Not Available
Exposure (Limits):	Not available
Irritancy of Material	Irritant to skin, eyes and mucous membranes.
Sensitization of Material	Sensitization may be induced through repetitive contact.
Synergistic Materials	None known.
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity:	None known.

SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to fish and aquatic organisms.

Toxicity to fish

Rainbow trout: LC50: 0.65 mg/l
Exposure time: 96 h

Daphnia: LC50: 0.87 mg/l
Exposure time: 48 h

Bioaccumulation: No data available

Biodegradability: Readily biodegradable

Mobility In Soil: Not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Deactivating Chemicals: None required.

Waste Disposal: Remove spilled, contaminated or left over material to approved landfill site or dispose material in accordance with Federal, Provincial or local government regulations.

Safe Handling of Residues: Same as above.

Disposal of Packaging: Do not re-use empty containers. Rinse thoroughly before discarding in trash.

SECTION 14 TRANSPORTATION INFORMATION

DOT

UN number : 3085
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S. (1-Bromo-3-Chloro-5,5-Dimethylhydantoin)
Class : 5.1
Packing Group : III
Labels : 5.1 (8)
Environmentally hazardous : no

TDG

UN number : 3085
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.(1-Bromo-3-Chloro-5,5-Dimethylhydantoin)
Class : 5.1
Packing Group : III
Labels : 5.1 (8)

SAFETY DATA SHEET

Environmentally hazardous : no

IATA

UN number : 3085
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.(1-Bromo-3-Chloro-5,5-Dimethylhydantoin)
Class : 5.1
Packing Group : III
Labels : 5.1 (8)
Environmentally hazardous : no

IMDG

UN number : 3085
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.(1-Bromo-3-Chloro-5,5-Dimethylhydantoin)
Class : 5.1
Subsidiary hazard class : 8
Packing Group : III
EmS Number 1 : F-A
EmS Number 2 : S-Q

Marine pollutant : yes
Environmentally hazardous : yes

SECTION 15 REGULATORY INFORMATION

CANADA

DSL/NDSL Complies

WHMIS: E, C

USA

TSCA Complies

SARA 311/312 Hazard Categories: Acute health hazard

California Proposition 65: This product does not contain any Proposition 65 chemicals.

EPA Statement: This chemical is a pesticide product registered by the EPA and is subject to certain labeling requirements under federal pesticides law.

INTERNATIONAL: Not available

SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2018

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

METASOL / SCALE & STAIN

WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Chelating agent

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Salt of 1 Hydroxyethylidene-1.1
- Diphosphoric Acid 7-3

2809-21-4

3.1g/kg

10 g/kg

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear, blue liquid

Odour Threshold (Ppm): Not applicable

Specific Gravity: 1.340

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): 100 deg C

Freezing Point (C): 0 deg C

Solubility In Water (20c): Soluble

% Volatile (By Weight) 56.0%

Ph: 5.5

Coefficient Of Water/Oil Distribution: Not applicable

META SOL / SCALE & STAIN

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: None
Autoignition Temperature (Celsius): None
Lower Explosion Limit (% By Volume): None
Upper Explosion Limit (% By Volume): None
Hazardous Combustion Products: Oxides of carbon and phosphorus

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: cyanides
Reactivity And Under What Conditions: None under normal conditions
Hazardous Decomposition Products: CO,CO2, oxides of phosphorus

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact X :Skin Absorption : Eye Contact X
: Inhalation Acute :Inhalation Chronic : Ingestion X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Product may irritate skin
Eye: Strong irritant- may cause burning
Inhalation: Severe irritation if mists are inhaled
Ingestion: Gastritis

Effects Of Chronic Exposure To Material: None known

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): Not established

Irritancy Of Material: Skin and eye irritant

Sensitization Of Material: None known

META SOL / SCALE & STAIN

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known
Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely
Eye (Specify): Safety glasses/goggles, if eye contact is likely
Respiratory (Specify): None
Other (Specify): None
Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): General ventilation
Leak And Spill Procedure: Small spills: Absorb with synthetic or natural absorbent and dispose into waste Container. Large spills: Neutralize with soda ash and absorb with absorbent material And dispose.
Waste Disposal: Dispose absorbed material in accordance with Federal, Provincial and local Regulations.
Handling Procedures And Equipment: Avoid skin contact
Storage Requirements: Store in cool, dry area
Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.
Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists
Inhalation: If mists are inhaled, seek immediate medical attention
Ingestion: Drink 2 or 3 glasses of water to dilute material, Induce vomiting. Contact a physician at once

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626
Preparation Date: January 1, 1996
Date Of Latest Revision/Review: September 2, 2008

Additional Notes Or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Soft Touch Pool Conditioner **WHMIS:** D2A

Manufacturer's Name: **CAPO INDUSTRIES LTD**
Street Address: **1200 CORPORATE DRIVE**
City: **BURLINGTON, ONTARIO**
Postal Code: **L7L 5R6**

Emergency Telephone: **Canutec (613) 996-6666 (Collect)**

Chemical Name: Not applicable
Chemical Family: Borates
Chemical Formula: Proprietary Blend
Trade Name & Synonyms: None
Molecular Weight: Not applicable
Material Use: Pool water conditioner & buffer

SECTION 2

HAZARDS IDENTIFICATION

GHS classification: H302 Acute toxicity, Oral, Category 4
 H335 Specific target organ toxicity, Single Exposure, Respiratory tract irritation,
 Category 3
 H401 Hazardous to the aquatic environment, Acute hazard, Category 2

Symbol(s)



Signal Word

Warning

Hazard statements

Harmful if swallowed. May cause respiratory tract irritation. Toxic to aquatic life.

Precautionary statements

Do not ingest. If ingested, do not induce vomiting, drink 2 or 3 glasses of water and seek medical attention. Avoid breathing in dusts/vapours/fumes. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Tetraborate Pentahydrate	12179-04-3	10 – 30
Boric Acid	10043-35-3	60 – 100

SECTION 4 FIRST AID MEASURES

- Inhalation:** Remove person to fresh air. Administer artificial respiration if person is having difficulty breathing and seek medical attention.
- Skin Contact:** Wash thoroughly with soap and water. Seek medical attention if redness or irritation develops.
- Eye Contact:** Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation develops.
- Ingestion:** Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing rinse mouth with water and give ½ to 1 glass of water to dilute material. Immediately contact local poison control centre. Vomiting should only be induced on the advice of a poison control centre or physician. If spontaneous vomiting occurs, have victim lean forward with head down to avoid inhaling in of vomitus. Rinse mouth and give more water. Immediately transport victim to an emergency facility.
- Note to physicians** For Borate ingestion or overexposure: Treat for Alkaline exposure or ingestion. Give vinegar in large amounts or water or diluted orange or lemon juice. Follow with demulcent. Do not use emetics or stomach tube. Assure adequate hydration. After ingestion or absorption into the blood stream of large amounts (15g or more), symptoms may appear after 24 to 72 hours. Borates are readily dissipated through the urine (20% in the first 24 hours). Observation only is required for adult ingestion of less than 6g of product. For ingestion in excess of 6g, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron assay of urine or blood is only useful for documenting exposure and should not be used to evaluate severity poisoning or to guide treatment.

SECTION 5 FIRE – FIGHTING MEASURES

- Hazardous Combustion Products:** Not applicable
- Unusual Fire or Explosion Hazards:** None known
- Sensitivity to Mechanical Impact:** None
- Rate of Burning:** Not applicable

Soft Touch Pool Conditioner

SAFETY DATA SHEET

Explosive Power: Not applicable
Sensitivity to Static Discharge: None
Fire Extinguishing Media: Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters: See below
Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Sweep up material and place in clean, dry labelled container for disposal. Do not allow product to enter sewers or waterways. This material is toxic to aquatic life. The product can be toxic to plants.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid prolonged skin contact. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.
Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.
Storage Requirements: Do not store sealed containers at temperatures above 40°C. Avoid moisture contamination.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex, PVC or rubber gloves if prolonged skin contact is likely.
Eye (Specify): Safety glasses/goggles if eye contact is likely.
Respiratory (Specify): Wear dust mask if prolonged use in non-ventilated area is unavoidable.
Other (Specify): Wear a NIOSH/MSA approved dust mask for concentrations of nuisance dust up to 100 mg/m3. An air supplied respirator of concentrations higher or unknown.
Eye wash and shower stations close to work area.

SAFETY DATA SHEET

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State:	Gas	Liquid	Solid	<u>X</u>
Odour & Appearance:	White powder, odourless			
Odour Threshold (ppm):	Not applicable			
Flammability:	Yes	No	<u>X</u>	
If Yes, Under Which Conditions?:				
Auto Ignition Temperature (Celsius):	Not applicable			
Upper Explosion Limit (% By Volume):	Not applicable			
Lower Explosion Limit (% By Volume):	Not applicable			
Decomposition Temp (°C)	Not available			
Specific Gravity:	0.849			
Viscosity:	Not applicable			
Vapour Pressure (mm):	Not applicable			
Vapour Density (Air-1):	Not applicable			
Flashpoint (°C)	Not applicable			
Evaporation Rate	Not applicable			
Boiling Point (°C):	Not applicable			
Freezing Point (°C):	200°C			
Solubility In Water (20°C):	3.6% by weight			
% Volatile (By Weight)	Not applicable			
PH:	7.0 – 8.0 (1% solution)			
Coefficient Of Water/Oil Distribution:	Not applicable			

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Elemental zirconium, base metals, alkali metals, reducing agents, and metal hydrides.		
Conditions to Avoid:	Reacts with strong reducing agents such as metal hydrides or alkali metals to generate flammable and explosive hydrogen gas.		
Hazardous Decomposition Products:	None known		

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to throat and nose and respiratory tract.
Skin Contact:	Not expected to cause irritation under normal conditions. Skin contact may cause irritation due to abrasive action. May cause defatting, drying and cracking of the skin. May be readily absorbed through broken or damaged skin. Toxic effects may be delayed.
Eye Contact:	Eye contact may cause irritation and possible damage due to abrasion.
Ingestion:	Ingestion of large amounts may cause nausea, gastrointestinal upset and abdominal pain. May cause diarrhea, circulatory collapse, cyanosis, convulsions, coma, nausea, vomiting and death.

CHRONIC HEALTH EFFECTS: May lead to irritation and/or sensitivity of the skin.

Other Health Effects:	Boric acid may cause cyanosis. Cyanosis is characterized by navy blue, almost black Lips, tongue and mucous membranes with skin colour being slate grey. Further Manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, Respiratory distress and death due to anoxia.
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LD 50 of Material (Specify Species and Routes): Boric Acid: 2660 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

Sodium Tetraborate Pentahydrate 30%: 8866.7 mg/kg, Oral (Rat)

LC 50 of Material (Specify Species and Routes): Boric Acid: >2.0 mg/l, Inhalation (Rat)

Sodium Tetraborate Pentahydrate 30%: Not available

Exposure (Limits):	Boric Acid ACGIH TLV, Inhalable fraction TWA: 2 mg/m ³ , 8 h, STEL: 6 mg/m ³ , 15 min. Sodium Tetraborate Pentahydrate ACGIH TLV, Inhalable fraction TWA: 2 mg/m ³ , STEL: 6 mg/m ³ , OSHA TWA: 10 mg/m ³ , Total Dust.
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Irritancy of Material	Skin, eye, nose and throat irritant.
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Sensitization of Material	None known
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Synergistic Materials	None known
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Carcinogenicity, Mutagenicity	None known
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Reproductive Effects	Boric acid and borates may cause reproductive effects based on laboratory animal studies. Animal studies show that ingestion of large amounts of borates over prolonged periods causes a decrease in sperm production and testicle size in male laboratory animals. No symptoms have been noted in humans.
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Teratogenicity:	Boric acid and borates may cause teratogenic/embryo toxic effects based on studies on laboratory animals. Animal studies show that ingestion of large amount of borates over prolonged periods cause developmental effects in fetuses of pregnant female animals.
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SAFETY DATA SHEET

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

BORIC ACID: LC50 1100 mg/l, Fish (*Oncorhynchus mykiss*), 96 h

LC50 53 mg/l, Daphnia (*Daphnia magna*), 21 days

SODIUM TETRABORATE PENTAHYDRATE: Not available

Environmental Fate

Biodegradability: Boric acid and Sodium Tetraborate Pentahydrate decomposes in the environment to natural borate. In aqueous solutions Sodium Tetraborate Pentahydrate is converted substantially into dissociated boric acid.

Bioaccumulative Potential: Not available

Mobility In Soil: Sodium Tetraborate Pentahydrate is soluble in water and is leachable through normal soil.

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with copious amounts of water.

Disposal of Packaging: Empty containers should be recycled or disposed through an approved waste management facility.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SAFETY DATA SHEET

SECTION 15 REGULATORY INFORMATION

CANADA All components of this product are either on the DSL or exempt

WHMIS: D2A

CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

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SAFETY DATA SHEET

Product Identifier

Manufacturer's Name: CAPO INDUSTRIES LTD.
Street Address: 1200 Corporate Drive
City: Burlington, Ontario, CANADA
Postal Code: L7L 5R6
Emergency Telephone: Canutec (613) 996-6666 (Collect)

SECTION 1. IDENTIFICATION

Product Identifier

Spa Plus

Other Means of Identification

Not applicable.

Recommended Use

Swimming pool oxidizing agent, algaecide, disinfectant, sanitizer, bactericide, fungicide, microbiocide/microbiostat

Restrictions on Use

Do not use product for anything outside of the above-specified uses.

Initial Supplier Identifier

Capo Industries Ltd.

Emergency Telephone Number

Canutec (613) 996-6666 (Collect)

SECTION 2. HAZARD IDENTIFICATION

Classification

Oxidising solids -	Category 2
Acute Oral Toxicity -	Category 4
Eye Irritation/Damage -	Category 2A
Skin Irritation -	Category 2B
Specific target organ toxicity (single exposure) -	Category 3
Acute Aquatic Toxicity -	Category 1
Chronic Aquatic Toxicity -	Category 1
Reproductive Toxicity -	Category 2

SIGNAL WORD: DANGER

Label Elements



Hazard Statement(s):

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.

SAFETY DATA SHEET

H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat. No smoking.
P220 Keep and store away from clothing, incompatible materials, combustible materials.
P221 Take any precaution to avoid mixing with combustibles / incompatible materials.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P281 Use personal protective equipment as required
P285 In case of inadequate ventilation wear respiratory protection.
P273 Avoid release to the environment.

Response:

P370+P378 In case of fire: Use water spray (large quantities) to extinguish.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF EXPOSED or CONCERNED: Get medical advice/attention.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313 IF EYE IRRITATION PERSISTS: Get medical advice/attention
P391 Collect spillage.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Other Hazards

Contact with acids liberates toxic gas.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms
Sodium dichloroisocyanurate	2893-78-9	50-80%	Dichlor; NaDCC; Dichloroisocyanuric acid, sodium salt
Sodium borate pentahydrate	12179-04-3	1-20%	Borax 5; Sodium tetraborate pentahydrate
Sodium tripolyphosphate	7758-29-4	10-30%	STPP

Notes

No additional data available

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SECTION 4. FIRST-AID MEASURES

For advice, contact a Poisons Information Centre or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with large amounts of water. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse.

Eye Contact:

Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion:

If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

Most Important Symptoms/Effects (Acute and Delayed):

Acute Symptoms/Effects: Listed below.

Inhalation (Breathing):

Respiratory System Effects: Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

Skin:

Skin Corrosion. Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns.

Eye:

Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

Ingestion (Swallowing):

Gastrointestinal Effects: Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

Delayed Symptoms/Effects:

Repeated and prolonged skin contact may cause dermatitis.

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Interaction with Other Chemicals Which Enhance Toxicity:

Contact with acids liberates toxic gas.

Medical Conditions Aggravated by Exposure: May aggravate pre-existing conditions such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders.

Protection of First-Aiders:

Protect yourself by avoiding contact with this material. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Avoid contact with skin and eyes. Do not ingest. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

Notes to Physician:

Treat as a corrosive substance. This material is more irritating to the skin and eyes in the presence of water. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray (large quantities).

Unsuitable Extinguishing Media:

DO NOT USE the following as extinguishing media: Dry agent (carbon dioxide, dry chemical powder).

Specific hazards arising from the chemical:

Non-combustible, but will support combustion of other materials. Oxidizing substance. Decomposes on heating emitting toxic fumes including those of chlorine, hydrogen chloride, oxides of boron, phosgene, sodium phosphorous oxide and sodium oxide.

Special protective equipment and precautions for fire-fighters:

Sodium dichloroisocyanurate is a powerful oxidising agent and decomposes violently upon heating liberating oxygen. In case of fire, area must be evacuated and specialist fire fighters called. Only large quantities of water should be used as an extinguishing agent. If excess water is not available, DO NOT attempt to extinguish the fire; use available water to prevent the spread of fire to adjacent property. Attending fire fighters should keep upwind if possible and wear full protective equipment including rubber boots and self-contained breathing apparatus. A fire in the vicinity of sodium dichloroisocyanurate should be extinguished in the most practical manner but avoid contaminating this material with the fire fighting agent, including water. Decomposes on contact with water evolving toxic chlorine gas and in the presence of small amounts of water, the explosive gas nitrogen trichloride. Once fire is extinguished, wash area thoroughly with excess water. Ensure that drains are not blocked with solid material. Maintenance of excess water during cleaning up operation is essential. Combustible material involved in the incident should be removed to a safe open area for controlled burning or for further drenching with water prior to collection for disposal.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions and Emergency Procedures:

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Clear area of all unprotected personnel. Shut off all possible sources of ignition. Increase ventilation. Avoid breathing dust. Product is a water-soluble white powder that may cause damage to trees or vegetation by root absorption. If contamination of sewers or waterways has occurred, advise local emergency services.

Personal Precautions and Protective Equipment

Wear protective equipment to prevent skin and eye contact and breathing in vapours. Air-supplied masks are recommended to avoid inhalation of toxic material.

Methods for Containment and Cleaning Up

DO NOT return spilled material to original container for re-use. DO NOT add small amounts of water to sodium dichloroisocyanurate. Collect and transfer to large volume of water – do NOT use a metal container. To neutralise add sodium sulfite (2.4 kg/kg product). If no active chlorine remains, add soda ash (1.1 kg/kg product) to effect complete neutralisation. Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid skin and eye contact and breathing in dust. Keep out of reach of children.

Conditions for Safe Storage

Store and handle in accordance with all current regulations and standards. (NFPA Oxidizer Class 2). Do not allow water to get in container. If liner is present, tie after each use. Keep container tightly closed and properly labeled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet). Product has an indefinite shelf life if stored in original container in a cool, dry place.

Incompatibilities/ Materials to Avoid:

Acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Sodium dichloroisocyanurate	No data available	No data available	No data available	No data available
Sodium borate pentahydrate	2 mg/m ³ (8h)	6 g/m ³ (15 min)	15 mg/m ³	5 mg/m ³

Appropriate Engineering Controls

Ensure ventilation is adequate and that air concentrations of decomposition product(s) is/are controlled below quoted Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Individual Protection Measures

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

SAFETY DATA SHEET

Eye/Face Protection

Wear safety glasses with side-shields. Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse. Wear appropriate chemical resistant gloves. Consult a glove manufacturer for assistance in selecting an appropriate chemical resistant glove (butyl rubber, natural rubber, neoprene, nitrile, polyvinyl chloride (PVC), Tyvek®).

Respiratory Protection

A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face-piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. Acid gas cartridges with N95 filters are required when fumes or vapor may be generated.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

White crystalline granule/powder

Odour:

Slight chlorine odor

Odour Threshold (ppm):

No data available.

Decomposition Temperature:

> 250°C/485°F

Boiling Point/Range:

Not applicable

Freezing Point/Range:

Not applicable.

Melting Point/Range:

No data available.

Vapor Pressure:

No data available.

Vapor Density (air=1):

No data available.

Relative Density/Specific Gravity (water=1):

No data available.

Bulk Density:

No data available.

Water Solubility:

SAFETY DATA SHEET

No data available.

pH:

8.5 @ 25°C (1% solution)

Volatility:

Not applicable

Evaporation Rate (ether=1):

Not applicable

Partition Coefficient (n-octanol/water):

$K_{ow} = 0$

Flash point:

Not applicable

Flammability (solid, gas):

Not flammable

Lower Flammability Level (air):

Not flammable

Upper Flammability Level (air):

Not flammable

Auto-ignition Temperature:

Not determined

% Available Chlorine:

34.5%

Viscosity:

Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Oxidising, avoid contact with reducing agents. Reacts with reducing agents. Contact with acids liberates toxic gas.

Chemical Stability

Powerful oxidizing agent. Sodium dichloroisocyanurate reacts with water and acids evolving toxic chlorine gas and in the presence of small amounts of water, the explosive gas nitrogen trichloride. Decomposes in alkaline conditions evolving carbon dioxide, nitrogen and chloramine gases. Slightly hygroscopic.

Possibility of Hazardous Reactions

Sodium dichloroisocyanurate reacts with water and acids evolving toxic chlorine gas and in the presence of small amounts of water, the explosive gas nitrogen trichloride. Decomposes in alkaline conditions evolving carbon dioxide, nitrogen, hydrogen and chloramine gases.

Conditions to Avoid

Avoid exposure to moisture. Avoid exposure to heat. Avoid exposure to direct sunlight. Avoid contact with other chemicals.

SAFETY DATA SHEET

Incompatible Materials

Incompatible with combustible materials, ammonium salts, nitrogenous materials, acids and water . Incompatible with reducing agents, potassium, acid anhydrides.

Hazardous Decomposition Products

Chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene, hydrogen

Hazardous Polymerization:

Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

☒ Inhalation ☒ Skin contact ☒ Eye contact ☒ Ingestion

Acute Toxicity

LC₅₀ (inhalation, rat, 4h)
0.27-1.17 mg/mL

LD₅₀ (oral, rat)
1823 mg/kg

LD₅₀ (dermal, rabbit)
> 2000 mg/kg

Notes

No additional data available

Skin Corrosion / Irritation

Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns. Dry material is less irritating than wet material. This material is not a skin sensitizer based on studies with guinea pigs.

Serious Eye Damage / Irritation

Eye exposures may cause burns to the eye lids, conjunctivitis, corneal edema and corneal burn. Significant and prolonged contact may cause damage to the internal contents of eye.

Aspiration Hazard

Material is irritant to the mucous membranes of the respiratory tract (airways). Inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed.

Respiratory Sensitization

This material in the form as sold is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction is typically less than 0.1% by weight for the granular and extra granular grades. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

Ingestion

SAFETY DATA SHEET

Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to epiglottis, mucus membranes of the mouth, esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

STOT (Specific Target Organ Toxicity) - Single Exposure

Category 3 - Respiratory Tract Irritation

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No data available

Carcinogenicity

This product is not classified as a carcinogen by NTP, IARC or OSHA.

Notes

No additional data available.

Reproductive Toxicity

No data available.

Germ Cell Mutagenicity

Not classified as a mutagen per GHS criteria.

Interactive Effects

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

This material is very toxic to aquatic life. This material is very toxic to aquatic life with long lasting effects. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

Fish Toxicity:

LC₅₀ Bluegill sunfish: 0.25-1.0 mg/L (96 hour)

LC₅₀ Rainbow trout: 0.13-0.36 mg/L (96 hour)

LC₅₀ Inland silversides: 1.21 mg/L (96 hour)

Invertebrate Toxicity:

LC₅₀ Water flea: 0.196 mg/L (48 hour)

LC₅₀ Mysid shrimp: 1.65 mg/L (96 hour)

Other Toxicity:

LD₅₀ Mallard duck (oral): 1,916 mg/kg

LD₅₀ N. Bobwhite Quail (oral): 1,732 mg/kg

LD₅₀ Mallard duck (diet): >10,000 ppm

LD₅₀ N. Bobwhite Quail (diet): >10,000 ppm

Persistence and Degradability

Sodium dichloroisocyanurate is not believed to persist in the environment. Free available chlorine is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid.

Borax is an inorganic substance and does not biodegrade.

Phosphate may persist indefinitely or incorporate into biological systems.

Bioaccumulative Potential

SAFETY DATA SHEET

Sodium dichloroisocyanurate hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative.

Borax is an inorganic substance and does not biodegrade.

Phosphate may persist indefinitely or incorporate into biological systems.

Mobility in Soil

Product not likely to be mobile in soil.

Other Adverse Effects

This product is very toxic to fish and aquatic organisms. This product is very toxic to aquatic life with long lasting effects. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of appropriate regulatory requirements (e.g. permit and the permitting authority has been notified in writing prior to discharge). Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your local or regional regulatory water boards and/or other appropriate regulatory offices.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of material through a licensed waste contractor. Add sodium dichloroisocyanurate into dilute solution of sodium hydroxide or soda ash with stirring gradually and neutralize that solution with reduction agents such as sodium sulfite and sodium thiosulfate. Adjust pH with sulfuric acid or hydrochloric acid to make neutral solution and dispose.

SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport



UN No: 1479

Transport Hazard Class: 5.1 Oxidizing Agent

Packing Group: II

Proper Shipping Name or

Technical Name: DICHLOROISOCYANURIC ACID SALTS

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 1479

Transport Hazard Class: 5.1 Oxidizing Agent

Packing Group: II

Proper Shipping Name or

Technical Name: DICHLOROISOCYANURIC ACID SALTS

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1479

Transport Hazard Class: 5.1 Oxidizing Agent

Packing Group: II

Proper Shipping Name or

SAFETY DATA SHEET

Technical Name: DICHLOROISOCYANURIC ACID SALTS

SECTION 15. REGULATORY INFORMATION

Classification of the chemical:

Oxidising solids - Category 2
Acute Oral Toxicity - Category 4
Eye Irritation - Category 2A
Specific target organ toxicity (single exposure) - Category 3
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

Hazard Statement(s):

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

National Inventory Status:

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

All components are listed or exempt.

TSCA 12(b):

This product is not subject to export notification.

Canadian Chemical Inventory:

All components of this product are listed on either the DSL or the NDSL.

SECTION 16. OTHER INFORMATION

Prepared By (Group, Department): Quality Control

Telephone: (905) 332-6626

Preparation Date: 20-February-2020

Date of Latest Revision: 1-December-2020

Additional Notes or References:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Spa Polish

WHMIS: Not Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Proprietary blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Spa Polish

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H316 Skin corrosion/irritation, Category 3
Symbol(s): None
Signal Word: Warning
Hazard statements: Causes mild skin irritation.
Precautionary statements: Avoid contact with skin and eyes. Wear gloves and safety glasses when handling.
Wash hands thoroughly after use.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air and seek medical attention.
Skin Contact: Flush skin with copious amounts of water and wash well with soap and water. Seek medical attention if irritation persists.
Eye Contact: Flush eyes with copious amounts of water for 20 minutes. Seek medical attention.

Spa Polish

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SAFETY DATA SHEET

Ingestion: Drink 2 or 3 glasses of water to dilute material. Do not induce vomiting. Seek medical attention.
Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: CO, CO₂ and SiO₂
Unusual Fire or Explosion Hazards: None known
Sensitivity to Mechanical Impact: None
Rate of Burning: Not applicable
Explosive Power: Not applicable
Sensitivity to Static Discharge: None
Fire Extinguishing Media: Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters: See below
Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Absorb with a suitable inert material (sand, absorbite). Sweep up and place in an appropriate waste container.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Wear gloves and safety glasses when handling. Wash hands thoroughly after use.
Ventilation Requirements: None required.

STORAGE

Ventilation Requirements: Store in a cool, dry area.
Storage Requirements: Keep from freezing.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if prolonged skin contact is likely.
Eye (Specify): Safety glasses/goggles if eye contact is likely.

SAFETY DATA SHEET

Respiratory (Specify): None required
Other (Specify): Eye wash and shower stations are close to work area.

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid
Odour & Appearance: White opaque odourless liquid.
Odour Threshold (ppm): Not applicable
Flammability: Yes No X
If Yes, Under Which Conditions?:
Auto Ignition Temperature (Celsius): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Decomposition Temp (°C): Not available
Specific Gravity: 1.066
Viscosity: 1000 cps min.
Vapour Pressure (mm): Not available
Vapour Density (Air-1): Not available
Flashpoint (°C): Not applicable
Evaporation Rate: Not available
Boiling Point (°C): 100°C
Freezing Point (°C): Not available
Solubility In Water (20°C): Soluble
% Volatile (By Weight): Not available
PH: 6 - 9
Coefficient Of Water/Oil Distribution: Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Strong oxidizers
Conditions to Avoid: None under normal conditions.
Hazardous Decomposition Products: CO, CO2 and SiO2

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Mists will irritate mucous membranes.
Skin Contact: Skin contact may cause mild irritation
Eye Contact: Eye contact may cause mild irritation.
Ingestion: This product will cause irritation of the digestive system.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: Mild skin and eye irritant.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residue with copious amounts of water.

Disposal of Packaging: Dispose of empty packaging in accordance with federal, provincial and local regulations.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

SAFETY DATA SHEET

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: Not controlled

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: June 8, 2015
Date Revised: December 1, 2020

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

SPA SHOCK

WHMIS: D2B

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Not applicable

Chemical Formula:

Mixture

Trade Name & Synonyms:

Not applicable

Molecular Weight:

Not applicable

Material Use:

Spa water treatment chemical

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H315 Skin corrosion/irritation, Category 2

H319 Serious eye damage/eye irritation, Category 2A

H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation

Label Elements

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and serious eye irritation.

Precautionary statements

Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If contact with eyes, flush with copious amounts of water for 15 minutes. Avoid breathing in dusts/fumes/vapours. If inhaled, remove person to fresh air and seek medical attention.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Pentapotassium Bis(Peroxymonosulphate)		
Bis(Sulphate)	70693-62-8	60 – 100
Dipotassium Peroxodisulphate	7727-21-1	0 – 5
Sodium Carbonate	497-19-8	10 – 30

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If difficulty breathing, give artificial respiration and seek medical attention.
Skin Contact:	Wash thoroughly with soap and water.
Eye Contact:	Flush eyes with copious amounts of water and seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water or milk to dilute material. Do not induce vomiting. Contact a physician.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	At elevated temperatures of 100°C may liberate oxides of sulphur and carbon.
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable for extinguishing surrounding fire.
Instructions to the Fire Fighters:	See below
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Prevent material from entering drains, sewers, and waterways. Sweep up and place metal waste containers for disposal.
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SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin and eyes. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Do not mix directly with other chemicals. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: General exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear air-purifying respirator with dust/mist cartridge if in a non-ventilated area.

Other (Specify): Impervious clothing if contact is likely. Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Opaque, white granular, odourless

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: Not available

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

SAFETY DATA SHEET

Flashpoint (°C)	Not applicable
Evaporation Rate	Not applicable
Boiling Point (°C):	Not available
Freezing Point (°C):	Not available
Solubility In Water (20°C):	Soluble
% Volatile (By Weight)	Not applicable
PH:	6.5 – 7.5 (1% solution)
Coefficient Of Water/Oil Distribution:	Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Heavy metal salts, halogenated compounds, cyanides, aluminum, and sulfamic acid.		
Conditions to Avoid:	Avoid extreme heat.		
Hazardous Decomposition Products:	Oxides of sulphur and carbon.		

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to respiratory tract.
Skin Contact:	Prolonged skin contact will cause irritation.
Eye Contact:	Eye contact will cause irritation or burns.
Ingestion:	Severe gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) 500 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)
Dipotassium Peroxodisulphate 802 mg/kg, Oral (Rat), >10000 mg/kg, Dermal (Rabbit)
Sodium Carbonate 4090 mg/kg, Oral (Rat), 2210 mg/kg, Dermal (Mouse).

LC 50 of Material (Specify Species and Routes): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) >5 mg/l, Inhalation 4 h (Rat)

SAFETY DATA SHEET

Exposure (Limits): Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate), AEL* (Dupont): 1mg/m³, 15 minute TWA, Dipotassium Peroxodisulphate, TLV (ACGIH): 0.1 mg/m³, TWA as persulphate.

Irritancy of Material Eye, skin and respiratory tract irritant.

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Pentopotassium Bis(Peroxymonosulphate)Bis(Sulphate) – 96 h LC₅₀ Cyprinodon Variegatus (sheepshead minnow):
1.09 mg/l
- 72 h ERC₅₀ Algae: 1mg/l
- 48 h EC₅₀ Daphnia: 3.5 mg/l

Dipotassium Peroxodisulphate – 48 h LC₅₀ Daphnia Magna (water flea): 92 mg/l

Environmental Fate

Biodegradability: Readily biodegradable

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with lots of water.

Disposal of Packaging: Dispose of containers in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

SAFETY DATA SHEET

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

CPR Compliance This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

DEFOAMER/FOAM FREE/ARCTIC PURE FOAM DISSOLVE WHMIS: Not Regulated

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6
Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Silicone Emulsion
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Defoamer for spas

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid
Odour & Appearance: Opaque, white, very mild odour
Odour Threshold (Ppm): Not applicable
Specific Gravity: 1.000
Vapour Pressure (Mm): Not applicable
Vapour Density (Air-1): Not applicable
Evaporation Rate: Not applicable
Boiling Point (C): 100 deg C
Freezing Point (C): 0 deg C
Solubility In Water (20c): Dispersible
% Volatile (By Weight) 83%
Ph: 4.20
Coefficient Of Water/Oil Distribution: Not available

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use media suitable to extinguish source of fire.
Special Procedures: Not applicable
Flashpoint (Celsius) And Method: Not applicable
Autoignition Temperature (Celsius): Not applicable
Lower Explosion Limit (% By Volume): Not applicable
Upper Explosion Limit (% By Volume): Not applicable
Hazardous Combustion Products: Not applicable

EXPLOSION DATA

Sensitivity To Mechanical Impact: None **Sensitivity To Static Discharge:** None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Oxidizing agents
Reactivity And Under What Conditions: None
Hazardous Decomposition Products: Burning may produce silicone dioxide and carbon monoxide.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:
 : Skin Contact :Skin Absorption : Eye Contact X
 : Inhalation Acute :Inhalation Chronic : Ingestion

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: None expected.
Eye: Mild irritation.
Inhalation: None expected.
Ingestion: None known.

Effects Of Chronic Exposure To Material: None known.

Other Health Effects: None known.

Ld 50 Of Material (Specify Species And Routes): See Section II

Lc 50 Of Material (Specify Species And Routes): See Section II

Exposure (Limits): Not applicable.

Irritancy Of Material: None known.

Sensitization Of Material: None known.

Synergistic Materials: None known.

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known.

MATERIAL SAFETY DATA SHEET

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): None.

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): None.

Other (Specify): None.

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): General.

Leak And Spill Procedure: Soak up with absorbent material. Collect and dispose in garbage. Wash spill area with water.

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local government regulations.

Handling Procedures And Equipment: No special requirements.

Storage Requirements: Store at ambient temperatures.

Special Shipping Information: **Transportation:** Not regulated.
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.

Eye: Flush eyes with plenty of water for 15 minutes.

Inhalation: If mists are inhaled, seek immediate medical attention.

Ingestion: Drink 2 or 3 glasses of water and induce vomiting. Contact a physician if irritation develops.

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626

Preparation Date: March, 30, 2014

Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

METASOL/PREVENT 11/ CONTROL/SCALE & STAIN
ARCTIC PURE DEFENSE

WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Chelating agent

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Salt of 1 Hydroxyethylidene-1.1
- Diphosphoric Acid 7-3

2809-21-4

3.1g/kg

10 g/kg

SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid ☒ Solid

Odour & Appearance: Clear, blue liquid

Odour Threshold (Ppm): Not applicable

Specific Gravity: 1.340

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): 100 deg C

Freezing Point (C): 0 deg C

Solubility In Water (20c): Soluble

% Volatile (By Weight) 56.0%

Ph: 5.5

Coefficient Of Water/Oil Distribution: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability: Yes No X
If Yes, Under Which Conditions?: Not applicable
Means Of Extinction: Use media suitable to extinguish source of fire.
Special Procedures: Wear self contained breathing apparatus when fire fighting.
Flashpoint (Celsius) And Method: None
Autoignition Temperature (Celsius): None
Lower Explosion Limit (% By Volume): None
Upper Explosion Limit (% By Volume): None
Hazardous Combustion Products: Oxides of carbon and phosphorus

EXPLOSION DATA

Sensitivity To Mechanical Impact: None Sensitivity To Static Discharge: None

SECTION V REACTIVITY DATA

Chemical Stability: Yes X No
If No, Under Which Conditions?: Not applicable
Incompatibility To Other Substances: Yes X No
If So, Which Ones: cyanides
Reactivity And Under What Conditions: None under normal conditions
Hazardous Decomposition Products: CO,CO2, oxides of phosphorus

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

Route Of Entry:

: Skin Contact X :Skin Absorption : Eye Contact X
: Inhalation Acute :Inhalation Chronic : Ingestion X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin: Product may irritate skin
Eye: Strong irritant- may cause burning
Inhalation: Severe irritation if mists are inhaled
Ingestion: Gastritis

Effects Of Chronic Exposure To Material: None known

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): Not established

Irritancy Of Material: Skin and eye irritant

Sensitization Of Material: None known

META SOL/PREVENT 11/CONTROL/SCALE & STAIN/ARCTIC PURE DEFENSE

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION VII

PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Latex or rubber gloves if skin contact is likely

Eye (Specify): Safety glasses/goggles, if eye contact is likely

Respiratory (Specify): None

Other (Specify): None

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): General ventilation

Leak And Spill Procedure: Small spills: Absorb with synthetic or natural absorbent and dispose into waste Container. Large spills: Neutralize with soda ash and absorb with absorbent material And dispose.

Waste Disposal: Dispose absorbed material in accordance with Federal, Provincial and local Regulations.

Handling Procedures And Equipment: Avoid skin contact

Storage Requirements: Store in cool, dry area

Special Shipping Information: **Transportation:** Not regulated

Class:

Pkg. Group:

P.I.N./Un:

SECTION VIII

FIRST AID MEASURES

Skin: Wash thoroughly with soap and water.

Eye: Flush eyes with plenty of water for 15 minutes. Seek medical attention if irritation persists

Inhalation: If mists are inhaled, seek immediate medical attention

Ingestion: Drink 2 or 3 glasses of water to dilute material, Induce vomiting. Contact a physician at once

SECTION IX

PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist

Telephone: (905) 332-6626

Preparation Date: March, 30, 2014

Date Of Latest Revision/Review: March, 30, 2014

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

SPARKILIZER **WHMIS:** Non Controlled

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Cationic Polyelectrolyte
Chemical Formula: Proprietary Blend
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: Water clarifier/coagulant

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H412 Hazardous to the aquatic environment, Long term hazard, Category 3
Symbol(s): None
Signal Word None
Hazard statement Harmful to aquatic life with long lasting effects.
Precautionary statement Avoid release into the environment.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
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No Regulated Components

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air if having difficulty breathing.
Skin Contact: Wash thoroughly with soap and water for 15 minutes.
Eye Contact: Flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation persists.

SAFETY DATA SHEET

Ingestion: Do not induce vomiting. Give water to dilute. Contact a physician if a large quantity of the product has been consumed.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: Oxides of carbon and nitrogen.

Unusual Fire or Explosion Hazards: Not applicable

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: See below

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Prevent entry into drains, sewers and waterways. Soak up spill with absorbent material. Sweep up and put into dry, clean and labelled containers for disposal. Due to the slippery nature of this product, clean up spills immediately and completely.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: None required.

STORAGE

Ventilation Requirements: Store in a cool, dry area. Do not freeze.

Storage Requirements: Store at room temperature. Keep containers tightly closed when not in use.

SAFETY DATA SHEET

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Rubber, PVC or latex gloves if skin contact is likely.

Eye (Specify): Safety glasses if eye contact is likely.

Respiratory (Specify): None

Other (Specify): Eye wash and shower stations are close to work area if needed.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear thick blue liquid, mild odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C): Not applicable

Specific Gravity: 1.010

Viscosity: 1300 cps min.

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C): Not applicable

Evaporation Rate: Not available

Boiling Point (°C): 100°C

Freezing Point (°C): 0°C

Solubility In Water (20°C): Soluble

% Volatile (By Volume) 94%

PH: 8 - 10

Coefficient Of Water/Oil Distribution: Not applicable

SAFETY DATA SHEET

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes ☒ No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes ☒ No

If So, Which Ones: Strong oxidizers and strong alkalis e.g. ammonia and caustic soda.

Conditions to Avoid: Contact with incompatible materials.

Hazardous Decomposition Products: Oxides of carbon and nitrogen.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None

Skin Contact: May cause mild irritation.

Eye Contact: May cause mild irritation.

Ingestion: May cause gastritis – stomach upset, nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): None established

Irritancy of Material Mild skin and eye irritant

Sensitization of Material None known

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

ALGAE TEST RESULTS: Acute Toxicity, Seawater (ISO 10253)

72 h, Marine Algae (Skeletonema Costatum): 0.75 mg/l IC50

Growth Inhibition (OECD 201)

96 h, Green Algae (Selenastrum Capricornutum): >10-100 mg/l IC50

FISH TEST RESULTS: Acute Toxicity, Freshwater (OECD 203)

SAFETY DATA SHEET

Zebra Fish (Brachydanio Rerio): >10-100 mg/l LC50

Acute Toxicity, Seawater (Parcom)

Juvenile Turbot (Scophthalmus Maximus): 1769 mg/l LC50

INVERTEBRATE TEST RESULTS: Acute Immobilization (OECD 202)

Water Flea (Daphnia Magna) : >10-100 mg/l EC50

Acute Invertebrate Toxicity, Seawater (Parcom)

Marine Copepod (Acartia Tonsa): 204 mg/l EC50 Immobilization

Environmental Fate

Biodegradability: This material is not readily biodegradable.

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Remove residues by scrubbing.

Disposal of Packaging: Dispose of containers in accordance with federal, provincial and local regulations.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SAFETY DATA SHEET

SECTION 15

REGULATORY INFORMATION

CANADA

WHMIS: Non Controlled

CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

USA Not available

INTERNATIONAL Not available

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

STABILIZED GRANULAR CHLORINE, CHLORAID, DI-CHLOR

WHMIS: D28,C,E – Regulated under the PCP Act

MANUFACTURER'S NAME:
STREET ADDRESS:
CITY:
POSTAL CODE:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

EMERGENCY TELEPHONE:

CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Sodium Dichloro-S-Triazone Trione
CHEMICAL FAMILY: Chlorinated Isocyanurate
CHEMICAL FORMULA: Not applicable
TRADE NAME & SYNONYMS: Dichloroisocyanuric Acid Sodium Salt
MOLECULAR WEIGHT: Not applicable
MATERIAL USE: Pool Water Disinfectant

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Dichloro-S-Triazinetrione	60-100	2893-78-9	670 mg/kg	Not available
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SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X

ODOUR & APPEARANCE: White, opaque, granular, chlorine odour

ODOUR THRESHOLD (PPM): Not applicable

SPECIFIC GRAVITY: 2.03

VAPOUR PRESSURE (MM): Not applicable

VAPOUR DENSITY (AIR-1): Not applicable

EVAPORATION RATE: Not applicable

BOILING POINT (C): 238 – 249 decomposes

FREEZING POINT (C): Not applicable

SOLUBILITY IN WATER (20C): 30g in 100g H2O @ 25 deg C

% VOLATILE (BY WEIGHT) Not applicable

PH: 6.5 (1% solution)

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

STABILIZED GRANULAR CHLORINE, CHLORAID, DI-CHLOR

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO X

IF YES, UNDER WHICH CONDITIONS?: Not flammable, but if heated by other sources to 238 – 249 deg C, it will undergo decomposition with evolution of heat and dense, noxious fumes.

MEANS OF EXTINCTION: Water

SPECIAL PROCEDURES: Wear full protective clothing and breathing apparatus when fire fighting

FLASHPOINT (CELSIUS) AND METHOD: Not applicable

AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Chlorine gas and traces of phosgene.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES NO X

IF NO, UNDER WHICH CONDITIONS?: Avoid contact with incompatible material and damp conditions.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO

IF SO, WHICH ONES: Easily oxidizable organic materials, ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and acids.

REACTIVITY AND UNDER WHAT CONDITIONS: Not applicable

HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures of 204 deg C and greater, chlorine gas and traces of phosgene will be liberated.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC	: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Corrosive

EYE: Corrosive

INHALATION: Fumes may produce eye, nose, throat and respiratory tract irritation.

INGESTION: This product may be harmful if swallowed. Corrosive to mucous membranes.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

STABILIZED GRANULAR CHLORINE, CHLORAID, DI-CHLOR

MATERIAL SAFETY DATA SHEET

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Chlorine – TWAEV – 1ppm, 3mg/m³
- STEV - 3ppm, 4mg/m³
(May be found in head space of containers)

IRRITANCY OF MATERIAL: Strong irritant of skin, eye, nose and throat.

SENSITIZATION OF MATERIAL: None known.

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURE PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses if eye contact is likely.

RESPIRATORY (Specify): Use NIOSH/NSHA approved dust or vapour mask when airborne exposure limits are exceeded.

OTHER (Specify): Protective clothing if contact is likely.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in a well ventilated area.

LEAK AND SPILL PROCEDURE: If material is spilled, clean up as soon as possible to prevent contamination with a material with which it may react. Keep spilled material dry. Sweep up and place material in a dry, clean container.

WASTE DISPOSAL: If material is dry, disposal by incineration is recommended. Alternate method for disposal is by neutralizing to a nonoxidizing residue. Keep unneutralized material out of sewers, watersheds and water systems.

HANDLING PROCEDURES AND EQUIPMENT: Avoid skin, eye and clothing contact. Use in well ventilated area. Wash thoroughly with soap and water after handling.

STORAGE REQUIREMENTS: Store in cool, dry area. Do not allow water to get into containers. Keep containers tightly closed when not in use.

SPECIAL SHIPPING INFORMATION:

Transportation:	Dichloroisocyanuric Acid Dry
Class:	5.1
Pkg. Group:	II
P.I.N./UN:	2465 1kg & under Ltd. quantity

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water. Should irritation persist, contact a physician.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Remove person to fresh air. Call a physician.

INGESTION: Drink 2 or 3 glasses of water or milk. Do not induce vomiting. Contact a physician.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996

DATE OF LATEST REVISION/REVIEW: September 2 ,2009

ADDITIONAL NOTES OR REFERENCES:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

**STABILIZED GRANULAR CHLORINE, CHLORAIID,
DI-CHLOR**

WHMIS: D28,C,E – Regulated under the PCP Act

MANUFACTURER'S NAME:
STREET ADDRESS:
CITY:
POSTAL CODE:

CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6

EMERGENCY TELEPHONE:

CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Sodium Dichloro-S-Triazone Trione
CHEMICAL FAMILY: Chlorinated Isocyanurate
CHEMICAL FORMULA: Not applicable
TRADE NAME & SYNONYMS: Dichloroisocyanuric Acid Sodium Salt
MOLECULAR WEIGHT: Not applicable
MATERIAL USE: Pool Water Disinfectant

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Dichloro-S-Triazinetrione	60-100	2893-78-9	670 mg/kg	Not available
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SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X

ODOUR & APPEARANCE: White, opaque, granular, chlorine odour

ODOUR THRESHOLD (PPM): Not applicable

SPECIFIC GRAVITY: 2.03

VAPOUR PRESSURE (MM): Not applicable

VAPOUR DENSITY (AIR-1): Not applicable

EVAPORATION RATE: Not applicable

BOILING POINT (C): 238 – 249 decomposes

FREEZING POINT (C): Not applicable

SOLUBILITY IN WATER (20C): 30g in 100g H2O @ 25 deg C

% VOLATILE (BY WEIGHT) Not applicable

PH: 6.5 (1% solution)

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

STABILIZED GRANULAR CHLORINE, CHLORAIID, DI-CHLOR

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO X

IF YES, UNDER WHICH CONDITIONS?: Not flammable, but if heated by other sources to 238 – 249 deg C, it will undergo decomposition with evolution of heat and dense, noxious fumes.

MEANS OF EXTINCTION: Water

SPECIAL PROCEDURES: Wear full protective clothing and breathing apparatus when fire fighting

FLASHPOINT (CELSIUS) AND METHOD: Not applicable

AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Chlorine gas and traces of phosgene.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES NO X

IF NO, UNDER WHICH CONDITIONS?: Avoid contact with incompatible material and damp conditions.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO

IF SO, WHICH ONES: Easily oxidizable organic materials, ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and acids.

REACTIVITY AND UNDER WHAT CONDITIONS: Not applicable

HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures of 204 deg C and greater, chlorine gas and traces of phosgene will be liberated.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC	: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Corrosive

EYE: Corrosive

INHALATION: Fumes may produce eye, nose, throat and respiratory tract irritation.

INGESTION: This product may be harmful if swallowed. Corrosive to mucous membranes.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

STABILIZED GRANULAR CHLORINE, CHLORALD, DI-CHLOR

MATERIAL SAFETY DATA SHEET

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Chlorine – TWAEV – 1ppm, 3mg/m³
- STEV - 3ppm, 4mg/m³
(May be found in head space of containers)

IRRITANCY OF MATERIAL: Strong irritant of skin, eye, nose and throat.

SENSITIZATION OF MATERIAL: None known.

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURE PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses if eye contact is likely.

RESPIRATORY (Specify): Use NIOSH/NSHA approved dust or vapour mask when airborne exposure limits are exceeded.

OTHER (Specify): Protective clothing if contact is likely.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in a well ventilated area.

LEAK AND SPILL PROCEDURE: If material is spilled, clean up as soon as possible to prevent contamination with a material with which it may react. Keep spilled material dry. Sweep up and place material in a dry, clean container.

WASTE DISPOSAL: If material is dry, disposal by incineration is recommended. Alternate method for disposal is by neutralizing to a nonoxidizing residue. Keep unneutralized material out of sewers, watersheds and water systems.

HANDLING PROCEDURES AND EQUIPMENT: Avoid skin, eye and clothing contact. Use in well ventilated area. Wash thoroughly with soap and water after handling.

STORAGE REQUIREMENTS: Store in cool, dry area. Do not allow water to get into containers. Keep containers tightly closed when not in use.

SPECIAL SHIPPING INFORMATION:

Transportation:	Dichloroisocyanuric Acid Dry
Class:	5.1
Pkg. Group:	II
P.I.N./UN:	2465 1kg & under Ltd. quantity

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water. Should irritation persist, contact a physician.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Remove person to fresh air. Call a physician.

INGESTION: Drink 2 or 3 glasses of water or milk. Do not induce vomiting. Contact a physician.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996

DATE OF LATEST REVISION/REVIEW: September 2 ,2009

ADDITIONAL NOTES OR REFERENCES:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

SUPER TABS 200 gm

WHMIS: C, D1B, D2B

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Trichloro-s-triazinetriene

Chemical Family:

Chloroisocyanurates

Chemical Formula:

C3 Cl3 N3 O3

Trade Name & Synonyms:

Trichloroisocyanuric Acid, TCCA, Trichlor

Molecular Weight:

232.41

Material Use:

Pool or Spa water chlorination

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Oxidizing solid, Category 2

Acute toxicity, Oral, Category 4

Skin corrosion/irritation, Category 1C

Acute toxicity, Inhalation, Category 2

Specific target organ toxicity, Single exposure, Respiratory tract irritation, Category 3

Hazardous to aquatic environment, long-term hazard, Category 1

Symbol(s)



Signal Word

Danger

Hazard statements

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

SAFETY DATA SHEET

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long-lasting effects.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220 Keep/Store away from clothing and combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P284 In case of inadequate ventilation wear respiratory protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do not induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

P320 Specific treatment is urgent (see first aid on this label).

P363 Wash contaminated clothing before use.

P370+P378 In case of fire: Use water spray for extinction.

P391 Collect spillage.

P403+P233 Store in a well-ventilated area. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local regulations.

NFPA: 3 Health, 0 Fire, 2 Reactivity Special Hazard Warning: OXIDIZER

HMIS: 3 Health, 0 Fire, 2 Reactivity

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Trichloro-s-triazinetriene	87-90-1	99.0

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If person is not breathing, give artificial respiration, by mouth to mouth if possible. Contact a physician
Skin Contact:	Take off contaminated clothing. Wash skin thoroughly with soap and water for 15 minutes. Seek medical attention.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water, rinse mouth. Do not give anything to an unconscious person. Do not induce vomiting, unless directed to do so by a doctor. Contact a physician immediately.
Note to physicians	Probable mucosal damage may contraindicate the use of gastric lavage. Corrosive. Treat symptomatically and supportively.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Small quantities of water will react with this material which will form nitrogen trichloride, which is violently explosive.
Unusual Fire or Explosion Hazards:	When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine, nitrous oxides, cyanates, carbon monoxide and carbon dioxide.
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Water only. Large amounts of water may be needed and the flow of water should not be stopped until the fire/reaction has stopped.
Instructions to the Fire Fighters:	Cool containers with water spray. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.
Fire Fighting Protective Equipment:	Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode.

SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:

Prevent spillage from contaminating soil or entering waterways, sewers, drains and confined areas. If material is spilled, clean up as soon as possible to prevent contamination with a material with which it will react. Keep spilled material dry. Sweep up and place material in a dry, clean and labeled container.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Avoid skin, eye and clothing contact. Wash hands thoroughly with soap and water after handling.

Ventilation Requirements:

Local exhaust ventilation.

STORAGE

Ventilation Requirements:

Store in a cool, dry and well ventilated area away from incompatible materials.

Storage Requirements:

Do not store material at temperatures above 60°C/140°F. Available chlorine loss can be as little as 0.1% per year at ambient temperatures. Do not allow water to get into container. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify):

Nitrile or neoprene gloves if skin contact is likely.

Eye (Specify):

Safety goggles/glasses or face shield if eye contact is likely.

Respiratory (Specify):

Use NIOSH/MSHA approved dust or vapour mask when airborne exposure limits are exceeded. An approved respirator with an acid gas (for chlorine) and dust prefilter may be adequate.

Other (Specify):

Body covering clothes and boots. Safety shower and eye wash stations are close to work area.

SAFETY DATA SHEET

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:	Gas	Liquid	Solid	<u>X</u>
Odour & Appearance:	White opaque tablets, chlorine odour			
Odour Threshold (ppm):	Not available			
Flammability:	Yes	No	<u>X</u>	
If Yes, Under Which Conditions?:				
Auto Ignition Temperature (Celsius):	Not applicable			
Upper Explosion Limit (% By Volume):	Not applicable			
Lower Explosion Limit (% By Volume):	Not applicable			
Decomposition Temp (°C)	225°C			
Specific Gravity:	Not applicable			
Viscosity:	Not applicable			
Vapour Pressure (mm):	Not applicable			
Vapour Density (Air-1):	Not applicable			
Flashpoint (°C)	Not applicable			
Evaporation Rate	Not applicable			
Boiling Point (°C):	Not applicable			
Freezing Point (°C):	Not applicable			
Solubility In Water (20°C):	Soluble			
% Volatile (By Weight)	Not applicable			
PH:	2.7 – 3.3 (1% solution)			
Coefficient Of Water/Oil Distribution:	Not applicable			

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability:	Yes	No	<u>X</u>
If No, Under Which Conditions?:			
Stable when dry. Reacts non-violently with water to form a bleach solution.			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:			
Avoid contact with water on concentrated forms of this material. Avoid contact with easily oxidizable organic materials – ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite and alkalis. Also other isocyanurates.			
Conditions to Avoid:	Contamination can cause spontaneous combustion at room temp.		

SAFETY DATA SHEET

Hazardous Decomposition Products: Chlorine gas and traces of phosgene can be liberated at temperatures greater than 225°C.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Irritation or burns to mucous membranes and respiratory tract.

Skin Contact: Irritation and may cause burns.

Eye Contact: Irritation and may cause burns.

Ingestion: Irritation or burns to the gastrointestinal tract.

CHRONIC HEALTH EFFECTS: Prolonged exposure may cause damage to the respiratory system. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.

Other Health Effects: Asthma, respiratory and cardiovascular diseases.

LD 50 of Material (Specify Species and Routes): 406 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): 0.09-0.29 mg/l, Inhalation (Rat)

Exposure (Limits): Chlorine – TWA: 0.5 ppm, STEL: 1 ppm

Irritancy of Material Strong irritant to skin, eye, nose and throat.

Sensitization of Material None

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic toxicity:

96 h LC50, Fish 0.13-0.5 mg/l (Lepomis macrochirus)

48 h LC50, Daphnia magna 0.21 mg/l

Environmental Fate

Biodegradability: Material is subject to hydrolysis. Acids produced by hydrolysis are biodegradable.

Bioaccumulative Potential: Not expected to bioaccumulate in the aquatic environment.

Mobility In Soil: Expected to be highly mobile in soil.

SAFETY DATA SHEET

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance to all applicable federal, provincial and local laws and regulations.

Safe Handling of Residues: See above

Disposal of Packaging: See above

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

1 kg and under are LIMITED QUANTITY

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

Emergency Guide No. 140

IMDG

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

EmS No: F-A, S-Q

IATA/ICAO

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

SAFETY DATA SHEET

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

ERG No: 5L

For shipments by vessel or bulk quantities (>882 pounds) by motor vehicle or aircraft, add "Marine Pollutant (Trichloroisocyanuric Acid)" to shipping description and label containers with Marine Pollutant markings.

SECTION 15 REGULATORY INFORMATION

CANADA Listed in DSL

WHMIS: C, D1B, and D2B

USA Reported in the EPA TSCA Inventory.

EPA Registration No. 83936-3

Emergency overview in accordance to EPA Master Label:

Danger. Hazards to humans and domestic animals. Highly corrosive. Causes irreversible damage or skin burns. May be fatal if inhaled, or absorbed through skin. Strong oxidizing agent. This pesticide is toxic to fish and aquatic organisms.

SARA (311,312) This product is categorized as an immediate health hazard, and fire and reactivity physical hazard.

Massachusetts, New Jersey and Pennsylvania Right to Know Lists: Listed

INTERNATIONAL

Australia, China, and Korea: Listed on their chemical inventory lists.

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2016

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

STABILIZER & CONDITIONER

WHMIS: Not regulated

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Cyanuric Acid
CHEMICAL FAMILY: Organic acid
CHEMICAL FORMULA: C3 H3 N3 O3
TRADE NAME & SYNONYMS: Not available
MOLECULAR WEIGHT: Not applicable
MATERIAL USE: Pool Water Stabilizer

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X
ODOUR & APPEARANCE: Mild odour, white, granular, free flowing
ODOUR THRESHOLD (PPM): Not applicable
SPECIFIC GRAVITY: 1.77
VAPOUR PRESSURE (MM): Not applicable
VAPOUR DENSITY (AIR-1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (C): Not applicable
FREEZING POINT (C): Not applicable
SOLUBILITY IN WATER (20C): 0.28g/100g water @ 25 deg C
% VOLATILE (BY WEIGHT) Not applicable
PH: Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

STABILIZER & CONDITIONER

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO ☒ X
IF YES, UNDER WHICH CONDITIONS?: Not applicable
MEANS OF EXTINCTION: Use media suitable to extinguish source of fire
SPECIAL PROCEDURES: Wear self contained breathing apparatus when fire fighting
FLASHPOINT (CELSIUS) AND METHOD: Not applicable
AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable
LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable
UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable
HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES ☒ X NO
IF NO, UNDER WHICH CONDITIONS?: Not applicable
INCOMPATIBILITY TO OTHER SUBSTANCES: YES ☒ X NO
IF SO, WHICH ONES: Oxidizing agents, ammonium compounds, amines, oil and grease,
Oxidized materials, strong acids and alkalis
REACTIVITY AND UNDER WHAT CONDITIONS: Not applicable
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	<input checked="" type="checkbox"/> X	: SKIN ABSORPTION	: EYE CONTACT	<input checked="" type="checkbox"/> X
: INHALATION ACUTE		: INHALATION CHRONIC	: INGESTION	<input checked="" type="checkbox"/> X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Mild irritation
EYE: Mild eye irritant
INHALATION: None expected
INGESTION: Gastritis

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None

OTHER HEALTH EFFECTS: None

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): OSHA PEL-(particulates not otherwise classified) TLV-total dust 10mg/m₃
TLV- respirable dust 5mg/m₃

IRRITANCY OF MATERIAL: Mild eye irritant

STABILIZER & CONDITIONER

MATERIAL SAFETY DATA SHEET

SENSITIZATION OF MATERIAL: None known.

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Latex or rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses if eye contact is likely.

RESPIRATORY (Specify): Wear NIOSH/MSHA approved dust respirator

OTHER (Specify): None.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in a well ventilated area.

LEAK AND SPILL PROCEDURE: . Sweep up spilled material and place in a appropriate container. and seal

WASTE DISPOSAL: Dispose of material in accordance with Federal and Provincial and local regulations

HANDLING PROCEDURES AND EQUIPMENT: Avoid eye and skin contact and dust inhalation

STORAGE REQUIREMENTS: Store in cool, dry area. Keep away from heat, open flames and incompatible materials

SPECIAL SHIPPING INFORMATION: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./UN:

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention. If irritation persists

INHALATION: Remove person to fresh air. Administer artificial respiration or CPR as required. Contact physician if breathing is difficult

INGESTION: Feed egg white and induce vomiting. Contact a physician.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 2006

DATE OF LATEST REVISION/REVIEW: February 22, 2011

ADDITIONAL NOTES OR REFERENCES:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

CHLORINE TABLETS/SUPER STICKS – JUMBO STICKS

WHMIS: Not Regulated (C, D2B)

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Trichloroisocyanuric Acid
CHEMICAL FAMILY: Isocyanurates
CHEMICAL FORMULA: C3 CL3 N3 O3
TRADE NAME & SYNONYMS: 1, 3, 5 Trichloroisocyanuric Acid
MOLECULAR WEIGHT: 232.44
MATERIAL USE: Pool or Spa Water Chlorination

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Trichloroisocyanuric	60-100	87-90-1	406-750 mg/kg	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X
ODOUR & APPEARANCE: White opaque tablets, chlorine odour
ODOUR THRESHOLD (PPM): Not available
SPECIFIC GRAVITY: Not applicable
VAPOUR PRESSURE (MM): Not applicable
VAPOUR DENSITY (AIR-1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (C): Decomposes 225 – 230 deg C
FREEZING POINT (C): Not applicable
SOLUBILITY IN WATER (20C): Soluble
% VOLATILE (BY VOLUME) Not applicable
PH: (1% solution) 2.7 – 3.3
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES X NO

IF YES, UNDER WHICH CONDITIONS?: This material, if heated by an outside source to a temperature of 225-230 deg C, will undergo decomposition emitting heat and dense, noxious gases.

MEANS OF EXTINCTION: Dry chemical or carbon dioxide

SPECIAL PROCEDURES: Wear full protective clothing and self-contained breathing apparatus when fire fighting. Use water spray to cool fire exposed containers and to reduce vapours. Massive quantities of water may be used to dilute material involved in a fire or spilled from container.

FLASHPOINT (CELSIUS) AND METHOD: Not applicable

AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Small quantities of H₂O will react with this material which will form NCL₃, which is violently explosive.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES NO X

IF NO, UNDER WHICH CONDITIONS?: Stable when dry. Reacts non-violently with water to form a bleach solution.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO

IF SO, WHICH ONES: Avoid contact with water on concentrated forms of this material. Also avoid contact with easily oxidizable organic materials – ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite and alkalis. Also other isocyanurates.

REACTIVITY AND UNDER WHAT CONDITIONS: Contamination can cause spontaneous combustion at room temperature.

HAZARDOUS DECOMPOSITION PRODUCTS: Chlorine gas & traces of phosgene can be liberated at temperatures greater than 400 deg C.

MATERIAL SAFETY DATA SHEET

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC	: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Irritation and may cause burns.

EYE: Irritation and may cause burns.

INHALATION: Irritation or burns to mucous membranes and respiratory tract.

INGESTION: Irritation or burns to gastro intestinal tract.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Chlorine – TWA EW – 1 ppm, 3mg/m³, STEV – 3 ppm, 9mg/m³, Dust – TWA EW – 10 mg/m³

IRRITANCY OF MATERIAL: Strong irritant to skin, eye, nose and throat

SENSITIZATION OF MATERIAL: Not available

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Nitrile or neoprene gloves if skin contact is likely.

EYE (Specify): Safety goggles, glasses or face shield if eye contact is likely.

RESPIRATORY (Specify): Use NIOSH/MSHA approved dust or vapour mask when airborne exposure limits are exceeded. An approved respirator with an acid gas (for chlorine) and dust prefilter may be adequate.

OTHER (Specify): Clothing to prevent skin contact.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area.

LEAK AND SPILL PROCEDURE: If material is spilled, clean up as soon as possible to prevent contamination with a material with which it will react. Keep spilled material dry. Sweep up and place material in a dry, clean container.

WASTE DISPOSAL: Dispose of in accordance to all applicable federal, provincial and local laws and regulations.

HANDLING PROCEDURES AND EQUIPMENT: Avoid skin, eye and clothing contact. Use in well ventilated areas. Wash thoroughly with soap and water after handling.

STORAGE REQUIREMENTS: Store in cool, dry area. Do not allow water to get into container. Keep containers tightly closed when not in use.

SPECIAL SHIPPING INFORMATION:	Transportation:	Trichloroisocyanuric Acid - Dry
	Class:	5.1
	Pkg. Group:	II
	P.I.N./UN:	2468 1KG 7 UNDER LTD. QTY

MATERIAL SAFETY DATA SHEET

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Remove person to fresh air. Contact a physician.

INGESTION: Drink 2 or 3 glasses of water followed with 10 ounces of milk of magnesia/water (50/50), or eat bread soaked in milk followed by olive oil or cooking oil. Contact a physician immediately.

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996

DATE OF LATEST REVISION/REVIEW: September 2, 2008

ADDITIONAL NOTES OR REFERENCES:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

TNL Cleaner / Tile and Vinyl Cleaner

WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable
Chemical Family: Not applicable
Chemical Formula: Not applicable
Trade Name & Synonyms: Not applicable
Molecular Weight: Not applicable
Material Use: All Purpose Cleaner

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H315 Skin corrosion/irritation, Category 2
H320 Serious eye damage/eye irritation, Category 2B

Symbol(s)



Signal Word Warning

Hazard statements Causes skin irritation. Causes eye irritation.

Precautionary statements Avoid skin and eye contact. Wear gloves and safety glasses when handling.
Wash hands thoroughly after use. If in eyes, flush with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Dipropylene Glycol Mono Methyl Ether	34590-94-8	3 – 7
Dipropylene Glycol Mono Butyl Ether	29911-28-2	3 – 7
Sodium Xylenesulphonate	1300-72-7	3 – 7

MATERIAL SAFETY DATA SHEET

Tetrasodium Ethylene Diamine Tetraacetate	64-02-8	3 – 7
Soda Ash	497-19-8	1 – 5
Sodium Dodecyl Benzene Sulfonate	25155-30-0	1 – 5
Ethoxylated C12-15 Alcohol	68131-39-5	0.5 – 1.5
D'Limonene	5989-27-5	0.1 – 1.0

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. Seek medical attention if irritation persists.
Skin Contact:	Wash thoroughly with soap and water.
Eye Contact:	Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.
Ingestion:	Drink 2 to 3 glasses of water to dilute. Do not induce vomiting. Seek medical attention immediately.
Note to physicians	None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	CO and CO ₂
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Use media suitable to extinguish source of fire.
Instructions to the Fire Fighters:	See below
Fire Fighting Protective Equipment:	Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:	Absorb with synthetic or natural absorbent and place in a clean, dry labelled container for disposal. Flush area with copious amounts of water.
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MATERIAL SAFETY DATA SHEET

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid skin and eye contact. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Keep away from incompatibles. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: None required

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex or rubber gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): None required

Other (Specify): Eye wash and shower stations are close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid X Solid

Odour & Appearance: Clear blue liquid, lemon odour

Odour Threshold (ppm): Not available

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) Not available

Specific Gravity: 1.046

Viscosity: Not available

Vapour Pressure (mm): Not available

Vapour Density (Air-1): Not available

Flashpoint (°C) Not applicable

MATERIAL SAFETY DATA SHEET

Evaporation Rate Not available
Boiling Point (°C): 100°C
Freezing Point (°C): Not available
Solubility In Water (20°C): Soluble
% Volatile (By Weight) 89.0%
PH: 10.5
Coefficient Of Water/Oil Distribution: Not available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No
If No, Under Which Conditions?:
Incompatibility To Other Substances: Yes X No
If So, Which Ones: Oxidizing compounds
Conditions to Avoid: None known
Hazardous Decomposition Products: CO and CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: None expected
Skin Contact: May cause irritation, burning and defatting of the skin.
Eye Contact: May cause irritation or burning of the eyes.
Ingestion: Gastrointestinal upset, vomiting, and possible diarrhea.

CHRONIC HEALTH EFFECTS: None known

Other Health Effects: None known

LD 50 of Material (Specify Species and Routes): Not available

LC 50 of Material (Specify Species and Routes): Not available

Exposure (Limits): Not established

Irritancy of Material: Skin and eye irritant.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

MATERIAL SAFETY DATA SHEET

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity Not available

Environmental Fate

Biodegradability: Not available

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose absorbed material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush with copious amounts of water.

Disposal of Packaging: Dispose packaging in accordance with federal, provincial and local regulations.

SECTION 14 TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SECTION 15 REGULATORY INFORMATION

CANADA

WHMIS: D2B

USA Not available

INTERNATIONAL Not available

MATERIAL SAFETY DATA SHEET

SECTION 16

OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control Telephone: (905) 332-6626

Preparation Date: June 10, 2015

Date Revised: December 1, 2018

Additional Notes Or References:

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SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

SUPER TABS 200 gm

WHMIS: C, D1B, D2B

Manufacturer's Name:

**CAPO INDUSTRIES LTD
1200 CORPORATE DRIVE
BURLINGTON, ONTARIO
L7L 5R6**

Street Address:

City:

Postal Code:

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Trichloro-s-triazinetriene

Chemical Family:

Chloroisocyanurates

Chemical Formula:

C₃ Cl₃ N₃ O₃

Trade Name & Synonyms:

Trichloroisocyanuric Acid, TCCA, Trichlor

Molecular Weight:

232.41

Material Use:

Pool or Spa water chlorination

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

Oxidizing solid, Category 2

Acute toxicity, Oral, Category 4

Skin corrosion/irritation, Category 1C

Acute toxicity, Inhalation, Category 2

Specific target organ toxicity, Single exposure, Respiratory tract irritation, Category 3

Hazardous to aquatic environment, long-term hazard, Category 1

Symbol(s)



Signal Word

Danger

Hazard statements

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

SAFETY DATA SHEET

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long-lasting effects.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220 Keep/Store away from clothing and combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P284 In case of inadequate ventilation wear respiratory protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do not induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

P320 Specific treatment is urgent (see first aid on this label).

P363 Wash contaminated clothing before use.

P370+P378 In case of fire: Use water spray for extinction.

P391 Collect spillage.

P403+P233 Store in a well-ventilated area. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local regulations.

NFPA: 3 Health, 0 Fire, 2 Reactivity Special Hazard Warning: OXIDIZER

HMIS: 3 Health, 0 Fire, 2 Reactivity

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Trichloro-s-triazinetriene	87-90-1	99.0

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. If person is not breathing, give artificial respiration, by mouth to mouth if possible. Contact a physician
Skin Contact:	Take off contaminated clothing. Wash skin thoroughly with soap and water for 15 minutes. Seek medical attention.
Eye Contact:	Flush eyes with plenty of water for 15 minutes. Seek medical attention.
Ingestion:	Drink 2 or 3 glasses of water, rinse mouth. Do not give anything to an unconscious person. Do not induce vomiting, unless directed to do so by a doctor. Contact a physician immediately.
Note to physicians	Probable mucosal damage may contraindicate the use of gastric lavage. Corrosive. Treat symptomatically and supportively.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Small quantities of water will react with this material which will form nitrogen trichloride, which is violently explosive.
Unusual Fire or Explosion Hazards:	When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine, nitrous oxides, cyanates, carbon monoxide and carbon dioxide.
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable
Explosive Power:	Not applicable
Sensitivity to Static Discharge:	None
Fire Extinguishing Media:	Water only. Large amounts of water may be needed and the flow of water should not be stopped until the fire/reaction has stopped.
Instructions to the Fire Fighters:	Cool containers with water spray. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.
Fire Fighting Protective Equipment:	Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode.

SAFETY DATA SHEET

SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure:

Prevent spillage from contaminating soil or entering waterways, sewers, drains and confined areas. If material is spilled, clean up as soon as possible to prevent contamination with a material with which it will react. Keep spilled material dry. Sweep up and place material in a dry, clean and labeled container.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices:

Avoid skin, eye and clothing contact. Wash hands thoroughly with soap and water after handling.

Ventilation Requirements:

Local exhaust ventilation.

STORAGE

Ventilation Requirements:

Store in a cool, dry and well ventilated area away from incompatible materials.

Storage Requirements:

Do not store material at temperatures above 60°C/140°F. Available chlorine loss can be as little as 0.1% per year at ambient temperatures. Do not allow water to get into container. Keep containers tightly closed when not in use.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls:

Local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify):

Nitrile or neoprene gloves if skin contact is likely.

Eye (Specify):

Safety goggles/glasses or face shield if eye contact is likely.

Respiratory (Specify):

Use NIOSH/MSHA approved dust or vapour mask when airborne exposure limits are exceeded. An approved respirator with an acid gas (for chlorine) and dust prefilter may be adequate.

Other (Specify):

Body covering clothes and boots. Safety shower and eye wash stations are close to work area.

SAFETY DATA SHEET

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State:	Gas	Liquid	Solid	<u>X</u>
Odour & Appearance:	White opaque tablets, chlorine odour			
Odour Threshold (ppm):	Not available			
Flammability:	Yes	No	<u>X</u>	
If Yes, Under Which Conditions?:				
Auto Ignition Temperature (Celsius):	Not applicable			
Upper Explosion Limit (% By Volume):	Not applicable			
Lower Explosion Limit (% By Volume):	Not applicable			
Decomposition Temp (°C)	225°C			
Specific Gravity:	Not applicable			
Viscosity:	Not applicable			
Vapour Pressure (mm):	Not applicable			
Vapour Density (Air-1):	Not applicable			
Flashpoint (°C)	Not applicable			
Evaporation Rate	Not applicable			
Boiling Point (°C):	Not applicable			
Freezing Point (°C):	Not applicable			
Solubility In Water (20°C):	Soluble			
% Volatile (By Weight)	Not applicable			
PH:	2.7 – 3.3 (1% solution)			
Coefficient Of Water/Oil Distribution:	Not applicable			

SECTION 10

STABILITY AND REACTIVITY

Chemical Stability:	Yes	No	<u>X</u>
If No, Under Which Conditions?:			
Stable when dry. Reacts non-violently with water to form a bleach solution.			
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:			
Avoid contact with water on concentrated forms of this material. Avoid contact with easily oxidizable organic materials – ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite and alkalis. Also other isocyanurates.			
Conditions to Avoid:	Contamination can cause spontaneous combustion at room temp.		

SAFETY DATA SHEET

Hazardous Decomposition Products: Chlorine gas and traces of phosgene can be liberated at temperatures greater than 225°C.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Irritation or burns to mucous membranes and respiratory tract.

Skin Contact: Irritation and may cause burns.

Eye Contact: Irritation and may cause burns.

Ingestion: Irritation or burns to the gastrointestinal tract.

CHRONIC HEALTH EFFECTS: Prolonged exposure may cause damage to the respiratory system. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.

Other Health Effects: Asthma, respiratory and cardiovascular diseases.

LD 50 of Material (Specify Species and Routes): 406 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

LC 50 of Material (Specify Species and Routes): 0.09-0.29 mg/l, Inhalation (Rat)

Exposure (Limits): Chlorine – TWA: 0.5 ppm, STEL: 1 ppm

Irritancy of Material Strong irritant to skin, eye, nose and throat.

Sensitization of Material None

Synergistic Materials None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic toxicity:

96 h LC50, Fish 0.13-0.5 mg/l (Lepomis macrochirus)

48 h LC50, Daphnia magna 0.21 mg/l

Environmental Fate

Biodegradability: Material is subject to hydrolysis. Acids produced by hydrolysis are biodegradable.

Bioaccumulative Potential: Not expected to bioaccumulate in the aquatic environment.

Mobility In Soil: Expected to be highly mobile in soil.

SAFETY DATA SHEET

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance to all applicable federal, provincial and local laws and regulations.

Safe Handling of Residues: See above

Disposal of Packaging: See above

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

1 kg and under are LIMITED QUANTITY

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

Emergency Guide No. 140

IMDG

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

EmS No: F-A, S-Q

IATA/ICAO

Proper shipping name: Trichloroisocyanuric Acid - Dry

Class: 5.1

SAFETY DATA SHEET

Label: Oxidizing substances (5.1)

Packing Group: II

UN: 2468

ERG No: 5L

For shipments by vessel or bulk quantities (>882 pounds) by motor vehicle or aircraft, add "Marine Pollutant (Trichloroisocyanuric Acid)" to shipping description and label containers with Marine Pollutant markings.

SECTION 15 REGULATORY INFORMATION

CANADA Listed in DSL

WHMIS: C, D1B, and D2B

USA Reported in the EPA TSCA Inventory.

EPA Registration No. 83936-3

Emergency overview in accordance to EPA Master Label:

Danger. Hazards to humans and domestic animals. Highly corrosive. Causes irreversible damage or skin burns. May be fatal if inhaled, or absorbed through skin. Strong oxidizing agent. This pesticide is toxic to fish and aquatic organisms.

SARA (311,312) This product is categorized as an immediate health hazard, and fire and reactivity physical hazard.

Massachusetts, New Jersey and Pennsylvania Right to Know Lists: Listed

INTERNATIONAL

Australia, China, and Korea: Listed on their chemical inventory lists.

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2016

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

CHLORINE 3" SUPER TABLETS / SUPER STICKS **WHMIS:** Regulated (C, D2B)

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Trichloroisocyanuric Acid
CHEMICAL FAMILY: Isocyanurates
CHEMICAL FORMULA: C3 CL3 N3 O3
TRADE NAME & SYNONYMS: 1, 3, 5 Trichloroisocyanuric Acid
MOLECULAR WEIGHT: 232.44
MATERIAL USE: Pool or Spa Water Chlorination

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Trichloroisocyanuric	60-100	87-90-1	406-750 mg/kg	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X

ODOUR & APPEARANCE: White opaque tablets, chlorine odour

ODOUR THRESHOLD (PPM): Not available

SPECIFIC GRAVITY: Not applicable

VAPOUR PRESSURE (MM): Not applicable

VAPOUR DENSITY (AIR-1): Not applicable

EVAPORATION RATE: Not applicable

BOILING POINT (C): Decomposes 225 – 230 deg C

FREEZING POINT (C): Not applicable

SOLUBILITY IN WATER (20C): Soluble

% VOLATILE (BY VOLUME) Not applicable

PH: (1% solution) 2.7 – 3.3

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES X NO

IF YES, UNDER WHICH CONDITIONS?: This material, if heated by an outside source to a temperature of 225-230 deg C, will undergo decomposition emitting heat and dense, noxious gases.

MEANS OF EXTINCTION: Dry chemical or carbon dioxide

SPECIAL PROCEDURES: Wear full protective clothing and self-contained breathing apparatus when fire fighting. Use water spray to cool fire exposed containers and to reduce vapours. Massive quantities of water may be used to dilute material involved in a fire or spilled from container.

FLASHPOINT (CELSIUS) AND METHOD: Not applicable

AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Small quantities of H₂O will react with this material which will form NCL₃, which is violently explosive.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES NO X

IF NO, UNDER WHICH CONDITIONS?: Stable when dry. Reacts non-violently with water to form a bleach solution.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO

IF SO, WHICH ONES: Avoid contact with water on concentrated forms of this material. Also avoid contact with easily oxidizable organic materials – ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite and alkalis. Also other isocyanurates.

REACTIVITY AND UNDER WHAT CONDITIONS: Contamination can cause spontaneous combustion at room temperature.

HAZARDOUS DECOMPOSITION PRODUCTS: Chlorine gas & traces of phosgene can be liberated at temperatures greater than 400 deg C.

MATERIAL SAFETY DATA SHEET

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC	: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Irritation and may cause burns.

EYE: Irritation and may cause burns.

INHALATION: Irritation or burns to mucous membranes and respiratory tract.

INGESTION: Irritation or burns to gastro intestinal tract.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): Chlorine – TWA EW – 1 ppm, 3mg/m³, STEV – 3 ppm, 9mg/m³, Dust – TWA EW – 10 mg/m³

IRRITANCY OF MATERIAL: Strong irritant to skin, eye, nose and throat

SENSITIZATION OF MATERIAL: Not available

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Nitrile or neoprene gloves if skin contact is likely.

EYE (Specify): Safety goggles, glasses or face shield if eye contact is likely.

RESPIRATORY (Specify): Use NIOSH/MSHA approved dust or vapour mask when airborne exposure limits are exceeded. An approved respirator with an acid gas (for chlorine) and dust prefilter may be adequate.

OTHER (Specify): Clothing to prevent skin contact.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in well ventilated area.

LEAK AND SPILL PROCEDURE: If material is spilled, clean up as soon as possible to prevent contamination with a material with which it will react. Keep spilled material dry. Sweep up and place material in a dry, clean container.

WASTE DISPOSAL: Dispose of in accordance to all applicable federal, provincial and local laws and regulations.

HANDLING PROCEDURES AND EQUIPMENT: Avoid skin, eye and clothing contact. Use in well ventilated areas. Wash thoroughly with soap and water after handling.

STORAGE REQUIREMENTS: Store in cool, dry area. Do not allow water to get into container. Keep containers tightly closed when not in use.

SPECIAL SHIPPING INFORMATION:	Transportation:	Trichloroisocyanuric Acid - Dry
	Class:	5.1
	Pkg. Group:	II
	P.I.N./UN:	2468 1KG 7 UNDER LTD. QTY

MATERIAL SAFETY DATA SHEET

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Remove person to fresh air. Contact a physician.

INGESTION: Drink 2 or 3 glasses of water followed with 10 ounces of milk of magnesia/water (50/50), or eat bread soaked in milk followed by olive oil or cooking oil. Contact a physician immediately.

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 1996
December 12, 2013

ADDITIONAL NOTES OR REFERENCES:

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

SECTION 1

MATERIAL NAME / IDENTIFIER

Ultra Spa

WHMIS: D2A

Manufacturer's Name:

CAPO INDUSTRIES LTD

Street Address:

1200 CORPORATE DRIVE

City:

BURLINGTON, ONTARIO

Postal Code:

L7L 5R6

Emergency Telephone:

Canutec (613) 996-6666 (Collect)

Chemical Name:

Not applicable

Chemical Family:

Borates

Chemical Formula:

Proprietary Blend

Trade Name & Synonyms:

None

Molecular Weight:

Not applicable

Material Use:

Spa water conditioner & buffer

SECTION 2

HAZARDS IDENTIFICATION

GHS classification:

H302 Acute toxicity, Oral, Category 4

H335 Specific target organ toxicity, Single Exposure, Respiratory tract irritation,
Category 3

H401 Hazardous to the aquatic environment, Acute hazard, Category 2

Symbol(s)



Signal Word

Warning

Hazard statements

Harmful if swallowed. May cause respiratory tract irritation. Toxic to aquatic life.

Precautionary statements

Do not ingest. If ingested, do not induce vomiting, drink 2 or 3 glasses of water and seek medical attention. Avoid breathing in dusts/vapours/fumes. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

SAFETY DATA SHEET

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Sodium Tetraborate Pentahydrate	12179-04-3	10 – 30
Boric Acid	10043-35-3	60 – 100

SECTION 4 FIRST AID MEASURES

Inhalation:	Remove person to fresh air. Administer artificial respiration if person is having difficulty breathing and seek medical attention.
Skin Contact:	Wash thoroughly with soap and water. Seek medical attention if redness or irritation develops.
Eye Contact:	Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation develops.
Ingestion:	Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing rinse mouth with water and give ½ to 1 glass of water to dilute material. Immediately contact local poison control centre. Vomiting should only be induced on the advice of a poison control centre or physician. If spontaneous vomiting occurs, have victim lean forward with head down to avoid inhaling in of vomitus. Rinse mouth and give more water. Immediately transport victim to an emergency facility.
Note to physicians	For Borate ingestion or overexposure: Treat for Alkaline exposure or ingestion. Give vinegar in large amounts or water or diluted orange or lemon juice. Follow with demulcent. Do not use emetics or stomach tube. Assure adequate hydration. After ingestion or absorption into the blood stream of large amounts (15g or more), symptoms may appear after 24 to 72 hours. Borates are readily dissipated through the urine (20% in the first 24 hours). Observation only is required for adult ingestion of less than 6g of product. For ingestion in excess of 6g, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron assay of urine or blood is only useful for documenting exposure and should not be used to evaluate severity poisoning or to guide treatment.

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products:	Not applicable
Unusual Fire or Explosion Hazards:	None known
Sensitivity to Mechanical Impact:	None
Rate of Burning:	Not applicable

SAFETY DATA SHEET

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: See below

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Sweep up material and place in clean, dry labelled container for disposal. Do not allow product to enter sewers or waterways. This material is toxic to aquatic life. The product can be toxic to plants.

SECTION 7 HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid prolonged skin contact. Avoid breathing in dust. Wear gloves and safety glasses when handling. Wash hands thoroughly after use.

Ventilation Requirements: Use in a well ventilated area.

STORAGE

Ventilation Requirements: Store in a cool, dry area.

Storage Requirements: Do not store sealed containers at temperatures above 40°C. Avoid moisture contamination.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin (Specify): Latex, PVC or rubber gloves if prolonged skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Wear dust mask if prolonged use in non-ventilated area is unavoidable.

Other (Specify): Wear a NIOSH/MSA approved dust mask for concentrations of nuisance dust up to 100 mg/m³. An air supplied respirator of concentrations higher or unknown.

Eye wash and shower stations close to work area.

SAFETY DATA SHEET

SECTION 9 PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Speckled blue powder, sweet odour

Odour Threshold (ppm): Not applicable

Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C): Not available

Specific Gravity: 0.849

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C): Not applicable

Evaporation Rate: Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): 200°C

Solubility In Water (20°C): 3.6% by weight

% Volatile (By Weight): Not applicable

PH: 7.0 – 8.0 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones: Elemental zirconium, base metals, alkali metals, reducing agents, and metal hydrides.

Conditions to Avoid: Reacts with strong reducing agents such as metal hydrides or alkali metals to generate flammable and explosive hydrogen gas.

Hazardous Decomposition Products: None known

SAFETY DATA SHEET

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation:	Dust may cause irritation to throat and nose and respiratory tract.
Skin Contact:	Not expected to cause irritation under normal conditions. Skin contact may cause irritation due to abrasive action. May cause defatting, drying and cracking of the skin. May be readily absorbed through broken or damaged skin. Toxic effects may be delayed.
Eye Contact:	Eye contact may cause irritation and possible damage due to abrasion.
Ingestion:	Ingestion of large amounts may cause nausea, gastrointestinal upset and abdominal pain. May cause diarrhea, circulatory collapse, cyanosis, convulsions, coma, nausea, vomiting and death.

CHRONIC HEALTH EFFECTS: May lead to irritation and/or sensitivity of the skin.

Other Health Effects:	Boric acid may cause cyanosis. Cyanosis is characterized by navy blue, almost black Lips, tongue and mucous membranes with skin colour being slate grey. Further Manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, Respiratory distress and death due to anoxia.
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LD 50 of Material (Specify Species and Routes): Boric Acid: 2660 mg/kg, Oral (Rat), >2000 mg/kg, Dermal (Rabbit)

Sodium Tetraborate Pentahydrate 30%: 8866.7 mg/kg, Oral (Rat)

LC 50 of Material (Specify Species and Routes): Boric Acid: >2.0 mg/l, Inhalation (Rat)

Sodium Tetraborate Pentahydrate 30%: Not available

Exposure (Limits):	Boric Acid ACGIH TLV, Inhalable fraction TWA: 2 mg/m ³ , 8 h, STEL: 6 mg/m ³ , 15 min. Sodium Tetraborate Pentahydrate ACGIH TLV, Inhalable fraction TWA: 2 mg/m ³ , STEL: 6 mg/m ³ , OSHA TWA: 10 mg/m ³ , Total Dust.
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Irritancy of Material	Skin, eye, nose and throat irritant.
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Sensitization of Material	None known
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Synergistic Materials	None known
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Carcinogenicity, Mutagenicity	None known
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Reproductive Effects	Boric acid and borates may cause reproductive effects based on laboratory animal studies. Animal studies show that ingestion of large amounts of borates over prolonged periods causes a decrease in sperm production and testicle size in male laboratory animals. No symptoms have been noted in humans.
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Teratogenicity:	Boric acid and borates may cause teratogenic/embryo toxic effects based on studies on laboratory animals. Animal studies show that ingestion of large amount of borates over prolonged periods cause developmental effects in fetuses of pregnant female animals.
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SAFETY DATA SHEET

SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

BORIC ACID: LC50 1100 mg/l, Fish (*Oncorhynchus mykiss*), 96 h

LC50 53 mg/l, Daphnia (*Daphnia magna*), 21 days

SODIUM TETRABORATE PENTAHYDRATE: Not available

Environmental Fate

Biodegradability: Boric acid and Sodium Tetraborate Pentahydrate decomposes in the environment to natural borate. In aqueous solutions Sodium Tetraborate Pentahydrate is converted substantially into dissociated boric acid.

Bioaccumulative Potential: Not available

Mobility In Soil: Sodium Tetraborate Pentahydrate is soluble in water and is leachable through normal soil.

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose material in accordance with federal, provincial and local regulations.

Safe Handling of Residues: Flush residues with copious amounts of water.

Disposal of Packaging: Empty containers should be recycled or disposed through an approved waste management facility.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

US DOT CLASSIFICATION (49CFR 172.101, 172.102)

Proper shipping name: Not regulated

Class: Not applicable

Packing group: Not applicable

UN: Not applicable

SAFETY DATA SHEET

SECTION 15 REGULATORY INFORMATION

CANADA All components of this product are either on the DSL or exempt

WHMIS: D2A

CPR Compliance: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

USA Not available

INTERNATIONAL Not available

SECTION 16 OTHER INFORMATION

Prepared By (Group, Department, Etc.): Quality Control **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Revised: December 1, 2020

Additional Notes Or References:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

CANADIAN VINYL SHOCK

WHMIS: D28,C,

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Not Applicable
CHEMICAL FAMILY: Not Applicable
CHEMICAL FORMULA: Not applicable
TRADE NAME & SYNONYMS: Proprietary Blend
MOLECULAR WEIGHT: Not applicable
MATERIAL USE: Pool Water Shock

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
Sodium Dichloro-S-Triazinetrione	30-60	2893-78-9	670 mg/kg	Not available
Sodium Tetraborate Pentahydrate	10-30	2179-04-3	2660mg/kg	Not available

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X
ODOUR & APPEARANCE: White, opaque, granular, chlorine odour
ODOUR THRESHOLD (PPM): Not applicable
SPECIFIC GRAVITY: 2.03
VAPOUR PRESSURE (MM): Not applicable
VAPOUR DENSITY (AIR-1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (C): 238 – 249 decomposes
FREEZING POINT (C): Not applicable
SOLUBILITY IN WATER (20C): 30g in 100g H2O @ 25 deg C
% VOLATILE (BY WEIGHT) Not applicable
PH: 8.5 (1% solution)
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO X

IF YES, UNDER WHICH CONDITIONS?: Not flammable, but if heated by other sources to 238 – 249 deg C, it will undergo decomposition with evolution of heat and dense, noxious fumes.

MEANS OF EXTINCTION: Water

SPECIAL PROCEDURES: Wear full protective clothing and breathing apparatus when fire fighting

FLASHPOINT (CELSIUS) AND METHOD: Not applicable

AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Chlorine gas and traces of phosgene.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES NO X

IF NO, UNDER WHICH CONDITIONS?: Avoid contact with incompatible material and damp conditions.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES X NO

IF SO, WHICH ONES: Easily oxidizable organic materials, ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and acids.

REACTIVITY AND UNDER WHAT CONDITIONS: Not applicable

HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures of 204 deg C and greater, chlorine gas and traces of phosgene will be liberated.

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	X	: SKIN ABSORPTION	: EYE CONTACT	X
: INHALATION ACUTE	X	: INHALATION CHRONIC	: INGESTION	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Corrosive when skin is wet

EYE: Corrosive

INHALATION: Fumes may produce eye, nose, throat and respiratory tract irritation.

INGESTION: This product may be harmful if swallowed. Corrosive to mucous membranes.

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None known

OTHER HEALTH EFFECTS: None known

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

MATERIAL SAFETY DATA SHEET

EXPOSURE (LIMITS): None established
IRRITANCY OF MATERIAL: Strong irritant of skin, eye, nose and throat.
SENSITIZATION OF MATERIAL: None known.
SYNERGISTIC MATERIALS: None known
CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII PREVENTATIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Rubber gloves if skin contact is likely.
EYE (Specify): Safety glasses if eye contact is likely.
RESPIRATORY (Specify): Use NIOSH/NSHA approved dust or vapour mask if inhalation is likely

OTHER (Specify): Protective clothing if contact is likely.
ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in a well ventilated area.
LEAK AND SPILL PROCEDURE: If material is spilled, clean up as soon as possible to prevent contamination with a material with which it may react. Keep spilled material dry. Sweep up and place material in a dry, clean container.
WASTE DISPOSAL: If material is dry, disposal by incineration is recommended. Alternate method for disposal is by neutralizing to a nonoxidizing residue. Keep unneutralized material out of sewers, watersheds and water systems.
HANDLING PROCEDURES AND EQUIPMENT: Avoid skin, eye and clothing contact. Use in well ventilated area. Wash thoroughly with soap and water after handling.
STORAGE REQUIREMENTS: Store in cool, dry area. Do not allow water to get into containers. Keep containers tightly closed when not in use.
SPECIAL SHIPPING INFORMATION:
Transportation: Limited quantity
Class:
Pkg. Group:
P.I.N./UN:

SECTION VIII FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water. Should irritation persist, contact a physician.
EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention.
INHALATION: Remove person to fresh air. Call a physician.
INGESTION: Drink 2 or 3 glasses of water or milk. Do not induce vomiting. Contact a physician.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: February 22, 2005

DATE OF LATEST REVISION/REVIEW: September 2, 2008

ADDITIONAL NOTES OR REFERENCES:

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MATERIAL SAFETY DATA SHEET

SECTION I - MATERIAL NAME / IDENTIFIER

STABILIZER & CONDITIONER

WHMIS: Not regulated

MANUFACTURER'S NAME: CAPO INDUSTRIES LTD
STREET ADDRESS: 1200 CORPORATE DRIVE
CITY: BURLINGTON, ONTARIO
POSTAL CODE: L7L 5R6

EMERGENCY TELEPHONE: CANUTEC (613) 996-6666 (COLLECT)

CHEMICAL NAME: Cyanuric Acid
CHEMICAL FAMILY: Organic acid
CHEMICAL FORMULA: C3 H3 N3 O3
TRADE NAME & SYNONYMS: Not available
MOLECULAR WEIGHT: Not applicable
MATERIAL USE: Pool Water Stabilizer

SECTION II - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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None

SECTION III PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: GAS LIQUID SOLID X

ODOUR & APPEARANCE: Mild odour, white, granular, free flowing

ODOUR THRESHOLD (PPM): Not applicable

SPECIFIC GRAVITY: 1.77

VAPOUR PRESSURE (MM): Not applicable

VAPOUR DENSITY (AIR-1): Not applicable

EVAPORATION RATE: Not applicable

BOILING POINT (C): Not applicable

FREEZING POINT (C): Not applicable

SOLUBILITY IN WATER (20C): 0.28g/100g water @ 25 deg C

% VOLATILE (BY WEIGHT) Not applicable

PH: Not available

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

STABILIZER & CONDITIONER

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES NO ☒ X
IF YES, UNDER WHICH CONDITIONS?: Not applicable
MEANS OF EXTINCTION: Use media suitable to extinguish source of fire
SPECIAL PROCEDURES: Wear self contained breathing apparatus when fire fighting
FLASHPOINT (CELSIUS) AND METHOD: Not applicable
AUTOIGNITION TEMPERATURE (CELSIUS): Not applicable
LOWER EXPLOSION LIMIT (% BY VOLUME): Not applicable
UPPER EXPLOSION LIMIT (% BY VOLUME): Not applicable
HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None **SENSITIVITY TO STATIC DISCHARGE:** None

SECTION V REACTIVITY DATA

CHEMICAL STABILITY: YES ☒ X NO
IF NO, UNDER WHICH CONDITIONS?: Not applicable
INCOMPATIBILITY TO OTHER SUBSTANCES: YES ☒ X NO
IF SO, WHICH ONES: Oxidizing agents, ammonium compounds, amines, oil and grease,
Oxidized materials, strong acids and alkalis
REACTIVITY AND UNDER WHAT CONDITIONS: Not applicable
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂

SECTION VI TOXICOLOGICAL PROPERTIES OF MATERIAL

ROUTE OF ENTRY:

: SKIN CONTACT	<input checked="" type="checkbox"/> X	: SKIN ABSORPTION	: EYE CONTACT	<input checked="" type="checkbox"/> X
: INHALATION ACUTE		: INHALATION CHRONIC	: INGESTION	<input checked="" type="checkbox"/> X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

SKIN: Mild irritation
EYE: Mild eye irritant
INHALATION: None expected
INGESTION: Gastritis

EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: None

OTHER HEALTH EFFECTS: None

LD 50 OF MATERIAL (Specify Species and Routes): See Section II

LC 50 OF MATERIAL (Specify Species and Routes): See Section II

EXPOSURE (LIMITS): OSHA PEL-(particulates not otherwise classified) TLV-total dust 10mg/m₃
TLV- respirable dust 5mg/m₃

IRRITANCY OF MATERIAL: Mild eye irritant

STABILIZER & CONDITIONER

MATERIAL SAFETY DATA SHEET

SENSITIZATION OF MATERIAL: None known.

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY: None known

SECTION VII

PREVENTATIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT

GLOVES (Specify): Latex or rubber gloves if skin contact is likely.

EYE (Specify): Safety glasses if eye contact is likely.

RESPIRATORY (Specify): Wear NIOSH/MSHA approved dust respirator

OTHER (Specify): None.

ENGINEERING CONTROLS (e.g. Ventilation, Enclosed Process – Specify): Use in a well ventilated area.

LEAK AND SPILL PROCEDURE: . Sweep up spilled material and place in a appropriate container. and seal

WASTE DISPOSAL: Dispose of material in accordance with Federal and Provincial and local regulations

HANDLING PROCEDURES AND EQUIPMENT: Avoid eye and skin contact and dust inhalation

STORAGE REQUIREMENTS: Store in cool, dry area. Keep away from heat, open flames and incompatible materials

SPECIAL SHIPPING INFORMATION: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./UN:

SECTION VIII

FIRST AID MEASURES

SKIN: Wash thoroughly with soap and water.

EYE: Flush eyes with plenty of water for 15 minutes. Seek medical attention. If irritation persists

INHALATION: Remove person to fresh air. Administer artificial respiration or CPR as required. Contact physician if breathing is difficult

INGESTION: Feed egg white and induce vomiting. Contact a physician.

MATERIAL SAFETY DATA SHEET

SECTION IX

PREPARATION DATE OF M.S.D.S.

PREPARED BY (Group, Department, etc.): PLANT CHEMIST

TELEPHONE: (905) 332-6626

PREPARATION DATE: January 1, 2006

DATE OF LATEST REVISION/REVIEW: February 22, 2011

ADDITIONAL NOTES OR REFERENCES:

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MATERIAL SAFETY DATA SHEET

SECTION I MATERIAL NAME / IDENTIFIER

SODIUM SULPHITE/ X-IT

WHMIS:

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Sodium Sulphite
Chemical Family: Sulphites
Chemical Formula: Na_2SO_3
Trade Name & Synonyms: Sodium Sulphite
Molecular Weight: 126-04
Material Use: Water Treatment

SECTION II HAZARDOUS INGREDIENTS

Hazardous Ingredients	Approx Conc %	C.A.S. N.A. U.N. Number	LD 50 Specify Species & Route (Oral, RAT)	LC 50 Specify Species & Route (Inhal, RAT)
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Sodium Sulphite	90-100%	7757-83-7	820mg/kg	Not available
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SECTION III PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: White to yellow powder

Odour Threshold (Ppm): Not available

Specific Gravity: 2.63

Vapour Pressure (Mm): Not applicable

Vapour Density (Air-1): Not applicable

Evaporation Rate: Not applicable

Boiling Point (C): Not applicable

Freezing Point (C): Decomposes to 900 deg C

Solubility In Water (20c): 17.0

% Volatile (By Weight) Not applicable

Ph: 9.8

Coefficient Of Water/Oil Distribution: Not available

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE & EXPLOSION HAZARD OF MATERIAL

Flammability:	Yes No <u>X</u>
If Yes, Under Which Conditions?:	Not applicable
Means Of Extinction:	Use media suitable to extinguish source of fire.
Special Procedures:	Wear self contained breathing apparatus and full protective equipment When firefighting
Flashpoint (Celsius) And Method:	Not applicable
Autoignition Temperature (Celsius):	Not applicable
Lower Explosion Limit (% By Volume):	Not applicable
Upper Explosion Limit (% By Volume):	Not applicable
Hazardous Combustion Products:	Toxic gas in vapours (SO2) will be released in a fire situation

EXPLOSION DATA	
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Sensitivity To Mechanical Impact:	None	Sensitivity To Static Discharge:	None
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SECTION V	REACTIVITY DATA
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Chemical Stability:	Yes	<u>X</u>	No
If No, Under Which Conditions?:	Not applicable		
Incompatibility To Other Substances:	Yes	<u>X</u>	No
If So, Which Ones:	Acids		
Reactivity And Under What Conditions:	Contact with acid produces S02		
Hazardous Decomposition Products:	Toxic gas or vapour(S02) will be emitted by decomposition		

SECTION VI	TOXICOLOGICAL PROPERTIES OF MATERIAL
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Route Of Entry:

: Skin Contact	<u>X</u>	:Skin Absorption	<u>X</u>	: Eye Contact	<u>X</u>
: Inhalation Acute	X	:Inhalation Chronic		: Ingestion	X

EFFECTS OF ACUTE EXPOSURE TO MATERIAL

Skin:	Irritant. Pain and brownish yellow stains, burns
Eye:	Irritant. Pain, tearing, May cause burns
Inhalation:	Irritation of respiratory tract.
Ingestion:	Irritation of gastrointestinal tract. May cause violent reaction in some asthmatics and sulphite sensitive individuals

Effects Of Chronic Exposure To Material: Not available

Other Health Effects: None known

Ld 50 Of Material (Specify Species And Routes): See section II

Lc 50 Of Material (Specify Species And Routes): See section II

Exposure (Limits): Sulphur dioxide- TWAEV 2ppm,5.2mg/m₃ - STEV 5 ppm, 10.4mg/m₃

Irritancy Of Material: Severe skin, eye, nose and throat irritant

Sensitization Of Material: None known

MATERIAL SAFETY DATA SHEET

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: Carcinogen – no, Reproductive Effects –
Teratogenicity – none known
Mutagenicity – none known

SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves (Specify): Impermeable gloves if skin contact is likely

Eye (Specify): Chemical goggles/glasses if eye contact is likely

Respiratory (Specify): Air purifying respirator as required for dusts

Other (Specify): Impermeable clothing as required

Engineering Controls (e.g. Ventilation, Enclosed Process – Specify): Local exhaust ventilation required if there
Is dusty or misty conditions or there is a
Release of sulphur dioxide

Leak And Spill Procedure: Stop and contain leak or spill. Collect (shovel, sweep) for reclaim or disposal

Waste Disposal: Dispose absorbed material in accordance with Federal, Provincial and local
government regulations

Handling Procedures And Equipment: Use normal "good" industrial hygiene and housekeeping practice

Storage Requirements: Store in airtight containers away from moisture and avoid physical damage. If left
Sitting in air, material will oxidize into a sulphate. Do not expose closed containers
To temperatures above 40 deg C

Special Shipping Information: **Transportation:** Not regulated
Class:
Pkg. Group:
P.I.N./Un:

SECTION VIII FIRST AID MEASURES

Skin: Remove contaminated clothing. Flush affected areas with running water for at least 15 minutes. Obtain
Medical attention if irritation develops

Eye: Flush eyes with running water for 15 minutes holding eyelids open. Seek medical attention immediately

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. Obtain medical attention if
Symptoms persists

Ingestion: If conscious, dilute 2 glasses of water or milk. Induce vomiting. Obtain medical attention immediately.

SECTION IX PREPARATION DATE OF M.S.D.S.

Prepared By (Group, Department, Etc.): Plant Chemist **Telephone:** (905) 332-6626

Preparation Date: January 1, 1996
Date Of Latest Revision/Review: September 2, 2008

Additional Notes Or References:

MATERIAL SAFETY DATA SHEET

While Capo Industries Ltd. believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Capo Industries Ltd. assumes legal responsibility. They are offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.

SAFETY DATA SHEET

19-May-2016

1. IDENTIFICATION

Product identifier

Product Name BioGuard Pool Complete

Other means of identification

Product Code 23763BIO

UN/ID no. UN1760

Recommended use of the chemical and restrictions on use

Recommended Use Swimming Pool Product.

Uses advised against Do not mix with other chemicals

Details of the supplier of the safety data sheet

Supplier Address

Bio-Lab, Inc.
P.O. Box 300002
Lawrenceville, GA 30049-1002
Telephone 800-859-7946

Emergency telephone number

Emergency Telephone Chemtrec (Transportation) 1-800-424-9300, 703-527-3887
Poison Control Center (Medical) : (877) 800-5553

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Corrosive to metals	Category 1

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation
May be corrosive to metals



Color colorless to light amber

Physical state liquid

Odor Faintly acidic

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

IF exposed

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store in original plastic container.

Corrosive to aluminum.

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

2.5% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Chemical Name	CAS No.	Weight-%
aluminium sulfate	10043-01-3	5 - 10

4. FIRST AID MEASURES**Description of first aid measures**

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician.
Skin contact	Wash skin with soap and water. If symptoms persist, call a physician.
Inhalation	Remove to fresh air.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
---------------------------	------------------------

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media	None known.
---------------------------------------	-------------

Specific hazards arising from the chemical

No information available.

Explosion data**Sensitivity to Mechanical Impact** None.**Sensitivity to Static Discharge** None.**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

Environmental precautions**Environmental precautions**

See Section 12 for additional ecological information.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Do not mix with other chemicals.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

Packaging materials

Keep only in the original container. Do not store in aluminum containers.

Incompatible materials

Do not mix with other swimming pool/spa chemicals in their concentrated forms. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
aluminium sulfate 10043-01-3	-	(vacated) TWA: 2 mg/m ³ Al Aluminum	TWA: 2 mg/m ³ Al

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls**Engineering Controls**

Showers

Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Rubber gloves.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	Odor	Faintly acidic
Appearance	Milky	Odor threshold	No information available
Color	colorless to light amber		
Property	Values	Remarks • Method	
pH	1.5 - 2.6	undiluted	
Melting point/freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	No information available		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific Gravity	No information available		
Water solubility	Miscible in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Density	8.7 - 9.1	lb/gal	
Bulk density	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Do not mix with other swimming pool/spa chemicals in their concentrated forms. Bases.

Hazardous Decomposition Products

Oxides of aluminum. Sulphur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Not an expected route of exposure.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	May be harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
aluminium sulfate 10043-01-3	= 1930 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

IARC (International Agency for Research on Cancer)

Not classifiable as a human carcinogen

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 22573 mg/kg
ATEmix (inhalation-dust/mist) 156.6 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

3.17999999% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
aluminium sulfate 10043-01-3	-	100: 96 h Carassius auratus mg/L LC50 37: 96 h Gambusia affinis mg/L LC50 static	136: 15 min Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container. Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal.

14. TRANSPORT INFORMATION**Note:**

Limited quantity (LQ) exception is possible

DOT

UN/ID no.	UN1760
Proper shipping name	Corrosive liquids, n.o.s. (contains aluminum sulfate)
Hazard Class	8
Packing Group	III

TDG

UN/ID no.	UN1760
Proper shipping name	Corrosive liquid, n.o.s. (contains aluminum sulfate)
Hazard Class	8
Packing Group	III

IATA

UN/ID no.	UN1760
Proper shipping name	Corrosive liquid, n.o.s. (contains aluminum sulfate)
Hazard Class	8
Packing Group	III

IMDG

UN/ID no.	UN1760
Proper shipping name	Corrosive liquid, n.o.s. (contains aluminum sulfate)
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION**International Inventories**

TSCA	Complies
DSL/NDL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
aluminium sulfate 10043-01-3	5000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
aluminium sulfate 10043-01-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
aluminium sulfate 10043-01-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number This product does not contain any substances regulated as pesticides

Difference between SDS and CPSC label

This product is regulated under Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act (16 CFR Part 1500) . These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace product labels.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 1	Flammability 0	Physical hazards 0	Personal protection X

Prepared By Regulatory Affairs
Revision Date 19-May-2016
Revision Note No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Material Safety Data Sheet

OMNI® SYNERGY® TABS

Version: 1.2

Revision Date: 08/03/2010

Print Date: 02/03/2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: *OMNI® SYNERGY® TABS*

Product Use Description: Recreational Water Product

Registration number: 5185-435-10305

Company: Manufacturer
Asepsis, Inc.
OMNI POOL PRODUCTS
P.O. Box 1788
Suwanee, GA
30024-0973

Telephone: (800) 959-7946

Emergency telephone: CHEMTREC: (24 hours) 800-424-9300, 703-527-3887
Poison Control Center (Medical) :: (877) 800-5553

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by: Product Safety Department
(US) +1 866-430-2775

+011-886-2-2712-5668 MSDSRequest@chemtura.com

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Danger

Form: tablet Colour: white Odour: Chlorine

Hazard Summary

:
Corrosive
Oxidizer
Causes serious eye damage.
Causes skin burns.
Harmful or fatal if swallowed.
May be fatal if inhaled.
Severe respiratory irritant
Do not breathe dust.
Do not breathe vapour.
Do not get in eyes, on skin, or on clothing.

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OSHA Hazards

: THIS MATERIAL IS HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29CFR 1910.1200.

Potential Health Effects

Primary Routes of Entry

: Eye contact
Skin contact
Inhalation
Ingestion

Aggravated Medical Condition

: Skin disorders
Respiratory disorders

Inhalation

: May be fatal if inhaled.
Severe respiratory irritant

Skin

: Causes skin burns.
On contact with moisture, this material readily hydrolyzes to acid which may result in burns if not promptly removed.

Eyes

: Causes serious eye damage.

Ingestion

: Harmful or fatal if swallowed.

Chronic Exposure

: This product contains a boron compound. This boron compound when fed to test animals at very high doses, has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to man.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Component	CAS-No.	Weight percent
Trichloro-s-triazinetriene	87-90-1	91.5 %
Boron salt		5 %

SECTION 4. FIRST AID MEASURES

First aid procedures

Inhalation : Remove to fresh air.

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- Give oxygen or artificial respiration if needed.
Call a POISON CENTER or doctor/physician.
- Skin contact** : Remove contaminated clothing and shoes.
Rinse immediately with plenty of water for at least 15 minutes.
Call a POISON CENTER or doctor/physician.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.
Call a POISON CENTER or doctor/physician.
- Ingestion** : Call a physician or poison control centre immediately.
Do not induce vomiting unless told to do so by the poison control center or doctor.
Have person sip a glass of water if able to swallow.
Do not give anything by mouth to an unconscious person.

Notes to physician

- Treatment** : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

- Flash point** : Remarks: not applicable

Fire fighting

- Suitable extinguishing media** : Flood with large volumes of water.
- Unsuitable extinguishing media** : Risk of violent reaction.
ABC powder
Dry chemical
- Further information** : Do not let fire burn.
Nitrogen trichloride can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Nitrogen trichloride can present an explosion hazard. Immediately after a fire has been extinguished, check for wet or damp material. Any spilled material from burned or broken containers should be assumed contaminated. Neutralize to a non-oxidizing material for safe disposal. Do not attempt to re-close broken containers, even for movement to the disposal area. They should be left open to disperse any nitrogen trichloride that may form. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. If the plastic liner (where applicable) of the container is damaged or the material is damp, the material should be chemically treated if allowable, to a non-oxidizing material for safe disposal. Bulging containers require extreme care. Contact the fire department.

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Protective equipment and precautions for firefighters

Specific hazards during fire fighting : Under extreme heat (greater than 400F), this product will evolve noxious chlorine containing gases.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods for containment / Methods for cleaning up : Using appropriate protective clothing and safety equipment, contain spilled material.
Do not add water to spilled material.
Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal.
Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form.

Additional advice : Do not use floor sweeping compounds to clean up spills.
Do not transport wet or damp material.
Treat recovered material as described in the section "Disposal considerations".
Do not contaminate water, food or feed by storage or disposal or cleaning of equipment.

SECTION 7. HANDLING AND STORAGE

Handling

Handling procedures : Contains a strong oxidizing agent.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours/dust.
Do not mix with other chemicals.
Mix only with water.
Never add water to this product.
Always add product to large quantities of water.
Use only clean and dry utensils.
Do not add this product to any dispensing devices containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion.
Contamination with moisture, organic matter or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.
In case of contamination or decomposition, do not reseal container.
If possible, isolate container in open air or well ventilated area.
Flood with large volumes of water.
Wash hands thoroughly with soap and water after handling and before eating, drinking or using tobacco.

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Do not handle until all safety precautions have been read and understood.

Storage

Requirements for storage areas and containers : Store in original container.
Keep container closed when not in use.
Store in a cool, dry, well ventilated area away from heat or open flame.
Keep out of reach of children.
Keep away from animals.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Components with workplace control parameters

Components / CAS-No.	Value / Basis / Update	Control parameters	Further information
Boron salt	TWA OSHA P0 1989-01-19	10 mg/m3	
	TWA ACGIH 2007-01-01	2 mg/m3	
	STEL ACGIH 2007-01-01	6 mg/m3	

Engineering measures

Engineering measures : Use with adequate ventilation.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye protection : Safety glasses with side-shields

Hand protection : Wear rubber gloves.

Respiratory protection : A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Hygiene measures : Wash contaminated clothing before reuse.

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Print Date: 02/03/2012

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : tablet
Colour : white
Odour : Chlorine

Safety data

Flash point : Note: not applicable
pH : 2.9
Density : 0.85 g/cm³
Water solubility : 1.5 g/l

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Remarks: Moisture/high humidity.
Poor ventilation.
High temperatures.
Contamination

Materials to avoid : Remarks: Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; other swimming pool/spa chemicals in their concentrated form; alkalis. Avoid contact with all other chemicals.

Hazardous decomposition products : Note: Chlorine containing gases can be produced.
Thermal decomposition : 187 - 191 °C

Hazardous reactions : Hazardous polymerisation does not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 651 mg/kg
Species: rat

Acute inhalation toxicity : Remarks: May cause severe irritation of the respiratory tract with coughing,

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choking, pain and possibly burns of the mucous membranes.

Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: rat

Skin irritation : Remarks: Direct contact with wet material or moist skin may cause severe irritation, pain and possibly burns.

Eye irritation : Remarks: Causes serious eye damage.

12. ECOLOGICAL INFORMATION

Toxicity to fish
Trichloro-s-triazinetriene : LC50: 0.24 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates.
Trichloro-s-triazinetriene : LC50: 0.21 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Boron salt : > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae
Trichloro-s-triazinetriene : EC50: 655 mg/l
Exposure time: 96 h
Species: Algae

Boron salt : > 100 mg/l
Exposure time: 72 h
Species: Algae

Further information on ecology

Additional ecological information : Toxic to fish.
Toxic to aquatic organisms.
Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems

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without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.
Do not use treated pool water on plants or lawns as this product and other pool chemicals could cause damage.

SECTION 13. DISPOSAL CONSIDERATIONS

- Further information : Dispose of waste material in compliance with all federal, state, and local regulations.
If these wastes cannot be disposed of by use according to label instructions, contact your Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. For registered pesticides, contact your State Pesticide Agency.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor.
Contact with incompatible materials could cause a reaction or fire. Improper disposal of excess product, spray mixture or rinsate is a violation of Federal Law.
- Contaminated packaging : Do not re-use empty containers.
Rinse thoroughly before discarding in trash.
Offer rinsed packaging material to local recycling facilities.

SECTION 14. TRANSPORT INFORMATION

DOT

- UN-Number : 2468
Description of the goods : Trichloroisocyanuric acid, dry, mixture
Class : 5.1
Packing group : II
ERG Code : 140

IATA

- UN-Number : 2468
Description of the goods : Trichloroisocyanuric acid, dry, mixture
Class : 5.1
Packing group : II

IMDG

- UN-Number : 2468
Description of the goods : TRICHLOROISOCYANURIC ACID, DRY

Material Safety Data Sheet

OMNI® SYNERGY® TABS

Version: 1.2

Revision Date: 08/03/2010

Print Date: 02/03/2012

Class : 5.1
Packing group : II
EmS Letter 1 : F-A
EmS Letter 2 : S-Q

Marine pollutant : yes
Trichloroisocyanuric acid, dry, mixture

Not recommended for shipment by air
Not regulated if shipped or transported in containers less than 400 KG.
Limited Quantity exemption possible
ORM-D Consumer Commodity exemption possible

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Reactivity Hazard

The components of this product are reported in the following inventories:

TSCA

Note: Listed

SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health hazard: 3
Flammability: 0
Physical hazards: 1
PPI: Ask supervisor or safety specialist for handling instructions

Material Safety Data Sheet

OMNI® SYNERGY® TABS

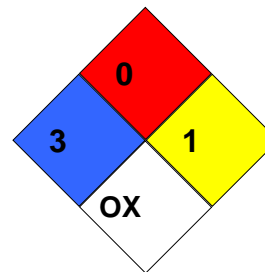
Version: 1.2

Revision Date: 08/03/2010

Print Date: 02/03/2012

NFPA Classification

: Health hazard: 3
Fire Hazard: 0
Reactivity Hazard: 1
Specific hazards: OX Class 1
Oxidizer.



Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+52 113 711 91 44
	All other countries	+44 (0)208 762 8322
<u>Mexico:</u>		+52 555 004 87 63

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

MSDS

Page: 1 of 9
Date-Issued: 08/19/1997
MSDS Ref. No: AOMN21127
Date-Revised: 07/01/1999
Revision No: 3

Omni Synergy Clear

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Omni Synergy Clear
GENERAL USE: Swimming pool water clarifier.

MANUFACTURER

Asepsis, Inc.
Omni
P.O. Box 537
Avondale Estates, GA 30002
Customer SERVICE: (800) 959-7946

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (Transportation) (800) 424-9300
Poison Control Center (Medical)(877) 800-5553

COMMENTS:

EPA Registration Number: 5185-475-10305

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt. %</u>
Sodium dichloro-s-triazinetriene	2893-78-9	58.2

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:
Blue, granular material.

IMMEDIATE CONCERNS:

DANGER: Corrosive: Causes irreversible eye damage. Do not breath dust; may be harmful if inhaled. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Causes skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear protective eyewear (safety glasses). Wash thoroughly with soap and water after handling product. Remove contaminated clothing and wash clothing before reuse.

POTENTIAL HEALTH EFFECTS

EYES:
Corrosive. Causes irreversible eye damage.

SKIN:
Causes skin irritation. Avoid contact with skin.

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SKIN ABSORPTION:

Harmful if absorbed through skin.

INGESTION:

Harmful if swallowed.

INHALATION:

May be harmful if inhaled. Avoid breathing dust.

CHRONIC:

This product contains a boron compound. This boron compound, when fed to test animals at very high doses, has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to man.

ROUTES OF ENTRY:

Skin Contact, Inhalation, Ingestion, Eye Contact.

4. FIRST AID MEASURES

EYES:

If in eyes: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

SKIN:

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

INGESTION:

If swallowed: Drink promptly large quantities of water. DO NOT induce vomiting. Avoid alcohol. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

INHALATION:

If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

NOTES TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD:

This product should not be exposed to external heat sources. Excessive heat may cause self-sustaining decomposition with the potential evolution of heat and noxious gases.

MATERIAL SAFETY DATA SHEET

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Omni Synergy Clear

EXTINGUISHING MEDIA:

Water Fog

HAZARDOUS COMBUSTION PRODUCTS:

If allowed to reach temperatures resulting in decomposition and/or combustion, this product will liberate noxious chlorine gases.

EXPLOSION HAZARDS:

This product does not pose an immediate explosion hazard.

FIRE FIGHTING PROCEDURES:

Firefighters should wear full protective clothing and self contained breathing apparatus (SCBA). Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

HAZARDOUS DECOMPOSITION PRODUCTS:

In the event of a decomposition and/or fire, extinguished material should be isolated. Any spilled material from burned or damaged containers should be assumed contaminated. Neutralize contaminated material to a non-oxidizing state for safe handling and disposal. To minimize unforeseen pressure buildup, do not attempt to re-close (seal) damaged containers of product.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

For small spills, scoop up and place product in pool or spa water, then flood spilled area with large volumes of water.

GENERAL PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Using appropriate protective clothing and safety equipment, contain spilled material. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not use floor sweeping compounds to clean up spills. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form. Do not transport wet or damp material. Keep product out of sewers, watersheds and water systems. Dispose of according to local, state and federal regulations.

7. HANDLING AND STORAGE

HANDLING:

This product contains OXIDIZING AGENTS. Do not mix with other chemicals or allow this product to become contaminated with organic materials or other chemicals that could lead to product decomposition and/or fire. Mix only with water. Never add water to this product. Always add product to large volumes of water. Use clean dry utensils. Do not add this product to any dispensing device (chemical feeder, etc.) containing remnants of any other product.

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STORAGE:

Keep this product in its original container when not in use. Store in cool, dry, well-ventilated area.
Keep this product and all other chemicals out of children's reach.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SUPPLIER OEL	
		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Sodium dichloro-s-triazinetriene	TWA	N/E ^[1]		N/E			

OSHA TABLE COMMENTS:

1. N/E = Not Established

ENGINEERING CONTROLS:

General room ventilation plus local exhaust should be used to minimize exposure to dust/vapors.

PERSONAL PROTECTIVE EQUIPMENT:

EYES AND FACE:

Wear goggles or safety glasses with side shields when handling this product.

SKIN:

Wear rubber gloves when handling this product. Avoid contact with skin.

RESPIRATORY:

Respirator protection is not normally required under routine use conditions. If product is used in an area with poor ventilation or airborne dust is expected, a respirator that meets OSHA/ANSI standards may be required.

WORK HYGIENIC PRACTICES:

Remove and wash contaminated clothing before reuse.

OTHER USE PRECAUTIONS:

Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

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Omni Synergy Clear

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid
ODOR: Chlorine
APPEARANCE: Granules
COLOR: Blue
pH: 5.0 to 5.5
VAPOR PRESSURE: Not Determined
VAPOR DENSITY: Not Determined
BOILING POINT: Not Applicable
MELTING POINT: 272°C (522°F)
SOLUBILITY IN WATER: 25g/100g water
SPECIFIC GRAVITY: 0.9960 g/ml

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

High temperature. Poor ventilation. Contamination. Moisture/high humidity.

STABILITY:

This product is stable under normal conditions.

POLYMERIZATION:

Hazardous polymerization will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogen containing gases can be produced.

INCOMPATIBLE MATERIALS:

Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material. Ammonia, urea, or similar nitrogen containing compounds. Inorganic reducing compounds. Floor sweeping compounds. Other swimming pool/spa chemicals in their concentrated forms.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: ~5000 mg/kg of body weight in rats.

ORAL LD₅₀: The Oral LD 50 for this product is 599 mg/kg in female albino rats and 862 mg/kg in male albino rats.

EYE EFFECTS:

Causes irreversible eye damage.

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SKIN EFFECTS:

Causes skin irritation.

SENSITIZATION:

This product is a skin sensitizer.

CARCINOGENICITY:

This product is not listed as a carcinogen by IARC.

This product is not listed as a carcinogen by NTP.

This product is not listed as a carcinogen by OSHA.

GENERAL COMMENTS:

This product is not a mutagen or teratogen.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

Pesticide wastes are toxic. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction or fire.

EMPTY CONTAINER:

Do not reuse container. Rinse thoroughly before discarding in trash.

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Omni Synergy Clear

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated.

OTHER SHIPPING INFORMATION: Bill of Lading Description - Compounds, Swimming Pool, Cleaning or Water Treating, Dry or Liquid (NMFC 50086)

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: NO PRESSURE GENERATING: NO REACTIVITY: NO ACUTE: YES CHRONIC: NO

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: This product contains a listed CERCLA Hazardous Substance with a reportable quantity of 5,000 lb.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: This product or its components are not subject to export notification.

TSCA STATUS: This product or its components are listed on the TSCA Inventory.

OSHA HAZARD COMM. RULE:

Product is hazardous by definition of the Hazardous Communication Standard.

CLEAN WATER ACT:

This product contains an aluminum salt which is listed as a Clean Water Act Section 311 Hazardous Substance.

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):

This product is a registered pesticide.

16. OTHER INFORMATION

MATERIAL SAFETY DATA SHEET

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Omni Synergy Clear

REVISION SUMMARY

Revision #: 3

This MSDS replaces the September 23, 1998 MSDS. Any changes in information are as follows:
In Section 1

General Use Statement Section 1 Footnotes

In Section 3

Emergency Overview - Immediate Concerns (text) Potential Health Effects - Eyes (text) Potential Health Effects - Skin (text) Potential Health Effects - Skin Absorption (text) Potential Health Effects - Inhalation (text) Comments Health (text)

In Section 4

Firstaid - Ingestion (text)

In Section 6

Small Spill (text)

In Section 8

Engineering Controls (text) Respiratory Protection (text)

In Section 9

(pH) (From) (pH) (To) (Group Field) for Vapor Pressure (Group Field) for Vapor Pressure Density (Group Field) for Boiling Point Melting Point (Operator) Melting °F (From) Melting °C (From) Specific Gravity (From) Specific Gravity (Unit)

In Section 11

Eye Effects (text) Skin Effects (text) Dermal LD50 (Operator) Dermal LD50 (Value) Dermal LD50 (Unit) Oral LD50 (text) Sensitization (text)

In Section 12

Ecotoxicological Information (text)

In Section 13

Product Disposal (text) Disposal (text)

In Section 15

Fire Pressure Generating Reactivity Accute Chronic CERCLA Regulatory (text) Clean Water Act (text) FIFRA (text)

NFPA CODES

HEALTH: 3 FIRE: 1 REACTIVITY: 1

HMIS CODES

HEALTH: 3 FIRE: 1 REACTIVITY: 1 PROTECTION: B

MATERIAL SAFETY DATA SHEET

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Omni Synergy Clear

MANUFACTURER DISCLAIMER:

IMPORTANT: This information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.

MATERIAL SAFETY DATA SHEET

MSDS

Page: 1 of 6
Date-Issued: 08/27/1997
MSDS Ref. No: AOMN21120
Date-Revised: 09/05/1997
Revision No: New MSDS

Omni Synergy Initiator

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Omni Synergy Initiator
GENERAL USE: Swimming pool water enhancer.
CHEMICAL FAMILY: Inorganic oxide

MANUFACTURER

Asepsis, Inc.
Omni
P.O. Box 537
Avondale Estates, GA 30002
Customer SERVICE: (800) 959-7946

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (Transportation) (800) 424-9300
Poison Control Center (Medical)(877) 800-5553

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>
Boron Salts		100

COMMENTS:

Ingredients listed in this section have been determined to be hazardous as defined in 29 CFR 1910.1200. Materials determined to be health hazards are listed if they comprise 1% of more of the composition. Materials identified as carcinogens are listed if they comprise 0.1% of more of the composition. Information on proprietary materials is available as provided in 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:

White, odorless powder.

IMMEDIATE CONCERNS:

CAUTION: Harmful if swallowed. Irritating to nose and throat. Avoid breathing dust. Avoid contact with eyes, skin or clothing. Wear goggles or safety glasses and rubber gloves when handling this product. Remove and wash contaminated clothing before reuse. Do not mix with other chemicals. Add this product only through skimmer only if other chemicals are not present in skimmer or an explosion may occur. Do not add to any dispensing device.

POTENTIAL HEALTH EFFECTS

EYES:

May cause eye irritation. Avoid contact with eyes.

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Omni Synergy Initiator

SKIN:

May cause skin irritation. Avoid contact with skin.

INGESTION:

Harmful if swallowed.

INHALATION:

Irritating to nose and throat. Avoid breathing dust or vapors.

CHRONIC:

This product contains a boron compound. This boron compound, when fed to test animals at very high doses, has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to man.

ROUTES OF ENTRY:

Eye Contact, Inhalation, Ingestion.

4. FIRST AID MEASURES

EYES:

If contact with eyes occurs: Immediately flush with cold water for at least 15 minutes. Then get immediate medical attention.

SKIN:

If contact with skin: Brush off excess chemical and flush skin with cold water for at least 15 minutes. If irritation persists, get medical attention.

INGESTION:

If swallowed: Drink large quantities of water, then induce vomiting. Avoid alcohol. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

INHALATION:

If inhaled: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If not breathing, give artificial respiration. Call a physician immediately.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Applicable

GENERAL HAZARD:

There are no unusual fire and explosion hazards known.

MATERIAL SAFETY DATA SHEET

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Revision No: New MSDS

Omni Synergy Initiator

EXTINGUISHING MEDIA:

Any fire extinguishing media may be used on nearby fires.

FIRE FIGHTING EQUIPMENT:

Firefighters should wear full protective clothing and self contained breathing apparatus (SCBA). Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Utilizing appropriate protective clothing and safety equipment, contain spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place in clean dry plastic containers for disposal. Dispose of according to local, state, and federal regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Avoid contact with eyes, skin or clothing. Avoid breathing dust.

HANDLING:

Use safe chemical handling procedures for the hazards presented by this material.

STORAGE:

Keep this product in its original container when not in use. Store in cool, dry, well-ventilated area. Keep this product and all other chemicals out of children's reach.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

General room ventilation plus local exhaust should be used to minimize exposure to dust/vapors.

PERSONAL PROTECTIVE EQUIPMENT:

EYES AND FACE:

Wear goggles or safety glasses with side shields when handling this product.

SKIN:

Wear rubber gloves when handling this product. Avoid contact with skin.

MATERIAL SAFETY DATA SHEET

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Omni Synergy Initiator

RESPIRATORY:

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

WORK HYGIENIC PRACTICES:

If product gets on clothing, remove and wash before reuse.

OTHER USE PRECAUTIONS:

Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid
ODOR: Odorless
APPEARANCE: Granules / powder
COLOR: White
pH: 5.1(3% solution @ 20 C)
MELTING POINT: 171°C
SOLUBILITY IN WATER: 4.6g/100g water @ 20C
SPECIFIC GRAVITY: 1.4 g/cc

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

High temperature. Poor ventilation. Contamination. Moisture/high humidity.

STABILITY:

This product is stable under normal conditions.

POLYMERIZATION:

Hazardous polymerization will not occur under normal conditions.

INCOMPATIBLE MATERIALS:

Other swimming pool/spa chemicals in their concentrated forms. Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:

This product may be irritating to eyes.

MATERIAL SAFETY DATA SHEET

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Omni Synergy Initiator

SKIN EFFECTS:

This product may be irritating to skin.

CARCINOGENICITY:

This product is not listed as a carcinogen by IARC.

This product is not listed as a carcinogen by NTP.

This product is not listed as a carcinogen by OSHA.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

This product may be toxic to fish and aquatic organisms. Keep product from entering waterways and watersheds.

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL:

Dispose of unused, uncontaminated product in compliance with local, state and federal regulations.

EMPTY CONTAINER:

Do not reuse container. Rinse thoroughly before discarding in trash.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated.

OTHER SHIPPING INFORMATION: Bill of Lading Description - Compounds, Swimming Pool, Cleaning or Water Treating, Dry or Liquid (NMFC 50086)

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 REPORTABLE INGREDIENTS: This product or its components are not listed.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: This product or its components are not listed.

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Omni Synergy Initiator

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: This product or its components are not subject to export notification.

TSCA STATUS: This product or its components are listed on the TSCA Inventory.

OSHA HAZARD COMM. RULE:

Product is hazardous by definition of the Hazardous Communication Standard.

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):

This product is not a registered pesticide.

16. OTHER INFORMATION

REVISION SUMMARY

New MSDS

NFPA CODES

HEALTH: 1 FIRE: 0 REACTIVITY: 0

HMIS CODES

HEALTH: 1 FIRE: 0 REACTIVITY: 0 PROTECTION: B

MANUFACTURER DISCLAIMER:

IMPORTANT: This information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.

SAFETY DATA SHEET

Revision Date 10-Sep-2018

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Spa Synergy Clear

Other means of identification

Product Code H4990

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Spa Product

Uses advised against Do not mix with other chemicals

Details of the supplier of the safety data sheet

Initial Supplier Identifier

KIK HOLDCO COMPANY INC.
33 MacIntosh Blvd.
Concord, ON L4K 4L5
1-888-640-7946

Emergency telephone number

Emergency Telephone Chemtrec (Transportation) 1-800-424-9300, 703-527-3887
Poison Control Center (Medical) : (877) 800-5553

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Label elements

Danger

Hazard statements

Harmful if swallowed
Causes skin irritation
Causes serious eye damage
Suspected of damaging fertility or the unborn child
May cause respiratory irritation



This product contains a boron compound. This boron compound when fed to test animals at very high doses has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to humans.

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Call a POISON CENTER or doctor/physician if you feel unwell

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects

Unknown acute toxicity 98.2 % of the mixture consists of ingredient(s) of unknown toxicity

30 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

40 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

98.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

98.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

40 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical Name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium Dichloro-S-Triazinetrione	2893-78-9	58.2	-	-
Boron sodium oxide (B ₄ Na ₂ O ₇), pentahydrate	12179-04-3	7 - 13	-	-
aluminium sulfate	10043-01-3	3 - 7	-	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Oxygen or artificial respiration if needed. If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Call a physician if irritation persists.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician. Rinse mouth. Have person sip a glass of water if able to swallow. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Flood fire area with water from a distance.

Unsuitable extinguishing media	Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.
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Specific hazards arising from the chemical

Do not let the fire burn. Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Wet material may generate nitrogen trichloride, an explosion hazard.

Hazardous combustion products	Chlorine gas. Nitrogen trichloride. Nitrogen. Phosgene. Cyanogen chloride. Carbon oxides.
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Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Other Information

Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions

This material is toxic to aquatic life. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form.

Methods for cleaning up

Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Avoid generation of dust. Clean contaminated surface thoroughly. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Do not use floor sweeping compounds to clean up spills. Do not transport wet or damp material. Contact supplier in Section 1 for instructions, especially for damp or contaminated material.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Do not breathe dust. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash contaminated clothing before reuse. Do not mix with other chemicals. Wash thoroughly after handling. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical Name	Alberta	British Columbia	Ontario TWA	Quebec
Boron sodium oxide (B ₄ Na ₂ O ₇), pentahydrate 12179-04-3	TWA: 1 mg/m ³ STEL: 3 ppm	TWA: 2 mg/m ³ STEL: 6 mg/m ³	TWA: 2 mg/m ³ STEL: 6 mg/m ³	TWA: 1 mg/m ³
aluminium sulfate 10043-01-3	TWA: 2 mg/m ³			TWA: 2 mg/m ³

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Rubber gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid
Appearance granules
Color blue
Odor Chlorine
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5-5.5	in 1% Solution
Melting point / freezing point	272 °C / 522 °F	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available.	

Oxidizing properties No information available.

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available
Density 1.0 g/cm³
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to avoid Extremes of temperature and direct sunlight. Protect from moisture. Do not mix with other chemicals.

Incompatible materials Acids. Bases. Ammonia. Calcium hypochlorite. Do not mix with other swimming pool/spa chemicals in their concentrated forms. Reducing agents.

Hazardous Decomposition Products Chlorine gas. Nitrogen trichloride. Nitrogen. Cyanogen chloride. Phosgene. Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May cause irritation. May be harmful by inhalation.
Eye contact Severely irritating to eyes. Risk of serious damage to eyes. Causes burns.
Skin contact Irritating to skin. Contact with moist skin may cause skin burns.
Ingestion Harmful if swallowed.

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 513.00 mg/kg
ATEmix (dermal) 2,064.00 mg/kg
ATEmix (inhalation-dust/mist) 12.90 mg/l

Unknown acute toxicity

98.2 % of the mixture consists of ingredient(s) of unknown toxicity
 30 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 40 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 98.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 98.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 40 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Oral LD50 599 mg/kg (rat)
 Dermal LD50 > 5000 mg/kg (rat)

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Dichloro-S-Triazinetrione 2893-78-9	= 1823 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	0.27 - 1.17 mg/L (Rat, dust) 4 h
Boron sodium oxide (B4Na2O7), pentahydrate 12179-04-3	= 2403 mg/kg (Rat)	-	-
aluminium sulfate 10043-01-3	= 1930 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION, WET MATERIAL CAUSES SKIN BURNS.
Serious eye damage/eye irritation	Irritating to eyes. Risk of serious damage to eyes. May cause burns.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	This product contains a boron compound. This boron compound when fed to test animals at very high doses has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to humans.
STOT - single exposure	May cause respiratory irritation.
STOT - repeated exposure	No information available.
Target Organ Effects	Eyes, Respiratory system, Skin.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity . Toxic to aquatic life.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium Dichloro-S-Triazinetrione 2893-78-9	-	0.207 - 0.389: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.29: 96 h Oncorhynchus mykiss mg/L LC50 0.176 - 0.267: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.13 - 0.36: 96 h Oncorhynchus mykiss mg/L LC50 static 0.25 - 1: 96 h Lepomis macrochirus mg/L LC50 static	-	0.00018 - 0.00021: 48 h Daphnia magna mg/L EC50 0.093 - 0.16: 48 h Daphnia magna mg/L EC50
aluminium sulfate 10043-01-3	-	100: 96 h Carassius auratus mg/L LC50 37:	-	136: 15 min Daphnia magna mg/L EC50

		96 h <i>Gambusia affinis</i> mg/L LC50 static		
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Persistence and degradability No information available.

Bioaccumulation No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

Note: Product classified as UN 3077 or UN 3082 that are shipped in containers not exceeding 5 kg or 5 L may ship as Not Subject to the provisions of the IMDG Code and Not Restricted under IATA. Refer to IMDG Ch 2.10 and IATA SP-197.

TDG Not regulated

DOT Not regulated

IATA

UN/ID no. UN3077
Proper shipping name Environmentally Hazardous Substance, Solid, n.o.s., (Sodium Dichloro-s-triazinetriene)
Hazard Class 9
Packing Group III
Description UN3077 Environmentally hazardous substances, solid, n.o.s. (Sodium dichloro-s-triazinetriene), 9, III

IMDG

UN/ID no. UN3077
Proper shipping name Environmentally Hazardous Substance, Solid, n.o.s., (Sodium Dichloro-s-triazinetriene)
Hazard Class 9
Packing Group III
Marine pollutant This material meets the definition of a marine pollutant
Description UN3077 Environmentally hazardous substances, solid, n.o.s. (Sodium dichloro-s-triazinetriene), 9, III

15. REGULATORY INFORMATION

Regulatory information

Canadian Federal Regulations

Consumer Chemicals and Containers Regulations, 2001 This product complies with Consumer Chemicals and Containers Regulations, 2001

PCP Registration Number This product does not contain any substances regulated as pesticides. / Ce produit ne contient aucune substance réglementée comme un pesticide.

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA Complies

DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 3	Flammability 0	Instability 1	Physical and chemical properties -
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 1	Personal protection X

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

*

Skin designation

Revision Date 10-Sep-2018

Revision Note No information available.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Revision Date 25-May-2018

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Spa Synergy Initiator

Other means of identification

Product Code H1023

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Spa Product

Uses advised against Do not mix with other chemicals

Details of the supplier of the safety data sheet

Initial Supplier Identifier

KIK HOLDCO COMPANY INC.
33 MacIntosh Blvd.
Concord, ON L4K 4L5
1-888-640-7946

Emergency telephone number

Emergency Telephone Chemtrec (Transportation) 1-800-424-9300, 703-527-3887
Poison Control Center (Medical) : (877) 800-5553

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Reproductive toxicity	Category 2

Label elements

Warning

Hazard statements

Harmful if inhaled
Suspected of damaging fertility or the unborn child



Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

May be harmful if swallowed May be harmful in contact with skin

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
boric acid	10043-35-3	100	-	-

4. FIRST AID MEASURES

Description of first aid measures**General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. Drink water and blow nose to remove dust. If symptoms persist, call a physician.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact

Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Have person sip a glass of water if able to swallow. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical

Product is not flammable, combustible or explosive.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Use personal protective equipment as required. Avoid generation of dust. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas.

Environmental precautions

Environmental precautions Avoid release to the environment. Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading.

Methods for cleaning up Avoid generation of dust. Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Do not breathe dust.

Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical Name	Alberta	British Columbia	Ontario TWA	Quebec
boric acid 10043-35-3		TWA: 2 mg/m ³ STEL: 6 mg/m ³	TWA: 2 mg/m ³ STEL: 6 mg/m ³	

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection None required for consumer use. Rubber gloves.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid
Appearance dry, free flowing granules
Color white
Odor Odorless
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.1	in 1% Solution
Melting point / freezing point	171 °C	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	

Vapor density	No information available
Relative density	No information available
Water solubility	Soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available.
Oxidizing properties	No information available.

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Protect from moisture. Extremes of temperature and direct sunlight.
Incompatible materials	Strong reducing agents. Do not mix with other swimming pool/spa chemicals in their concentrated forms.
Hazardous Decomposition Products	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	May cause irritation of respiratory tract.
Eye contact	May cause slight irritation. Dust contact with the eyes can lead to mechanical irritation.
Skin contact	Not expected to cause skin irritation under normal use conditions.
Ingestion	No adverse health effects anticipated from ingestion of incidental amounts of product.

Information on toxicological effects

Symptoms	No information available.
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Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (dermal)	2,002.00 mg/kg
ATEmix (inhalation-dust/mist)	2.12 mg/l

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Oral LD50 3450 mg/kg (rat)**Dermal LD50** > 2000 (rabbit)**Inhalation LC50** > 2.12 mg/l (rat)**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
boric acid 10043-35-3	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** Not applicable.**Serious eye damage/eye irritation** Mild eye irritant.**Respiratory or skin sensitization** No information available.**Germ cell mutagenicity** No information available.**Carcinogenicity** No information available.

Reproductive toxicity This product contains a boron compound. This boron compound when fed to test animals at very high doses has shown reproductive and developmental toxicity. When this product is used according to label directions, the boron compound in this product does not represent a practical risk to humans.

STOT - single exposure No information available.**STOT - repeated exposure** No information available.**Aspiration hazard** No information available.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
boric acid 10043-35-3	-	1020: 72 h Carassius auratus mg/L LC50 flow-through	-	115 - 153: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.**Bioaccumulation** No information available.**Component Information**

Chemical Name	Partition coefficient
boric acid 10043-35-3	-0.757

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products
Contaminated packaging

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
 Do not reuse empty containers.

14. TRANSPORT INFORMATION

TDG Not regulated

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

Regulatory information

Canadian Federal Regulations

Consumer Chemicals and Containers Regulations, 2001
PCP Registration Number

This product complies with Consumer Chemicals and Containers Regulations, 2001

This product does not contain any substances regulated as pesticides. / Ce produit ne contient aucune substance réglementée comme un pesticide.

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 0	Flammability 0	Instability 0	Physical and chemical properties - Personal protection X
HMIS	Health hazards 1*	Flammability 0	Physical hazards 0	

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision Date 25-May-2018

Revision Note

No information available.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL SDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: CCH Calcium Hypochlorite Tablets

EPA Registration Number: 1258-1233

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

REVISION DATE: 05/27/2015

SUPERCEDES: 09/19/2007

MSDS Number: 000000023493

SYNONYMS: None

CHEMICAL FAMILY: Hypochlorite

DESCRIPTION / USE: Sanitizer and Oxidizer

FORMULA: NOT APPLICABLE/MIXTURE

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 2

Acute toxicity (Oral) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Acute toxicity (Inhalation) : Category 3

Specific target organ toxicity -
single exposure : Category 3

GHS Label element

Hazard pictograms :



Signal word : Danger



Hazard statements : H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME
CALCIUM HYPOCHLORITE

CAS #
7778-54-3

% RANGE
60 - 80



SODIUM CHLORIDE	7647-14-5	10 - 20
CALCIUM CHLORATE	10137-74-3	0 - 5
CALCIUM CHLORIDE	10043-52-4	0 - 5
CALCIUM HYDROXIDE	1305-62-0	0 - 6
CALCIUM CARBONATE	471-34-1	0 - 4
Sodium Tripolyphosphate	13573-18-7	0.5 - 1.0
Water	7732-18-5	5.5 - 10

SECTION 4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Skin Contact:	IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact:	IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion:	IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES



Flammability Summary (OSHA):

This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire., This product is a strong oxidizer which is capable of intensifying a fire once started., Product is not known to be flammable, combustible or pyrophoric.

Flammable Properties

Flash Point:

Not applicable

Autoignition Temperature:

Not applicable

Extinguishing Media:

Water only. Do not use dry extinguishers containing ammonium compounds.

Fire Fighting Instructions:

Use water to cool containers exposed to fire. See Section 6 for protective equipment for fire fighting.

Upper Flammable / Explosive Limit,
% in air:

Not applicable

Lower Flammable / Explosive Limit,
% in air:

Not applicable

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency
Situations:

Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment.

Spill Mitigation Procedures

Air Release:

Vapors may be suppressed by the use of water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

Water Release:

This product is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

Land Release:

Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.



Additional Spill Information :

Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure. **FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300** REPORTABLE QUANTITY: 10 lbs. (as calcium hypochlorite) per 40 CFR 302.4.

SECTION 7. HANDLING AND STORAGE

Handling:

Avoid inhalation of dust and fumes. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Remove contaminated clothing and wash before reuse.

Storage:

Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

Shelf Life Limitations:

Do not store product where the average daily temperature exceeds 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in a cool, dry and well ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur.

Incompatible Materials for Storage:

Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.

Do Not Store At temperatures Above:

Average daily temperature of 35° C / 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.



SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.

Eye Protection: Use chemical goggles. Emergency eyewash should be provided in the immediate work area.

Protective Clothing Type: Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
CALCIUM HYPOCHLORITE (7778-54-3)	TWA	1 mg/m3	ARCH OEL*
CALCIUM HYPOCHLORITE (7778-54-3)	Conc	37 - 48 mg/m3	NIOSH/GUIDE IDLH
CALCIUM HYDROXIDE (1305-62-0)	TWA	5 mg/m3	ACGIH (02 2014)

ARCH OEL: Arch Recommended Occupational Exposure Guideline.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: solid

Form: Tablet

Color: white

Odor: Chlorine-like

Molecular Weight: 143.00 g/mol

pH : 10.4 - 10.8 (1% solution in neutral, distilled water) (@ 25 Deg. C)

Boiling Point: Not applicable

Melting point/freezing point: Not applicable

Density: 1.9000g/cc



Vapor Pressure:	(@ 25 Deg. C) Not applicable
Vapor Density:	Not applicable
Viscosity:	Not applicable
Fat Solubility:	No data
Solubility in Water:	18.00000 % (@ 25 Deg. C) Product also contains calcium hydroxide and calcium carbonate which will leave a residue.
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	Not applicable
Oxidizing:	Oxidizer
Volatiles, % by vol.:	Not applicable
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to Avoid:	Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.
Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous Decomposition Products:	Chlorine
Decomposition Temperature:	170 - 180 °C - , 338 - 356 °F-

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

CCH Calcium Hypochlorite Tablets
REVISION DATE : 05/27/2015



Oral LD50 value:

CALCIUM HYPOCHLORITE	LD50 (65% calcium hypochlorite)	850 mg/kg	Rat
SODIUM CHLORIDE	LD50	= 3,000 mg/kg	Rat
CALCIUM CHLORIDE	LD50	= 1,000 mg/kg	Rat
CALCIUM HYDROXIDE	LD50	= 7,340 mg/kg	Rat
Sodium Triphosphosphate	LD50	= 6,500 mg/kg	Rat

Component Animal Toxicology

Dermal LD50 value:

CALCIUM HYPOCHLORITE	LD50 (65% calcium hypochlorite)	> 2,000 mg/kg	Rabbit
SODIUM CHLORIDE	LD50	> 10,000 mg/kg	Rabbit
CALCIUM CHLORIDE	LD50	= 2,630 mg/kg	Rat
CALCIUM HYDROXIDE	No data		
Sodium Triphosphosphate	No data		

Component Animal Toxicology

Inhalation LC50 value:

CALCIUM HYPOCHLORITE	Inhalation LC50 1 h (65% calcium hypochlorite), (Nose Only)	=	2.04 mg/l
	Rat		
	Inhalation LC50 4 h (65% calcium hypochlorite), (Nose Only)	=	0.51 mg/l
	Rat		
SODIUM CHLORIDE	Inhalation LC50 1 h	>	42 mg/l Rat
CALCIUM CHLORIDE	No data		
CALCIUM HYDROXIDE	No data		
Sodium Triphosphosphate	Inhalation LC50 4 h	>	0.39 mg/l Rat

Product Animal Toxicity

Oral LD50 value:

Dermal LD50 value:

Inhalation LC50

value:

Skin Irritation:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.
Eye Irritation:	Corrosive to eyes.
Skin Sensitization:	This material is not known or reported to be a skin or respiratory sensitizer.



Acute Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Subchronic / Chronic Toxicity: There are no known or reported effects from repeated exposure except those secondary to burns.

Reproductive and Developmental Toxicity: Calcium hypochlorite has been tested for teratogenicity in laboratory animals. Results of this study have shown that calcium hypochlorite is not a teratogen.

CALCIUM CHLORIDE

Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Calcium hypochlorite has been tested in the Dominant lethal assay in male mice, and it did not induce a dominant lethal response. Calcium hypochlorite has been reported to produce mutagenic activity in two in vitro assays. It has, however, been shown to lack the capability to produce mutations in animals based on results from the micronucleus assay. In vitro assays frequently are inappropriate to judge the mutagenic potential of bactericidal chemicals due to a high degree of cellular toxicity. The concentration which produces mutations in these in vitro assays is significantly greater than the concentrations used for disinfection. Based on high cellular toxicity in in vitro assays and the lack of mutagenicity in animals, the risk of genetic damage to humans is judged not significant.

CALCIUM CHLORIDE

This product was determined to be non-mutagenic in the Ames assay. It was also shown to be non-clastogenic in the chromosomal aberration test.

Sodium Tripolyphosphate

This product was determined to be non-mutagenic in the Ames assay.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. One hundred mice were exposed dermally 3 times a week for 18 months to a solution of calcium hypochlorite. Histopathological examination failed to show an increased incidence of tumors. IARC (International Agency for Research on Cancer) reviewed studies conducted with several hypochlorite salts. IARC has classified hypochlorite salts as having inadequate evidence for carcinogenicity to humans and animals. IARC therefore considers hypochlorite salts to be not classifiable as to their carcinogenicity to humans (Group 3 Substance).

CALCIUM CHLORIDE

This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Highly toxic to fish and other aquatic organisms.



Ecological Toxicity Values for: CALCIUM HYPOCHLORITE

	Bluegill	-	(nominal, static). 96 h LC50 0.088 mg/l
Rainbow trout (<i>Salmo gairdneri</i>),		-	(nominal, static). 96 h LC50 0.16 mg/l
	Daphnia magna,	-	(nominal, static). 48 h LC50 0.11 mg/l
	Bobwhite quail	-	Dietary LC50 > 5,000 ppm
Mallard ducklings		-	Dietary LC50 > 5,000 ppm
Bobwhite quail		-	Oral LD50 3,474 mg/kg

Ecological Toxicity Values for: CALCIUM CHLORIDE

	Bluegill	-	(nominal, static). 96 h LC50 = 10,650 mg/l
Mosquito fish		-	(nominal, static). 96 h LC50 = 13,400 mg/l
Pimephales promelas (fathead minnow)		-	(nominal, static). 96 h LC50 = 4,630 mg/l
	Daphnia magna,	-	(nominal, static). 48 h LC50= 2,770 mg/l
Ceriodaphnia dubia		-	(nominal, static). 48 h LC50= 1,830 mg/l
	Nitzschia linearis (diatom)	-	(nominal, static). 5 day LC50 = 3,130 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001. If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

Disposal Methods : As a hazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : D001

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixtures



Class : 5.1
Packing group : III
Labels : 5.1
Emergency Response : 140
Guidebook Number

TDG

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : II
Labels : 5.1

IATA

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixture
Class : 5.1
Packing group : III
Labels : 5.1
Packing instruction (cargo aircraft) : 563
Packing instruction (passenger aircraft) : 559
Packing instruction (passenger aircraft) : Y546

IMDG-CODE

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : III
Labels : 5.1
EmS Number 1 : F-H
EmS Number 2 : S-Q

Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Signal word : DANGER!
Hazard statements : Causes substantial but temporary eye injury.
Corrosive. Causes skin burns.
Corrosive. Causes irreversible eye damage.
This pesticide is toxic to fish.



EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Calcium hypochlorite	7778-54-3	10	13

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Calcium hypochlorite	7778-54-3	80 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Calcium hypochlorite	7778-54-3	80 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Calcium hypochlorite	7778-54-3
Calcium dihydroxide	1305-62-0



Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1

Pennsylvania Right To Know

Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Calcium dihydroxide	1305-62-0
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium carbonate	471-34-1

New Jersey Right To Know

Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Calcium dihydroxide	1305-62-0
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium carbonate	471-34-1

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : This is an EPA registered pesticide.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 7, 14, 10
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .

U27434



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

FOR ALL SDS QUESTIONS & REQUESTS, CALL:

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: DryTec Calcium Hypochlorite Granular

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America (USA)

REVISION DATE: 06/14/2017
SUPERCEDES: 11/04/2016

MSDS Number: 000000023097
SYNONYMS: none
CHEMICAL FAMILY: Hypochlorite
DESCRIPTION / USE: Sanitizer and Oxidizer Water treatment chemical
FORMULA: Not Applicable/Mixture

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 2
Acute toxicity (Oral) : Category 4
Skin corrosion : Category 1B
Serious eye damage : Category 1
Acute toxicity (Inhalation) : Category 3
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :



Signal word : **Danger**



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

Hazard statements : H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray to extinguish.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME
Calcium hypochlorite

CAS #
7778-54-3

% RANGE
60 - 80



SODIUM CHLORIDE	7647-14-5	10 - 20
Chloric acid, calcium salt (2:1)	10137-74-3	0 - 5
Calcium chloride	10043-52-4	0 - 5
Calcium hydroxide	1305-62-0	0 - 4
Calcium carbonate	471-34-1	0 - 5
Aqua	7732-18-5	5.5 - 10

SECTION 4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Skin Contact:	IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact:	IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion:	IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

Flammability Summary (OSHA):

This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire. This product is a strong oxidizer which is capable of intensifying a fire once started. Product is not known to be flammable, combustible or pyrophoric.

Flammable Properties

Flash Point:

Not applicable

Autoignition Temperature:

Not applicable

Extinguishing Media:

Water only. Do not use dry extinguishers containing ammonium compounds.

Fire Fighting Instructions:

Use water to cool containers exposed to fire. See Section 6 for protective equipment for fire fighting.

Upper Flammable / Explosive Limit,
% in air:

Not applicable Not applicable

Lower Flammable / Explosive Limit,
% in air:

Not applicable Not applicable

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency
Situations:

Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment.

Spill Mitigation Procedures

Air Release:

Vapors may be suppressed by the use of water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

Water Release:

This product is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

Land Release:

Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

Additional Spill Information :

Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure. **FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300** REPORTABLE QUANTITY: 10 lbs. (as calcium hypochlorite) per 40 CFR 302.4.

SECTION 7. HANDLING AND STORAGE

Handling:

Avoid inhalation of dust and fumes. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Remove contaminated clothing and wash before reuse. Maximum Usage Level (MUL) for Potable Water is 15mg/L.

Storage:

Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

Shelf Life Limitations:

Do not store product where the average daily temperature exceeds 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in a cool, dry and well ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur.

Incompatible Materials for Storage:

Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.

Do Not Store At temperatures Above:

Average daily temperature of 35° C / 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.



SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.

Eye Protection: Use chemical goggles. Emergency eyewash should be provided in the immediate work area.

Protective Clothing Type: Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Calcium hydroxide (1305-62-0)	TWA	5 mg/m3	ACGIH (02 2014)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: solid

Form free flowing, granular

Color: off-white

Odor: Chlorine-like

Molecular Weight: (Active ingredient)143.00 g/mol

Relative density Not applicable

pH : 10.4 - 10.8

77 °F (25 °C)

Boiling Point: Not applicable

Melting point/freezing point Not applicable

Density: 0.8g/cc

Vapor Pressure: Not applicable

Vapor Density: Not applicable

Viscosity: Not applicable

Fat Solubility: no data available



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Solubility in Water:	ca. 180 g/l 77 °F (25 °C)
Partition coefficient n-octanol/water:	no data available
Evaporation Rate:	Not applicable
Oxidizing:	Oxidizing
Volatiles, % by vol.:	Not applicable
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to Avoid:	Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.
Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous Decomposition Products:	Chlorine
Decomposition Temperature:	170 - 180 °C - , 338 - 356 °F-

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

Calcium hypochlorite	LD50	850 mg/kg	Rat
SODIUM CHLORIDE	LD50	3,000 mg/kg	Rat

DryTec Calcium Hypochlorite Granular

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	LD50	3,550 mg/kg	Rat
Calcium chloride	LD50	2,301 mg/kg	Rat
	LD50	1,000 mg/kg	Rat
Calcium hydroxide	LD50	7,340 mg/kg	Rat

Component Animal Toxicology

Dermal LD50 value:

SODIUM CHLORIDE	LD50	> 10,000 mg/kg	Rabbit
Calcium chloride	LD50	> 5,000 mg/kg	Rabbit
	LD50	2,630 mg/kg	Rat

Component Animal Toxicology

Inhalation LC50 value:

Product Animal Toxicity

Oral LD50 value: LD50 approximately 800 mg/kg Rat

Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 value: Inhalation LC50 1.00 h (Nose Only) > 2.04 mg/l Rat Inhalation LC50 4 h (Nose Only) > 0.51 mg/l Rat Inhalation LC50 1 h (Nose Only) > 2.04 mg/l Rat Inhalation LC50 4 h (Nose Only) > 0.51 mg/l Rat

Skin Irritation: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.

Eye Irritation: Corrosive to eyes.

Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Subchronic / Chronic Toxicity: There are no known or reported effects from repeated exposure except those secondary to burns.

Reproductive and Developmental Toxicity: Calcium hypochlorite has been tested for teratogenicity in laboratory animals. Results of this study have shown that calcium hypochlorite is not a teratogen.

Mutagenicity: Calcium hypochlorite has been tested in the Dominant lethal assay in male mice, and it did not induce a dominant lethal response. Calcium hypochlorite has been reported to produce mutagenic activity in two in vitro assays. It has, however, been shown to lack the capability to produce mutations in animals based on results from the micronucleus assay. In vitro assays frequently are inappropriate to judge the mutagenic potential of bactericidal chemicals due to a high degree of cellular toxicity. The concentration which produces mutations in these in vitro assays is significantly greater than the concentrations used for disinfection. Based on high cellular toxicity in in vitro assays and the lack of mutagenicity in animals, the risk of genetic damage to humans is judged not significant.



Carcinogenicity:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. One hundred mice were exposed dermally 3 times a week for 18 months to a solution of calcium hypochlorite. Histopathological examination failed to show an increased incidence of tumors. IARC (International Agency for Research on Cancer) reviewed studies conducted with several hypochlorite salts. IARC has classified hypochlorite salts as having inadequate evidence for carcinogenicity to humans and animals. IARC therefore considers hypochlorite salts to be not classifiable as to their carcinogenicity to humans (Group 3 Substance).

SECTION 12. ECOLOGICAL INFORMATION

Overview: Highly toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: Calcium hypochlorite

Lepomis macrochirus (Bluegill sunfish)	-	96 h LC50 0.057 mg/l
Daphnia magna (Water flea)	-	48 h EC50 0.067 mg/l
Colinus virginianus (Bobwhite quail)	-	Dietary LC50 > 5,000 ppm
Colinus virginianus (Bobwhite quail)	-	Oral LD50 3,474 mg/kg
Mallard ducklings	-	Dietary LC50 > 5,000 ppm

Ecological Toxicity Values for: SODIUM CHLORIDE

Carassius auratus (goldfish)	-	Acute toxicity 10 d LC50 > 10,000 mg/l
Daphnia magna (Water flea)	-	Immobilization 48 h EC50 > 100 mg/l

Ecological Toxicity Values for: Calcium chloride

Lepomis macrochirus (Bluegill sunfish)	-	Acute toxicity 96 h LC50 10,650 mg/l
Daphnia magna (Water flea)	-	48 h EC50 2,400 mg/l
Daphnia magna (Water flea)	-	48 h EC50 144 mg/l
Chlorella vulgaris (Fresh water algae)	-	Cell multiplication inhibition test 120 h EC10 140 mg/l

Ecological Toxicity Values for: Calcium hydroxide

Gambusia affinis (Mosquito fish)	-	Acute toxicity 96 h LC50 160 mg/l
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SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary :

If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001. If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

Disposal Methods :

As a hazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixtures
Class : 5.1
Packing group : II
Labels : 5.1
Emergency Response : 140
Guidebook Number

TDG

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : II
Labels : 5.1

IATA

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixture
Class : 5.1
Packing group : II
Labels : 5.1
Packing instruction (cargo aircraft) : 562
Packing instruction (passenger aircraft) : 558



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Packing instruction : Y544
(passenger aircraft)

IMDG-CODE

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : II
Labels : 5.1
EmS Number 1 : F-H
EmS Number 2 : S-Q

Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Signal word : DANGER!
Hazard statements : Causes substantial but temporary eye injury.
Corrosive. Causes skin burns.
Corrosive. Causes irreversible eye damage.
This pesticide is toxic to fish.
EPA No. : 1258-427

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Calcium hypochlorite	7778-54-3	10	13

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



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Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Calcium hypochlorite	7778-54-3	10

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Calcium hypochlorite	7778-54-3	

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Calcium carbonate	471-34-1
Calcium chlorate	10137-74-3
Calcium dihydroxide	1305-62-0

Pennsylvania Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Calcium carbonate	471-34-1
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium dihydroxide	1305-62-0



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SAFETY DATA SHEET

New Jersey Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Calcium carbonate	471-34-1
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium dihydroxide	1305-62-0

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

SECTIONS REVISED:

1

SECTIONS REVISED:

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch-Chemicals, Inc.

Major References :

Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT..



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SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL SDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: HTH® SUPER 70

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America (USA)

REVISION DATE: 06/08/2017

SUPERCEDES: 06/01/2017

MSDS Number: 000000033182

SYNONYMS:

CHEMICAL FAMILY: Mixture

DESCRIPTION / USE: Water treatment chemical

FORMULA: None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 2

Acute toxicity (Oral) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

Acute toxicity (Inhalation) : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.

HTH® SUPER 70

REVISION DATE : 06/08/2017

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H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.

Precautionary statements

Prevention:

P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dust or mist.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P271 Use only outdoors or in a well-ventilated area.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use water spray to extinguish.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
Calcium hypochlorite	7778-54-3	60 - 80



SODIUM CHLORIDE	7647-14-5	10 - 20
Calcium chloride	10043-52-4	0 - 5
Chloric acid, calcium salt (2:1)	10137-74-3	0 - 5
Calcium carbonate	471-34-1	0 - 5
Calcium hydroxide	1305-62-0	0 - 4

SECTION 4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Give oxygen. First aider needs to protect himself. Call a physician immediately.
Skin Contact:	Take off all contaminated clothing immediately. After contact with skin, wash immediately with plenty of soap and water. Call a physician immediately.
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
Ingestion:	Call a physician immediately. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA):	This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire., This product is a strong oxidizer which is capable of intensifying a fire once started., Product is not known to be flammable, combustible or pyrophoric.
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Flammable Properties

Flash Point:	Not applicable
Autoignition Temperature:	Not applicable
Fire / Explosion Hazards:	During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media:	Water Do not use dry extinguishers containing ammonium compounds.
Fire Fighting Instructions:	Use water spray to cool unopened containers.
Upper Flammable / Explosive Limit, % in air:	Not applicable



Lower Flammable / Explosive Limit, Not applicable
% in air:

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Spill Mitigation Procedures

Air Release:

Vapors may be suppressed by the use of water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

Water Release:

This product is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

Land Release:

Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

SECTION 7. HANDLING AND STORAGE

Handling:

Avoid breathing dust. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Remove contaminated clothing and wash before reuse.

Storage:

Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.



Shelf Life Limitations:

Do not store product where the average daily temperature exceeds 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in a cool, dry and well ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur., Average daily temperature of 35° C / 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.

Incompatible Materials for Storage:

Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection :

A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit., Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Skin Protection :

Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.

Eye Protection:

Use chemical goggles. An eye wash and safety shower should be provided in the immediate work area.

Protective Clothing Type:

Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Components with workplace control parameters

Components (CAS-No.)	Value	Control parameters	Basis (Update)
Calcium hydroxide (1305-62-0)	TWA	5 mg/m3	ACGIH (02 2014)



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	free flowing, granular
Color:	white
Odor:	Chlorine-like
Molecular Weight:	143 g/mol
pH :	10.4 - 10.8
	77 °F (25 °C) (1% solution in neutral, distilled water)
Boiling Point:	Not applicable
Density	0.8 g/cm ³ at 77 °F (25 °C)
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	no data available
Solubility in Water:	Approximately 18%, Product also contains calcium hydroxide and calcium carbonate which will leave a residue.
Partition coefficient n-octanol/water:	
Evaporation Rate:	Not applicable
Oxidizing:	The substance or mixture is classified as oxidizing with the category 2.
Volatiles, % by vol.:	Not applicable
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to Avoid:	Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.
Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers



Hazardous Decomposition Products:
Decomposition Temperature:

(containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases.
No decomposition if stored normally.
170 - 180 °C

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

Calcium hypochlorite	LD50	850 mg/kg	Rat
SODIUM CHLORIDE	LD50	3,000 mg/kg	Rat
	LD50	3,550 mg/kg	Rat
Calcium chloride	LD50	2,301 mg/kg	Rat
	LD50	1,000 mg/kg	Rat
Calcium hydroxide	LD50	7,340 mg/kg	Rat

Component Animal Toxicology

Dermal LD50 value:

SODIUM CHLORIDE	LD50	> 10,000 mg/kg	Rabbit
Calcium chloride	LD50	> 5,000 mg/kg	Rabbit
	LD50	2,630 mg/kg	Rat

Component Animal Toxicology

Inhalation LC50 value:

Product Animal Toxicity

Oral LD50 value: Acute toxicity estimate 945.32 mg/kg

Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 LC50 4 h > 0.51 mg/l Rat

value:

Skin Irritation: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.

Eye Irritation: Corrosive to eyes.

Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Subchronic / Chronic
Toxicity:

Reproductive and
Developmental Toxicity:

Mutagenicity:



Carcinogenicity:

SECTION 12. ECOLOGICAL INFORMATION

Overview: no data available

Ecological Toxicity Values - Product:

Fish - Acute toxicity LC50 no data available

Bioaccumulative potential: no data available

Mobility: no data available

Ecological Toxicity Values for: Calcium hypochlorite

Lepomis macrochirus (Bluegill sunfish)	-	96 h LC50 0.057 mg/l
Daphnia magna (Water flea)	-	48 h EC50 0.067 mg/l
Colinus virginianus (Bobwhite quail)	-	Dietary LC50 > 5,000 ppm
Colinus virginianus (Bobwhite quail)	-	Oral LD50 3,474 mg/kg
Mallard ducklings	-	Dietary LC50 > 5,000 ppm

Ecological Toxicity Values for: SODIUM CHLORIDE

Carassius auratus (goldfish)	-	Acute toxicity 10 d LC50 > 10,000 mg/l
Daphnia magna (Water flea)	-	Immobilization 48 h EC50 > 100 mg/l

Ecological Toxicity Values for: Calcium chloride

Lepomis macrochirus (Bluegill sunfish)	-	Acute toxicity 96 h LC50 10,650 mg/l
Daphnia magna (Water flea)	-	48 h EC50 2,400 mg/l
Daphnia magna (Water flea)	-	48 h EC50 144 mg/l
Chlorella vulgaris (Fresh water algae)	-	Cell multiplication inhibition test 120 h EC10 140 mg/l

Ecological Toxicity Values for: Calcium hydroxide

Gambusia affinis (Mosquito fish)	-	Acute toxicity 96 h LC50 160 mg/l
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SECTION 13. DISPOSAL CONSIDERATIONS



CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixtures
Class : 5.1
Packing group : II
Labels : 5.1
Emergency Response : 140
Guidebook Number

TDG

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : II
Labels : 5.1

IATA

UN number : 2880
Description of the goods : Calcium hypochlorite, hydrated mixture
Class : 5.1
Packing group : II
Labels : 5.1
Packing instruction (cargo aircraft) : 562
Packing instruction (passenger aircraft) : 558
Packing instruction (passenger aircraft) : Y544

IMDG-CODE

UN number : 2880
Description of the goods : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Class : 5.1
Packing group : II
Labels : 5.1
EmS Number 1 : F-H
EmS Number 2 : S-Q



Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Calcium hypochlorite	7778-54-3	10	13

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component
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		RQ (lbs)
Calcium hypochlorite	7778-54-3	10

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Calcium hypochlorite	7778-54-3	70 - 90 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

Pennsylvania Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

Pennsylvania Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3

New Jersey Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Sodium chloride	7647-14-5
Water	7732-18-5
Calcium chloride	10043-52-4
Calcium chlorate	10137-74-3
Calcium carbonate	471-34-1
Calcium dihydroxide	1305-62-0

New York City Hazardous Substances

No components listed on the New York City Hazardous Substances List



**Arch
Chemicals,
Inc.**

SAFETY DATA SHEET

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

FOR ALL SDS QUESTIONS & REQUESTS, CALL:

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: **GLB CLEAR BLUE**

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier

GLB

**1400 Bluegrass Lakes Parkway ,
Alpharetta, GA, 30004
USA**

Telephone: +17705215999

Telefax: +17705215959

Web: www.poolspacare.com

REVISION DATE:

08/25/2016

SUPERCEDES:

05/09/2016

MSDS Number:

000000024430

SYNONYMS:

None

CHEMICAL FAMILY:

None

DESCRIPTION / USE

Water treatment chemical

FORMULA:

None established

Manufacturer

Advantis Technologies

1200 Bluegrass Lakes Parkway

Alpharetta, GA 30004

United States of America (USA)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a dangerous substance according to GHS.

GHS label elements

Not a dangerous substance according to GHS.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
2-PROPEN-1-AMINIUM, N,N-DIMETHYL-N-2-PROPENYL-, C	26062-79-3	0 - 7

SECTION 4. FIRST AID MEASURES

Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
Skin Contact:	IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
Ingestion:	IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Combustible above 93 deg. C / 200 deg. F.

Flammable Properties

Flash Point: > 100 °C

Fire / Explosion Hazards: May be ignited by open flame.

Extinguishing Media: Water fog Carbon dioxide (CO2) Foam Dry powder

Fire Fighting Instructions: Use water spray to cool unopened containers. In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

Hazardous Combustion Products: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

Spill Mitigation Procedures

Air Release: Keep people away from and upwind of spill/leak.

Water Release:	solubleIf the product contaminates rivers and lakes or drains inform respective authorities.
Land Release:	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).Do not contaminate ponds, waterways or ditches with chemical or used container.
Additional Spill Information :	Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition.

SECTION 7. HANDLING AND STORAGE

Handling:	Do not take internally. Avoid contact with skin, eyes and clothing. If in eyes or on skin, rinse well with water. Avoid breathing vapours, mist or gas.
Storage:	Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Do not store at temperatures below: 40 Deg. F (4.4 Deg. C)
Incompatible Materials for Storage:	Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	No exposure limits exist for the constituents of this product. Additional ventilation beyond that of general exhaust is not normally required.
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Protective Equipment for Routine Use of Product

Respiratory Protection :	Respiratory protection not normally needed.
Skin Protection :	Impervious gloves
Eye Protection:	Safety glasses with side-shields
Protective Clothing Type:	Impervious clothing

Components with workplace control parameters

no data available

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	blue
Odor:	no data available
Molecular Weight:	None established
pH :	2.0 - 3.0
	()
Boiling Point:	212 °F (100 °C)

Melting point/freezing point	no data available
Bulk Density:	() no data available
Vapor Pressure:	no data available
Vapor Density:	no data available
Viscosity:	no data available
Solubility in Water:	soluble in cold water
Partition coefficient n-octanol/water:	no data available
Evaporation Rate:	no data available
Oxidizing:	None established
Volatiles, % by vol.:	no data available
VOC Content	This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions.
Conditions to Avoid:	Heat, flames and sparks.
Chemical Incompatibility:	Oxidizing agents
Hazardous Decomposition Products:	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride
Decomposition Temperature:	No data

SECTION 11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

2-PROPEN-1-AMINIUM, N,N-DIMETHYL-N-2-PROPENYL-, C LD50 > 5,000 mg/kg Rat

Component Animal Toxicology

Dermal LD50 value:

2-PROPEN-1-AMINIUM, N,N-DIMETHYL-N-2-PROPENYL-, C LD50 > 20,000 mg/kg Rabbit

Component Animal Toxicology

Inhalation LC50 value:

2-PROPEN-1-AMINIUM, N,N-DIMETHYL-N-2-

GLB CLEAR BLUE

REVISION DATE : 08/25/2016

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PROPENYL-, C

Product Animal Toxicity

Oral LD50 value: LD50 > 5,000 mg/kg Rat
 Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit
Inhalation LC50
 value: no data available

Skin Irritation: Not expected to cause irritation.
 Eye Irritation: Not expected to cause irritation.
 Skin Sensitization: Not believed to be sensitising to skin.

Acute Toxicity: There are no known or reported target organ effects from acute exposure.
 Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Not known or reported to be mutagenic.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: 2-PROPEN-1-AMINIUM, N,N-DIMETHYL-N-2-PROPENYL-, C

Bluegill sunfish	-	96 h LC50 = 0.82 - 1.3 mg/l, (40% Solution)
Rainbow trout (Salmo gairdneri),	-	96 h LC50 0.37 mg/l (40% Solution)
Daphnia magna,	-	48 h LC50= 0.9 mg/l (In clear water), (40% Solution)
Daphnia magna,	-	48 h LC50= 1.2 - 2.5 mg/l, (In 50 ppm clay suspension), (40% Solution)
Daphnia magna,	-	48 h LC50= 24.8 mg/l (In 1000 ppm clay suspension), (40% Solution)

SECTION 13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary :

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D. As a nonhazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

Not dangerous goods

TDG

Not dangerous goods

IATA

Not dangerous goods

IMDG-CODE

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hypochlorite	7681-52-9	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sodium hypochlorite	7681-52-9
Sodium hydroxide	1310-73-2

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sodium hypochlorite	7681-52-9
Sodium hydroxide	1310-73-2

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

No components are subject to the Pennsylvania Right to know act

New Jersey Right To Know

2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer	26062-79-3
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

SECTIONS REVISED: 1
Major References : Available upon request.

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HTH Super 3" Chlorinating Tablets

Version 1.0

SDS Number: 000000025218

Revision Date: 2018.03.28

SECTION 1. IDENTIFICATION

Product name : HTH Super 3" Chlorinating Tablets

Product code : 000000025218

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address : sds@lonza.com

Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300,
CHEMTREC WORLD-WIDE: +1-703-527-3887.**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Acute toxicity (Oral) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage : Category 1

Specific target organ toxicity -
single exposure : Category 3 (Respiratory system)**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P260 Do not breathe vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/
face protection.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if
you feel unwell.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT

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induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P362 Take off contaminated clothing and wash before reuse.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Chloroisocyanurates

Hazardous components

Chemical name	CAS-No.	Concentration (%)
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1	93.60
zinc sulphate	7446-19-7	3.50
filter aid		1.50

SECTION 4. FIRST AID MEASURES

General advice : Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If inhaled : IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

In case of skin contact : IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

In case of eye contact : IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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- If swallowed : IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water only.
- Specific hazards during firefighting : During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat.
- Further information : Use water to cool containers exposed to fire. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.
Do not use dry extinguishers containing ammonium compounds.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment.
Compatible materials for response to this material are: neoprene. Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.

Environmental precautions

- Air : Vapors may be suppressed by the use of water fog.
- Water : This material is heavier than water.
This material is soluble in water.
Stop water flow or divert water flow around spill if possible and safe to do so.
Begin monitoring for available chlorine and pH immediately.
- Soil : Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

SECTION 7. HANDLING AND STORAGE

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SDS Number: 000000025218

Revision Date: 2018.03.28

- Advice on safe handling : Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing dust, mist, vapor or gas.
- Conditions for safe storage : Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Avoid creating dusts.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
filter aid	Not Assigned	(Respirable fraction.)		ACGIH
		TWA (Respirable fraction.)	1 mg/m3	ACGIH
		REL	2 mg/m3 (as Al)	NIOSH/GUIDE
		TWA	2 mg/m3 (as Al)	Z1A
		TWA (Respirable fraction.)	1 mg/m3	CAD ON OEL

Appropriate engineering controls

- Engineering measures** : Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

- Respiratory protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Hand protection

- Remarks : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.

- Eye protection : Use chemical goggles.

- Skin and body protection : Nitrile
Natural Rubber
Neoprene (This includes: gloves, boots, apron, protective suit)

- Protective measures : An eye wash and safety shower should be provided in the immediate work area.

HTH Super 3" Chlorinating Tablets

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: tablet
Colour	: white
Odour	: Sharp, chlorine-like, bleach odor
Odour Threshold	: no data available
pH	: 2.6, 1 %
Melting point/freezing point	: Not applicable
Boiling point/boiling range	: no data available
Flash point	: no data available
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Product is not known to be flammable, combustible or pyrophoric.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: no data available
Relative density	: > 1 (20 °C)
Solubility(ies) Water solubility	: 12 g/l (25 °C)
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: 225 °C
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Oxidizing properties	: Oxidizing
Molecular weight	: 232.41 g/mol

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions : Product will not undergo hazardous polymerization. Product is an

HTH Super 3" Chlorinating Tablets

Version 1.0

SDS Number: 000000025218

Revision Date: 2018.03.28

Conditions to avoid	: oxidizer. Sparks, open flame, other ignition sources, and elevated temperatures. Contact with small amounts of water may result in an exothermic reaction with the liberation of toxic fumes. Damp or slightly wet product (will evolve nitrogen trichloride) May be unstable at temperatures above 225 Deg. C (437 Deg. F)
Incompatible materials	: Organic materials Oils Grease Sawdust Reducing agents nitrogen-containing compounds Oxidizing Acids Bases Dry fire extinguishers containing ammonium compounds
Hazardous decomposition products	: Nitrogen trichloride Chlorine nitrous oxides cyanates Carbon monoxide, Carbon dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation, skin, eyes, ingestion
Acute toxicity	
Acute oral toxicity (LD50)	: 490 mg/kg Species: Rat
Acute inhalation toxicity (LC50)	: approximately 0.54 mg/l Species: Rat Exposure time: 4 h Test atmosphere: dust/mistRemarks: (Nose Only)
Acute inhalation toxicity (LC50)	: approximately 2.16 mg/l Species: Rat Exposure time: 1 h Test atmosphere: dust/mistRemarks: (Nose Only)
Acute dermal toxicity (LD50)	: > 2,000 mg/kg Species: Rabbit
Skin corrosion/irritation	
Skin irritation	: Remarks: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION.WET MATERIAL CAUSES SKIN BURNS.
Serious eye damage/eye irritation	
Eye irritation	: Remarks: Corrosive to eyes

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Respiratory or skin sensitisation

Sensitisation : Remarks: Negative skin sensitizer, guinea pig - Buehler Method

Carcinogenicity**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Repeated dose toxicity: Remarks: There are no known or reported effects from repeated exposure.
Toxicological investigation indicates it does not produce significant effects from chronic exposure.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**Toxicity to fish (LC50) : 0.32 mg/l
Species: Rainbow trout (*Salmo gairdneri*),
Exposure time: 96 hToxicity to fish (LC50) 0.30 mg/l
Species: Bluegill sunfish
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates (LC50) : 0.21 mg/l
Species: *Daphnia magna*,
Exposure time: 48 hToxicity to terrestrial organisms : Dietary LC50(*Anas platyrhynchos* (Mallard duck)): > 10,000 ppm
Exposure time: 8 dAcute Oral LD50(*Anas platyrhynchos* (Mallard duck)): 1,600 mg/kgDietary LC50(*Colinus virginianus* (Bobwhite quail)): 7,422 ppm
Exposure time: 8 d**Persistence and degradability**

no data available

Bioaccumulative potential**Components:****1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione**

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Partition coefficient: n-octanol/water : log Pow: 0.94
Method: Calculation method

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Highly toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

SECTION 14. TRANSPORT INFORMATION**IATA**

UN number : 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Labels : 9MI
Environmental hazards : yes

IMDG

UN number : 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Labels : 9
EmS Number 1 : F-A
EmS Number 2 : S-F
Environmental hazards : Marine pollutant: yes

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ADR

UN number : 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Environmental hazards : yes

RID

UN number : 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Environmental hazards : yes

DOT

UN number : 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Labels : 9
Emergency Response Guidebook : 171
Number
Environmental hazards : yes

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SDS Number: 000000025218

Revision Date: 2018.03.28

TDG

UN number : 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(Trichloro-s-triazinetriene, zinc sulphate)
Transport hazard class : 9
Packing group : III
Labels : 9
Environmental hazards : yes

Special precautions for user :
49CFR (DOT) Material is not regulated for ground transportation within the US if shipped in non-bulk packages. Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages (reference 49CFR 171.4(c)).

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Signal word : DANGER!
Hazard statements : Harmful if swallowed.
May be fatal if absorbed through skin.
May be fatal if inhaled.
Corrosive. Causes skin burns.
Corrosive. Causes irreversible eye damage.
This pesticide is toxic to fish.
EPA No. : 1258-1338

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
zinc sulphate	7446-19-7	1000	28571

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

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This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
zinc sulphate	7446-19-7	1000
filter aid	17927-65-0	5000

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
zinc sulphate	7446-19-7	
filter aid	17927-65-0	

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

Components	CAS-No.
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1
zinc sulphate	7446-19-7
filter aid	

Pennsylvania Right To Know

Components	CAS-No.
1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1
zinc sulphate	7446-19-7
filter aid	

New Jersey Right To Know

Components	CAS-No.
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1,3,5-Trichloro-1,3,5-triazinane-2,4,6-trione	87-90-1
zinc sulphate	7446-19-7
filter aid	

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

1

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

Revision Date : 2018.03.28

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:

FOR ALL MSDS QUESTIONS & REQUESTS, CALL:

1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)

1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)

1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: HTH® DURATION® TABLETS

1. PRODUCT AND COMPANY IDENTIFICATION

**Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204
Norwalk, CT 06856-5204**

REVISION DATE: 09/27/2010
SUPERCEDES: 11/04/2009

MSDS Number: 000000002537
SYNONYMS: None
CHEMICAL FAMILY: Hypochlorite
DESCRIPTION / USE: Sanitizer and Oxidizer
FORMULA: Not Applicable/Mixture

2. HAZARDS IDENTIFICATION

OSHA Hazard
Classification:

Toxic by inhalation, Corrosive to eyes and skin, Lung toxin, Oxidizer

Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known or reported interactions.
Medical Conditions Aggravated: Asthma, respiratory and cardiovascular disease

Human Threshold Response Data

Odor Threshold Approximately 1.4 mg/m3 (based on odor threshold of chlorine)

Irritation Threshold Approximately 13-22 mg/m3 (based on irritation threshold of chlorine)



Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	3	0	1	
NFPA	3	0	1	OX

Immediate (Acute) Health Effects

Inhalation Toxicity:	HARMFUL IF PRODUCT IS INHALED IN HIGH CONCENTRATIONS. CAUSES BURNS TO RESPIRATORY TRACT. Inhalation of dust or vapor from this product can be irritating to the nose, mouth, throat and lungs. In confined areas, mechanical agitation can result in high levels of dust, and reaction with incompatible materials (as listed in Section 10) can result in high concentrations of chlorine vapor, either of which may result in burns to the respiratory tract, producing lung edema, shortness of breath, wheezing, choking, chest pains, impairment of lung function and possible permanent lung damage.
Skin Toxicity:	DRY MATERIAL CAUSES MODERATE SKIN IRRITATION. WET MATERIAL CAUSES SKIN BURNS. Dermal exposure to dry material causes moderate skin irritation characterized by redness and swelling. Dermal exposure to wet material can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.
Eye Toxicity:	CAUSES BURNS TO EYES. Severe irritation and/or burns can occur following eye exposure. Direct contact may cause impairment of vision and corneal damage.
Ingestion Toxicity:	MODERATELY TOXIC IF SWALLOWED. CAUSES BURNS TO DIGESTIVE TRACT. Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding, and/or tissue ulceration or perforation. Significant exposure to this material can lead to serious health effects and/or death.
Acute Target Organ Toxicity:	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract., The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Reproductive and Developmental Toxicity:	No reproductive or developmental risk to humans is expected from exposure to this product.
Inhalation:	Repeated inhalation exposure may cause impairment of lung function and permanent lung damage.



Skin Contact: Effects similar to those from acute exposure. In addition, chronic exposure to wet material may cause effects secondary to tissue destruction.

Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure. The acute corrosivity of this product, makes chronic ingestion of significant amounts unlikely.

Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Chronic Target Organ Toxicity: There are no known or reported effects from repeated exposure except those secondary to burns.

Supplemental Health Hazard Information : No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
CALCIUM HYPOCHLORITE	7778-54-3	60 - 80
SODIUM CHLORIDE	7647-14-5	10 - 20
CALCIUM CHLORATE	10137-74-3	0 - 5
CALCIUM CHLORIDE	10043-52-4	0 - 5
CALCIUM HYDROXIDE	1305-62-0	0 - 6
CALCIUM CARBONATE	471-34-1	0 - 5
Water	7732-18-5	4 - 8.5



4. FIRST AID MEASURES

General Advice:	Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation:	IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Skin Contact:	IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact:	IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion:	IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire., This product is a strong oxidizer which is capable of intensifying a fire once started., Product is not known to be flammable, combustible or pyrophoric.
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Flammable Properties

Flash Point:	Not applicable
Autoignition Temperature:	Not applicable
Extinguishing Media:	Water only. Do not use dry extinguishers containing ammonium compounds.
Fire Fighting Instructions:	Use water to cool containers exposed to fire. See Section 6 for protective equipment for fire fighting.
Upper Flammable / Explosive Limit, % in air:	Not applicable
Lower Flammable / Explosive Limit, % in air:	Not applicable



6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:

Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment.

Spill Mitigation Procedures

Air Release:

Vapors may be suppressed by the use of water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

Water Release:

This product is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

Land Release:

Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

Additional Spill Information :

Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration. This material may be neutralized for disposal; you are requested to contact Arch Chemicals at 1-800-654-6911 before beginning any such procedure. FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC: 1-800-424-9300 REPORTABLE QUANTITY: 10 lbs. (as calcium hypochlorite) per 40 CFR 302.4.



7. HANDLING AND STORAGE

Handling:	Avoid inhalation of dust and fumes. Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Remove contaminated clothing and wash before reuse.
Storage:	Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.
Shelf Life Limitations:	Do not store product where the average daily temperature exceeds 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products. Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperatures. Store in a cool, dry and well ventilated area. Prolonged storage at elevated temperatures will significantly shorten the shelf life. Storage in a climate controlled storage area or building is recommended in those areas where extremes of high temperature occur.
Incompatible Materials for Storage:	Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.
Do Not Store At temperatures Above:	Average daily temperature of 35° C / 95° F. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation:	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.
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Protective Equipment for Routine Use of Product



Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : A NIOSH approved full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.

Eye Protection: Use chemical goggles. Emergency eyewash should be provided in the immediate work area.

Protective Clothing Type: Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
CALCIUM HYPOCHLORITE	7778-54-3	ARCH-ROEG*	1 mg/m3 TWA
CALCIUM HYPOCHLORITE	7778-54-3	NIOSH-IDLH	37 - 48 mg/m3 based on IDLH concentration of chlorine
CALCIUM HYDROXIDE	1305-62-0	ACGIH	5 mg/m3 TWA
CALCIUM HYDROXIDE	1305-62-0	OSHA Z1	15 mg/m3 TWA total dust
CALCIUM HYDROXIDE	1305-62-0	OSHA Z1	5 mg/m3 TWA respirable fraction
CALCIUM CARBONATE	471-34-1	OSHA Z1	15 mg/m3 TWA Total dust
CALCIUM CARBONATE	471-34-1	OSHA Z1	5 mg/m3 TWA respirable dust fraction

*ARCH-ROEG: Arch Recommended Occupational Exposure Guideline.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	solid
Form	Tablet
Color:	white
Odor:	Chlorine-like
Molecular Weight:	(Active ingredient)143.00
Specific Gravity :	Not applicable
pH :	10.4 - 10.8 (1% solution in neutral, distilled water) (@ 25 Deg. C)
Boiling Point:	Not applicable



Freezing Point:	Not applicable
Melting Point:	Not applicable
Density:	1.9g/cc
Vapor Pressure:	(@ 25 Deg. C) Not applicable
Vapor Density:	Not applicable
Viscosity:	Not applicable
Fat Solubility:	No data
Solubility in Water:	18 % Product also contains calcium hydroxide and calcium carbonate which will leave a residue.
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	Not applicable
Oxidizing:	Oxidizer
Volatiles, % by vol.:	Not applicable
VOC Content	Not applicable
HAP Content	Not applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to Avoid:	Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.
Chemical Incompatibility:	This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter.
Hazardous Decomposition Products:	Chlorine
Decomposition Temperature:	170 - 180 DEG°C - , 338 - 356 DEG°F-



11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

CALCIUM	LD50 (65% calcium hypochlorite)	850 mg/kg	Rat
HYPOCHLORITE			
SODIUM CHLORIDE	LD50	= 3,000 mg/kg	Rat
CALCIUM CHLORIDE	LD50	= 1,000 mg/kg	Rat
CALCIUM HYDROXIDE	LD50	= 7,340 mg/kg	Rat

Component Animal Toxicology

Dermal LD50 value:

CALCIUM	LD50 (65% calcium hypochlorite)	> 2,000 mg/kg	Rabbit
HYPOCHLORITE			
SODIUM CHLORIDE	LD50	> 10,000 mg/kg	Rabbit
CALCIUM CHLORIDE	LD50	= 2,630 mg/kg	Rat
CALCIUM HYDROXIDE		No data	

Component Animal Toxicology

Inhalation LC50 value:

CALCIUM	Inhalation LC50 1 h (65% calcium hypochlorite), (Nose Only)	= 2.04 MG/L	Rat
HYPOCHLORITE			
CALCIUM	Inhalation LC50 4 h (65% calcium hypochlorite), (Nose Only)	= 0.51 MG/L	Rat
HYPOCHLORITE			
SODIUM CHLORIDE	Inhalation LC50 1 h	> 42 MG/L	Rat
CALCIUM CHLORIDE		No data	
CALCIUM HYDROXIDE		No data	

Product Animal Toxicity

Oral LD50 value: LD50 Approximately 800 mg/kg Rat

Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Inhalation LC50 value: Inhalation LC50 1.00 h (Nose Only) Believed to be > 2.04 MG/L Rat
Inhalation LC50 4 h (Nose Only) Believed to be > 0.51 MG/L Rat

Skin Irritation: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION., WET MATERIAL CAUSES SKIN BURNS.

Eye Irritation: Corrosive to eyes.

Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause



Subchronic / Chronic Toxicity: irritation to mucous membranes and respiratory tract. The dry material is irritating to the skin. However when wet, it will produce burns to the skin.
There are no known or reported effects from repeated exposure except those secondary to burns.

Reproductive and Developmental Toxicity: Calcium hypochlorite has been tested for teratogenicity in laboratory animals. Results of this study have shown that calcium hypochlorite is not a teratogen.

CALCIUM CHLORIDE

Not known or reported to cause reproductive or developmental toxicity.

Mutagenicity: Calcium hypochlorite has been tested in the Dominant lethal assay in male mice, and it did not induce a dominant lethal response. Calcium hypochlorite has been reported to produce mutagenic activity in two in vitro assays. It has, however, been shown to lack the capability to produce mutations in animals based on results from the micronucleus assay. In vitro assays frequently are inappropriate to judge the mutagenic potential of bactericidal chemicals due to a high degree of cellular toxicity. The concentration which produces mutations in these in vitro assays is significantly greater than the concentrations used for disinfection. Based on high cellular toxicity in in vitro assays and the lack of mutagenicity in animals, the risk of genetic damage to humans is judged not significant.

CALCIUM CHLORIDE

This product was determined to be non-mutagenic in the Ames assay. It was also shown to be non-clastogenic in the chromosomal aberration test.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. One hundred mice were exposed dermally 3 times a week for 18 months to a solution of calcium hypochlorite. Histopathological examination failed to show an increased incidence of tumors. IARC (International Agency for Research on Cancer) reviewed studies conducted with several hypochlorite salts. IARC has classified hypochlorite salts as having inadequate evidence for carcinogenicity to humans and animals. IARC therefore considers hypochlorite salts to be not classifiable as to their carcinogenicity to humans (Group 3 Substance).

CALCIUM CHLORIDE

This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

12. ECOLOGICAL INFORMATION

Overview: Highly toxic to fish and other aquatic organisms.



Ecological Toxicity Values for: **CALCIUM HYPOCHLORITE**

Bluegill	-	(nominal, static). 96 h LC50 0.088 mg/l
Rainbow trout (<i>Salmo gairdneri</i>),	-	(nominal, static). 96 h LC50 0.16 mg/l
Daphnia magna,	-	(nominal, static). 48 h LC50 0.11 mg/l
Bobwhite quail	-	Dietary LC50 > 5,000 ppm
Mallard ducklings	-	Dietary LC50 > 5,000 ppm
Bobwhite quail	-	Oral LD50 3,474 mg/kg

Ecological Toxicity Values for: **CALCIUM CHLORIDE**

Bluegill	-	(nominal, static). 96 h LC50 = 10,650 mg/l
Mosquito fish	-	(nominal, static). 96 h LC50 = 13,400 mg/l
Fathead minnow (<i>Pimephales promelas</i>),	-	(nominal, static). 96 h LC50 = 4,630 mg/l
Daphnia magna,	-	(nominal, static). 48 h LC50= 2,770 mg/l
Ceriodaphnia dubia	-	(nominal, static). 48 h LC50= 1,830 mg/l
Nitzschia linearis (diatom)	-	(nominal, static). 5 day LC50 = 3,130 mg/l

13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary :

If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001. If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

Disposal Methods :

As a hazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes :

D001



14. TRANSPORT INFORMATION

Land (US DOT):	UN1748	CALCIUM HYPOCHLORITE, DRY MIXTURE	5.1	III	
Water (IMDG):	UN1748	CALCIUM HYPOCHLORITE, DRY MIXTURE,	5.1	III	MARINE
		POLLUTANT			

Flash Point: Not applicable

Air (IATA):	UN1748	CALCIUM HYPOCHLORITE, DRY MIXTURE,	5.1	III
Emergency Response Guide Number:		ERG # 140		

Transportation Notes: Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages.

EMS: F-H, S-Q

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health	Immediate (Acute) Health Hazard
Physical	Fire Hazard

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302	TPQ (threshold planning quantity)	None established
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Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	Calcium hypochlorite Value: 10lbs
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ZUS_SAR302	Reportable quantity	None established
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Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313 De minimis concentration None established

Clean Air Act Toxic ARP Section 112r:

CAA 112R None established

Clean Air Act Socmi:

HON SOC None established

Clean Air Act VOC Section 111:

CAA 111 None established

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP None established

ZUS_CAAHRP None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

CAS #	COMPONENT NAME
10137-74-3	CALCIUM CHLORATE
1305-62-0	CALCIUM HYDROXIDE
7778-54-3	CALCIUM HYPOCHLORITE

ZUSPA_RTK

Pennsylvania: Hazardous substance list
1989-08-11
CHLORIC ACID, CALCIUM SALT

Pennsylvania: Hazardous substance list
1989-08-11
CALCIUM HYDROXIDE

Pennsylvania: Hazardous substance list
1989-08-11
HYPOCHLOROUS ACID, CALCIUM SALT
Environmental hazard

New Jersey:



CAS #	COMPONENT NAME
10137-74-3	CALCIUM CHLORATE
1305-62-0	CALCIUM HYDROXIDE
7778-54-3	CALCIUM HYPOCHLORITE

ZUSNJ_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM CHLORATE CHLORIC ACID, CALCIUM SALT

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM HYDROXIDE CALCIUM HYDROXIDE (Ca(OH)₂) HYDRATED LIME

New Jersey Right to Know Hazardous Substance List (RTK-HSL)

2007-03-01

CALCIUM HYPOCHLORITE HYPOCHLOROUS ACID, CALCIUM SALT BLEACHING POWDER

Massachusetts:

CAS #	COMPONENT NAME
10137-74-3	CALCIUM CHLORATE
1305-62-0	CALCIUM HYDROXIDE
7778-54-3	CALCIUM HYPOCHLORITE

ZUSMA_RTK

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

CALCIUM CHLORATE

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1994-04-01

CALCIUM HYDROXIDE

Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

CALCIUM HYPOCHLORITE

California Proposition 65:

CAS #	COMPONENT NAME
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HTH® DURATION® TABLETS

REVISION DATE : 09/27/2010



**Arch
Chemicals,
Inc.**

**MATERIAL SAFETY
DATA SHEET**

ZUSCA_P65

None established

WHMIS Hazard Classification:

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight percent

991

Calcium hydroxide

16. OTHER INFORMATION

MSDS REVISION STATUS :

SECTIONS REVISED:

1

Major References :

Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

GLB Algimycin 2000

Version 2.0

Revision Date 2020.03.12

Print Date 2020.12.30

SECTION 1. IDENTIFICATION

Product name : GLB Algimycin 2000

PMRA Registration number : 24026

Manufacturer or supplier's details

Company : Innovative Water Care, LLC
1400 Bluegrass Lakes Parkway
Alpharetta, GA
30004

Telephone : 1-800-511-6737 (Outside the USA: 1-423-780-2347)

E-mail address : sds@sigurawater.com

Emergency telephone number : 1-800-654-6911 (Outside the USA: 1-423-780-2970)

Recommended use of the chemical and restrictions on use

Recommended use : Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves.
P280 Wear eye protection/ face protection.
Response:

GLB Algimycin 2000

P302 + P352 IF ON SKIN: Wash with plenty of water.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Poly[oxyethylene (dimethyliminio) ethylene]	31512-74-0	15 - 23
Poly(diallyldimethylammonium chloride)	26062-79-3	5 - 15

SECTION 4. FIRST AID MEASURES

- General advice : Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- If inhaled : IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
- In case of skin contact : IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- In case of eye contact : IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If swallowed : IF SWALLOWED: Call a poison control center or doctor im-

GLB Algimycin 2000

mediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use dry chemical, water fog, carbon dioxide (CO₂), or foam.

Specific hazards during firefighting : May be ignited by open flame.

Further information : Use water spray to cool unopened containers.
In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
Prevent further leakage or spillage if safe to do so.
Use personal protective equipment as required.
Evacuate personnel to safe areas.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not take internally.
Avoid contact with skin, eyes and clothing.
If in eyes or on skin, rinse well with water.
Avoid breathing vapours, mist or gas.

Conditions for safe storage : Store in a cool, dry and well ventilated place. Isolate from incompatible materials.

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Do not freeze.

Materials to avoid : Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

We are not aware of any national exposure limit.

Contains no substances with occupational exposure limit values.

Engineering measures : No exposure limits exist for the constituents of this product. Additional ventilation beyond that of general exhaust is not normally required.

Personal protective equipment

Respiratory protection : Respiratory protection not normally needed.

Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Impervious clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : tan

Odour : no data available

Odour Threshold : no data available

pH : 6.0 - 8.0

Melting point/freezing point : Not applicable

Boiling point/boiling range : 212 °F / 100 °C

Flash point : > 199 °F / > 93 °C

Evaporation rate : no data available

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Flammability (solid, gas)	: Combustible above 93 deg. C / 200 deg. F.
Flammability (liquids)	: no data available
Self-ignition	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.0 - 1.2 (68 °F / 20 °C)
Bulk density	: no data available
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Stable under normal conditions.
Conditions to avoid	: Heat
Incompatible materials	: Oxidizing agents

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :
sure

This product will not exert a significant adverse effect to health from any route of exposure.

Acute toxicity

GLB Algimycin 2000

Acute oral toxicity : Believed to be > 2,000 mg/kg
Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity : Believed to be > 2,000 mg/kg
Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Remarks: Not expected to cause irritation.

Serious eye damage/eye irritation

Result: No eye irritation

Respiratory or skin sensitisation

Remarks: Not believed to be sensitising to skin.

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Repeated dose toxicity

Remarks: There are no known or reported effects from chronic exposure.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

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Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data for product. Individual constituents are as follows:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If this product becomes a waste, it will be a nonhazardous waste.
As a nonhazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class : 9
Packing group : III
Labels : 9
Emergency Response Guidebook Number : 171
Environmental hazards : yes

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TDG

UN number	: 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class	: 9
Packing group	: III
Labels	: 9
Environmental hazards	: yes

IATA

UN number	: 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class	: 9
Packing group	: III
Labels	: 9MI
Environmental hazards	: yes

IMDG

UN number	: 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class	: 9
Packing group	: III
Labels	: 9
EmS Number 1	: F-A
EmS Number 2	: S-F
Environmental hazards	: Marine pollutant: yes

ADR

UN number	: 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class	: 9
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
Environmental hazards	: yes

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RID

UN number	: 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Poly[oxyethylene (dimethyliminio) ethylene])
Transport hazard class	: 9
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
Environmental hazards	: yes
Special precautions for user	: none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	: Not applicable

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

EPA Registration number	: 7364-81
Signal word	: CAUTION!
Hazard statements	: Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. This pesticide is toxic to fish.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain label.

Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

PMRA Registration number	: 24026
Hazard pictograms	:



Signal word	: CAUTION!
Hazard statements	: Harmful if swallowed. Causes moderate eye irritation. Pesticide is toxic to aquatic organisms.

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EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Components	CAS-No.
Poly[oxyethylene (dimethyliminio) ethylene]	31512-74-0

GLB Algimycin 2000

Silicon dioxide	14808-60-7
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Pennsylvania Right To Know

Components	CAS-No.
Water	7732-18-5
Poly[oxyethylene (dimethyliminio) ethylene]	31512-74-0
Poly(diallyldimethylammonium chloride)	26062-79-3

New Jersey Right To Know

Components	CAS-No.
Water	7732-18-5
Poly[oxyethylene (dimethyliminio) ethylene]	31512-74-0
Poly(diallyldimethylammonium chloride)	26062-79-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

The components of this product are reported in the following inventories:

TSCA : This is an EPA registered pesticide.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory;

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LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

1

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

Revision Date : 2020.03.12

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Date format : yyyy/mm/dd

US / EN

HTH® EXTRA SUPER SHOCK

Version 1.0

SDS Number: 000000023087

Revision Date: 2017.12.12

SECTION 1. IDENTIFICATION

Product name : HTH® EXTRA SUPER SHOCK

Product code : 000000023087

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address : sds@lonza.com

Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300,
CHEMTREC WORLD-WIDE: +1-703-527-3887.**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Oxidizing solids : Category 2

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 2

Skin irritation : Category 2

Serious eye damage : Category 1

Specific target organ toxicity -
single exposure : Category 3 (Respiratory system)**GHS label elements**

Hazard pictograms



Signal word : Danger

Hazard statements : H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

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P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P284 Wear respiratory protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use water spray to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Hypochlorite

Hazardous components

Chemical name	CAS-No.	Concentration (%)
Calcium hypochlorite	7778-54-3	65.00 - 90.00
Sodium chloride	7647-14-5	0.00 - 3.00
Calcium chlorate	10137-74-3	0.00 - 5.00
Calcium chloride	10043-52-4	0.00 - 5.00
Calcium dihydroxide	1305-62-0	0.00 - 5.00
Calcium carbonate	471-34-1	0.00 - 4.00
Water	7732-18-5	9.00 - 16.00

SECTION 4. FIRST AID MEASURES

General advice : Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If inhaled : IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably

HTH® EXTRA SUPER SHOCK

Version 1.0

SDS Number: 000000023087

Revision Date: 2017.12.12

- mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
- In case of skin contact : IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- In case of eye contact : IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If swallowed : IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water only.
Do not use dry extinguishers containing ammonium compounds.
- Specific hazards during firefighting : Strong oxidizer
- Further information : Use water to cool containers exposed to fire. See Section 6 for protective equipment for fire fighting.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Response to a large quantity spill (100 pounds or greater) or when dusting or decomposition gas exposure could occur requires the use of a positive pressure full face supplied air respirator or self contained breathing apparatus (SCBA), chemical resistant gloves, coveralls and boots. In case of fire, this personal protective equipment should be used in addition to normal fire fighter equipment.
- Environmental precautions
- Air : Vapors may be suppressed by the use of water fog.
All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.
- Water : This product is heavier than water.
This material is soluble in water.
Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.
- Soil : Contact 1-800-654-6911 immediately. DANGER: All spills of this product should be treated as contaminated. Contaminated product

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may initiate a chemical reaction that may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors. Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid inhalation of dust and fumes.
Do not take internally. Avoid contact with skin, eyes and clothing.
Upon contact with skin or eyes, wash off with water.
Remove contaminated clothing and wash before reuse.
- Conditions for safe storage : Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.
- Materials to avoid : Do not allow product to come in contact with other materials, including e.g. other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. A chemical reaction with such substances can cause a fire of great intensity.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Calcium dihydroxide	1305-62-0	TWA	5 mg/m3	ACGIH
		REL	5 mg/m3	NIOSH/GUIDE
		PEL (Total dust.)	15 mg/m3	OSHA_TRANS
		PEL (Respirable fraction.)	5 mg/m3	OSHA_TRANS
Calcium carbonate	471-34-1	TWA	5 mg/m3	Z1A
		TWA	5 mg/m3	CAD ON OEL
		REL (Total)	10 mg/m3	NIOSH/GUIDE
		REL (Respirable.)	5 mg/m3	NIOSH/GUIDE

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		PEL (Total dust.)	15 mg/m3	OSHA_TRANS
		PEL (Respirable fraction.)	5 mg/m3	OSHA_TRANS
		TWA (Total dust.)	15 mg/m3	Z1A
		TWA (Respirable fraction.)	5 mg/m3	Z1A

Appropriate engineering controls**Engineering measures**

: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

Respiratory protection

: Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Hand protection

Remarks

: Wear impervious gloves to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye protection

: Use chemical goggles.

Skin and body protection

: Neoprene, Nitrile, Natural rubber (This includes: gloves, boots, apron, protective suit)

Protective measures

: An eye wash and safety shower should be provided in the immediate work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: free flowing, granular

Colour

: white

Odour

: Chlorine-like

Odour Threshold

: no data available

pH

: 10.5 - 11.5, 1 % (25 °C)

Melting point/range

: Not applicable

Boiling point/boiling range

: no data available

Flash point

: no data available

Evaporation rate

: Not applicable

Flammability (solid, gas)

: This product is chemically reactive with many substances. Any

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contamination of the product with other substances by spill or otherwise may result in a chemical reaction and fire.

Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: no data available
Relative density	: Not applicable
Solubility(ies) Water solubility	: ca. 180 g/l (25 °C)
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: 170 - 180 °C
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Oxidizing properties	: Oxidizing

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Product is not sensitive to mechanical shock or impact. Product is not sensitive to electrical static discharge. Product will not undergo hazardous polymerization. Product is an NFPA Class 3 oxidizer which can cause a severe increase in fire intensity. Not pyrophoric. Not an organic peroxide. If subjected to excessive temperatures, the product may undergo rapid decomposition, evolution of chlorine gas, and heat sufficient to ignite combustible substances. If product is exposed to small amounts of water, it can react violently to produce heat and toxic gases and spatter. Use copious amounts of water for fires involving this product.
Conditions to avoid	: Do not store next to heat source, in direct sunlight, or elevated storage temperature. Do not store where the daily average temperature exceeds 95 °F. Prevent ingress of humidity and moisture into container or package. Always close the lid.
Incompatible materials	: This product is chemically reactive with many substances, including, e.g., other pool treatment products, acids, organics, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, corrosive, flammable or combustible materials. Do not allow product to contact any foreign matter, including other water treatment products. Contamination or improper use may cause a fire of great intensity, explosion or the release of toxic gases. If product is exposed to small amounts

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of water, it can react violently to produce heat and toxic gases and spatter.

Hazardous decomposition products : Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, skin, eyes, ingestion

Acute toxicity

Acute oral toxicity (LD50) : Believed to be approximately 700 mg/kg
Species: Rat

Acute dermal toxicity (LD50) : Believed to be > 2,000 mg/kg
Species: Rabbit

Skin corrosion/irritation

Skin irritation : Remarks: DRY MATERIAL CAUSES MODERATE SKIN IRRITATION.WET MATERIAL CAUSES SKIN BURNS.

Serious eye damage/eye irritation

Eye irritation : Assessment: Corrosive
Remarks: Corrosive to eyes

Respiratory or skin sensitisation

Sensitisation : Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

Carcinogenicity**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

no data available

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Persistence and degradability

no data available

Bioaccumulative potential**Components:****Sodium chloride**Partition coefficient: n-
octanol/water : log Pow: -3**Mobility in soil**

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Highly toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.
If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly.

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SECTION 14. TRANSPORT INFORMATION**IATA**

UN number : 2880
Proper shipping name : Calcium hypochlorite, hydrated mixture
Transport hazard class : 5.1
Packing group : II
Labels : 5.1
Environmental hazards : no

IMDG

UN number : 2880
Proper shipping name : Calcium hypochlorite, hydrated mixture
Transport hazard class : 5.1
Packing group : II
Labels : 5.1
EmS Number 1 : F-H
EmS Number 2 : S-Q
Environmental hazards : Marine pollutant: yes

ADR

UN number : 2880
Proper shipping name : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Transport hazard class : 5.1
Packing group : II
Classification Code : O2
Hazard Identification Number : 50
Labels : 5.1
Environmental hazards : yes

RID

UN number : 2880
Proper shipping name : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Transport hazard class : 5.1
Packing group : II
Classification Code : O2
Hazard Identification Number : 50
Labels : 5.1
Environmental hazards : yes

DOT

UN number : 2880
Proper shipping name : Calcium hypochlorite, hydrated mixtures
Transport hazard class : 5.1
Packing group : II
Labels : 5.1
Emergency Response Guidebook Number : 140
Environmental hazards : yes

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TDG

UN number : 2880
Proper shipping name : CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
Transport hazard class : 5.1
Packing group : II
Labels : 5.1
Environmental hazards : yes

Special precautions for user : none

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Calcium hypochlorite	7778-54-3	10	11

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components	CAS-No.	Component RQ (lbs)
Calcium hypochlorite	7778-54-3	10

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components	CAS-No.	Concentration
Calcium hypochlorite	7778-54-3	

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Calcium chlorate	10137-74-3
Calcium dihydroxide	1305-62-0
Calcium carbonate	471-34-1

Pennsylvania Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium dihydroxide	1305-62-0
Calcium carbonate	471-34-1
Sodium chloride	7647-14-5

New Jersey Right To Know

Components	CAS-No.
Calcium hypochlorite	7778-54-3
Calcium chlorate	10137-74-3
Calcium chloride	10043-52-4
Calcium dihydroxide	1305-62-0
Calcium carbonate	471-34-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GLB SEQUA-SOL

Version 1.1

SDS Number: 000000023888

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SECTION 1. IDENTIFICATION

Product name : GLB SEQUA-SOL

Product code : 000000023888

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address : sds@lonza.com

Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300,
CHEMTREC WORLD-WIDE: +1-703-527-3887.**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Eye irritation : Category 2B

GHS label elements

Signal word : Warning

Hazard statements : H320 Causes eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
P402 + P404 Store in a dry place. Store in a closed container.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (%)
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Trisodium citrate dihydrate	6132-04-3	10.00 - 20.00
Inorganic Salt		8.00 - 15.00

SECTION 4. FIRST AID MEASURES

- If inhaled : IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
- In case of skin contact : IF ON SKIN: Flush skin with water for 15 minutes. Take off all contaminated clothing. Seek medical attention if irritation develops.
- In case of eye contact : IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
- If swallowed : IF SWALLOWED: Immediately drink water to dilute. Seek medical attention if symptoms develop. Never give anything by mouth to an unconscious person.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during firefighting : Material will not ignite or burn.
- Further information : In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
- Environmental precautions
- Air : Vapors may be suppressed by the use of water fog.
- Water : Do not flush into surface water or sanitary sewer system.
- Soil : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Do not contaminate ponds, waterways or ditches with chemical or used container.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water.

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Avoid breathing mist or vapor.

Conditions for safe storage : Store in a cool, dry and well ventilated place. Isolate from incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Appropriate engineering controls

Engineering measures : Ventilation beyond that of general exhaust is not normally required. No exposure limits exist for the constituents of this product.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : Wear impervious gloves to avoid skin contact.

Eye protection : Use safety glasses with side shields.

Skin and body protection : Impervious

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear

Odour : none

Odour Threshold : no data available

pH : 5.5 - 7.0

Melting point/freezing point : no data available

Boiling point/boiling range : no data available

Flash point : no data available

Evaporation rate : no data available

Flammability (solid, gas) : Product is not known to be flammable, combustible, pyrophoric or explosive.

Upper explosion limit : no data available

Lower explosion limit : no data available

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Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1
Density	: no data available
Solubility(ies) Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Oxidizing properties	: no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Conditions to avoid	: High temperatures
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Oxides of phosphorus Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation, skin, eyes, ingestion
--	-------------------------------------

Acute toxicity

Acute oral toxicity (LD50)	: Believed to be > 5,000 mg/kg Species: Rat
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Acute dermal toxicity (LD50)	: Believed to be > 2,000 mg/kg Species: Rabbit
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Skin corrosion/irritation

Skin irritation	: No skin irritation
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Serious eye damage/eye irritation

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Eye irritation : Remarks: Contact would be expected to cause transient redness if not washed out and left in the eye for an extended period of time.
Not considered to be a primary eye irritant.

Respiratory or skin sensitisation

Sensitisation : Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

Carcinogenicity**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No aquatic toxicity data is available for this product.

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : If this product becomes a waste, it will be a nonhazardous waste. As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION**IATA**

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : no

IMDG

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : Marine pollutant: no

ADR

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : no

RID

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : no

DOT

Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : no

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TDG : Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable
Environmental hazards : no

Special precautions for user : none

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

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This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Components	CAS-No.
Trisodium citrate dihydrate	6132-04-3

New Jersey Right To Know

Components	CAS-No.
Trisodium citrate dihydrate	6132-04-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

1

Arch is a wholly-owned subsidiary of Lonza and continues to operate as Arch Chemicals, Inc.

Revision Date : 2018.06.14

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SECTION 1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION:

Product Name: Sodium Hypochlorite Solution

Trade Name: Flochem-12B

WHMIS CLASS: C, E, D-1B, D-2B

Effective Date: September 14, 2022

Product Use: Disinfection, odour control, laundry, water, sewage and industrial waste treatment, hard surface cleaner and biocide.

Supplier Name & Address:

FLOCHEM LTD.
6986 Wellington Rd. 124,
Guelph, ON, Canada N1H 6J4

Emergency Phone Number:

1-877-378-7745

SECTION 2 - HAZARDS IDENTIFICATION:



SIGNAL

WORD:.....

GHS

CLASSIFICATION:.....

HAZARD

STATEMENTS:.....

PRECAUTIONARY

STATEMENTS:.....

DANGER.

Serious Eye Damage/ Eye Irritation Category 1. Skin corrosion Category 1. Specific Target Organ Toxicity Single Category 3. Respiratory tract irritation Category 1. Acute aquatic toxicity Category 1. Chronic aquatic toxicity Category 1.

H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/container to an approved waste disposal plant.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS:

Ingredients:

Sodium Hypochlorite
Sodium Hydroxide
Water

CAS#

7681-52-9
1310-73-2
7732-18-5

Wt%

7-13
0.2- 5
Balance

SECTION 4 - FIRST AID MEASURES:

Route of Exposure: Eye, Skin, Ingestion and Inhalation.

INHALATION.....	Remove victim to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get immediate medical attention. Call a poison center or physician.
EYE CONTACT.....	Immediately hold eyelids open and flush with water for at least 15 minutes. Check for and remove any contact lenses if easy to do. Consult a physician.
SKIN CONTACT.....	Immediately flush skin with plenty of water for 15 minutes. Remove contaminated clothing and wash before reuse. Consult a physician.
INGESTION.....	Call immediately a poison center or a doctor. Do not induce vomiting or give anything by mouth to an unconscious person. Rinse out mouth with water.
ACUTE SYMPTOMS/EFFECTS	
Eyes:.....	Causes eye burns. Causes eye irritation.
Ingestion:.....	May cause severe irritation damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Skin:.....	Causes severe burns. Causes skin irritation. Direct skin contact may cause skin burns, deep ulcerations and possibly permanent scarring.
Inhalation:.....	Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract.
DELAYED SYMPTOMS/EFFECTS.....	Prolonged or repeated contact may cause drying, cracking and de fatting of the skin.
GENERAL ADVICE.....	Consult a physician. Show this safety data sheet to the doctor.

SECTION 5 - FIRE FIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY.....	Non-flammable substance. Non-combustible substance.
SUITABLE EXTINGUISHING MEDIA.....	Use fire-extinguishing media appropriate for surrounding materials. Use Water spray, Alcohol-resistant foam, Dry chemical or Carbon dioxide.
UNSUITABLE EXTINGUISHING MEDIA.....	Do not use dry chemical extinguishing agents that contain ammonium compounds.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS	Firefighter should wear proper protective equipment and self-contained breathing Apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Use water to cool fire exposed containers.
HAZARDOUS COMBUSTION PRODUCTS.	May include and are not limited to: Chlorine; Hydrogen chloride gas; Oxygen; Sodium dioxides.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

PERSONNEL PRECAUTIONS: Restrict access to area until completion of clean up. Evacuate personnel to safe areas. Ensure clean-up is conducted by trained personnel only. Do not touch and walk through spilled material. All persons dealing with clean up should wear the appropriate protective equipment including self-contained breathing apparatus. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personnel protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS: Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Prevent further leakage or spillage if safe to do.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING Contain and absorb spilled liquid with noncombustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal. Flush with water. Do not flush into surface water or sanitary sewer system. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

SECTION 7 - HANDLING & STORAGE:

HANDLING PROCEDURES..... Use good industrial hygiene practices in handling this material. Do not eat, drink, or smoke when using this product. Use in well ventilated areas. Do not get in eyes, on skin or on clothing. Avoid inhalation of mists/vapours/fumes. Wash thoroughly after handling. Keep container tightly closed.

STORAGE NEEDS..... Keep out of reach of children. Protect from sunlight. Keep container tightly closed. Store in a cool, dry and well ventilated area. Do not store near acids.

STORAGE TEMPERATURE..... <30°C.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION:

INGREDIENTS	ACGIH TLV		OSHA PEL		NIOSH
	TWA	STEL	PEL	STEL	REL
Sodium Hypochlorite	Not established	Ceiling: 2 mg/m3	2 mg/m3	Not established	Not established
Sodium Hydroxide	Not established	2 mg/m3	2 mg/m3	Not established	Not established
ACGIH TLV:..... American Conference of Governmental Industrial Hygienists - Threshold Limit Value.					
OSHA PEL:..... Occupational Safety and Health Administration - Permissible Exposure Limits.					
NIOSH IDLH:..... Immediately Dangerous to Life or Health.					
ENGINEERING CONTROLS.....	Use under well-ventilated conditions or with respiratory protection.				
GENERAL HYGIENE	Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Remove soiled clothing and wash it thoroughly before reuse. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Do not eat, drink, smoke or use cosmetics while working with this product.				
CONSIDERATIONS:.....					

PERSONAL PROTECTIVE EQUIPMENT:

As required by employer. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Eye/Face protection:..... Wear safety goggles with side shields and/or face shield.

Hand protection:..... Wear protective gloves. Gloves must be inspected prior to use.

Respiratory protection:..... Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s). Use a full face respirator with multi-purpose combination or wear self-contained breathing apparatus.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES:

Boiling Point: Decomposes on heating
Vapour Pressure (mm Hg): 22@20(°C)
Vapour Density (Air =1): Not Available
Percent Volatile (Wt %): 80
Physical State: Liquid
Odour: Chlorine like, pungent

Specific Gravity (H2O=1): 1.076 – 1.168
Freezing Point(°C): -20°C
Appearance: Greenish-yellow solution
pH: 12-14
Solubility in Water: Miscible
Viscosity @ 20°C: Water thin

SECTION 10 - STABILITY & REACTIVITY:

CHEMICAL STABILITY..... Stable under the recommended storage and handling conditions prescribed.

REACTIVITY..... React vigorously with acids. Reacts with amines and ammonia to form explosively unstable compounds. May develop chlorine if mixed with acidic solutions. Contact with some reactive metals may produce flammable hydrogen gas. Corrosive to metals.

HAZARDOUS POLYMERIZATION.....	Hazardous polymerization cannot occur.
CONDITIONS TO AVOID.....	Avoid heat and open flame. Exposure to sunlight. Do not mix with other chemicals.
INCOMPATIBILITY.....	Avoid contact with the following materials: Urea, Ammonia, Amides, Amines, Nitrogen containing compounds, Combustible materials, Organic materials, Metals, Reducing materials, Hydrocarbons materials, Alcohols, Ether. Contact with Magnesium, galvanized Zinc, Tin, Chromium, Brass and Bronze generates explosive Hydrogen.
HAZARDOUS PRODUCTS OF DECOMPOSITION.....	May include and are not limited to: Hydrogen chloride, Chlorine gas, Sodium dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION:

INGREDIENTS	LC50	LD50
Sodium Hypochlorite Inhalation,	Rat: > 10.5 mg/kg	Oral Rat: 8200 mg/kg; Oral Mice: 5800 mg/kg; Dermal Rat: >2000 mg/kg; Dermal Rabbit: >10000 mg/kg
Sodium Hydroxide	Not established	Oral Rat: 2400mg/kg Dermal Rabbit: >2000mg/kg
ROUTE OF EXPOSURE.....	Eyes, skin, respiratory system and digestive system.	
POTENTIAL EFFECT ON HUMANS		
Eye contact.....	Causes eye burns. Causes severe eye damage.	
Skin contact.....	Causes skin burns. Causes skin irritation.	
Inhalation.....	Harmful if inhaled. May cause respiratory tract irritation or chemical burns.	
Ingestion.....	Harmful if swallowed. May cause severe irritation and corrosive damage to mouth, throat and stomach.	
CHRONIC EFFECTS ON HUMANS.....	Safe handling of this material on a long term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures.	
SENSITIZATION.....	No information available.	

TARGET ORGANS.....	Contains material which may cause damage to the following organs: upper respiratory tract, skin, eye, lens of cornea and stomach.
CARCINOGENICITY.....	No evidence of carcinogenic effects.
Carcinogen classification code	A4 - Not classifiable as a human carcinogen (Sodium Hypochlorite). No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium Hypochlorite).
ACGIH.....	
IARC.....	
International Agency for Research on Cancer	
MUTAGENICITY.....	No information available.
REPRODUCTIVE EFFECTS.....	No information available.
TERATOGENICITY.....	No information available.
SPECIFIC TARGET ORGANS TOXICITY - .	No information available.
Single exposure	
SPECIFIC TARGET ORGANS TOXICITY - .	No information available.
Repeated exposure	
ASPIRATION HAZARD.....	No information available.

SECTION 12 - ECOLOGICAL INFORMATION:

ECOTOXICITY DATA, Sodium Hypochlorite: Acute 96Hrs LC50 Rainbow trout: 0.030 - 0.070 mg/L.
Acute 48Hrs LC50 Daphnia magna: 0.032 - 0.036 mg/L.

ECOTOXICITY DATA, Sodium Hydroxide:.....	Acute 96Hrs LC50 fish Guppy <i>Poecilia reticulata</i> :196 mg/L Chronic 96Hrs NOEC fish Guppy <i>Poecilia reticulata</i> :56 mg/L.
MOBILITY IN SOIL.....	No information available.
BIODEGRADABILITY.....	No information available.
BIOACCUMULATION.....	No information available.
OTHER ADVERSE EFFECTS.....	Very toxic to aquatic life with long lasting effects.

SECTION 13- DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL..... The disposal of the product must be made in an approved sanitary landfill or in a foundry in accordance with municipal, provincial and/or federal regulations.

SECTION 14 - TRANSPORT INFORMATION:

Proper Shipping Name: Hypochlorite Solution
Transport Canada Classification, Class 8, UN1791, Packaging Group II

SECTION 15 - REGULATORY INFORMATION:

- On the DSL and TSCA Inventory.
- WHMIS CLASSIFICATION..... This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this document contains all the information required by the Controlled Products Regulations. Class E: Corrosive Material. Class C: Oxidizing Material. Class D-1B: Materials Causing Immediate/Serious Effects - Toxic Material. Class D-2B: Toxic material causing other toxic effects.

SECTION 16 - OTHER INFORMATION:

Disclaimer:

The information contained herein is based on data considered to the best of our knowledge to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof.

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