amerse™ SPA CARE

SAFETY DATA SHEET
Shock Oxidizer - 0120

Product Name: Shock Oxidizer
Date: 2/26/19

SECTION 1 *IDENTIFICATION*

Supplier:
Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor:
Essentials
5070 Wallace Drive
Cumming, GA 30041
(626) 305-1182

U.S. Emergency Telephone: 1-800-222-1222
Product Name: **Shock Oxidizer**
Synonyms: Potassium Peroxymonosulfate; Potassium Hydrogen Sulfate; Potassium Monopersulfate Sulfate; Pentapotassium bis(peroxymonosulfate)bis(sulfate); Potassium Peroxysulfate
Chemical Name: Potassium Monopersulfate
Chemical Formula: $HKO_5S \cdot 0.5HKO_4S \cdot 0.5K_2O_4S$
CAS Number: 70693-62-8
Product Use: Non-Chlorine Water Shock

SECTION 2 *HAZARDS IDENTIFICATION*

EMERGENCY OVERVIEW
Danger

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Respiratory sensitization (Category 1)
Skin sensitization (Category 1)
Specific target organ toxicity - single exposure (Category 3), Respiratory system

Hazard Statement(s)

H272: May intensify fire; oxidizer.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.

Precautionary statement(s)

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.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

SECTION 2 ***HAZARDS IDENTIFICATION - Continued***

P285: In case of inadequate ventilation wear respiratory protection.
P321: Specific treatment (see First Aid Measures on this label).
P363: Wash contaminated clothing before reuse.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 ***COMPOSITION, INFORMATION ON INGREDIENTS***

Component	**CAS Number**	**Percent**
Potassium Monopersulfate	70693-62-8	32.18%
Sodium Carbonate	497-19-8	30.00%
Potassium Sulfate	7778-80-5	20.30%
Potassium Bisulfate	7646-93-7	16.10%
Magnesium Carbonate	546-93-0	1.42%

SECTION 4 ***FIRST-AID MEASURES***

General Advice: Consult a physician. Move out of dangerous area. Show this safety data sheet to the doctor in attendance.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 ***FIRE FIGHTING MEASURES***

Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Sulphur oxides, Potassium oxides, Magnesium oxide.

Hazardous Combustion Products: Grinding or intensive mixing may cause decomposition with liberation of heat and oxygen; ignition of oxidizable material if present may occur.

Advice for Firefighters: Wear self contained breathing apparatus for firefighting if necessary.

Further Information: Use water spray to cool unopened containers. Contact with combustible materials may cause fire. Improper storage of large masses of "oxone" can trap heat and lead to ignition of combustibles (see “SECTION 7: ***HANDLING AND STORAGE***").

SECTION 6 *ACCIDENTAL RELEASE MEASURES*

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 *HANDLING AND STORAGE*

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Keep away from heat and sources of ignition.

Special Handling Requirements: Do not inhale. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place away from heat sources.

Incompatible Materials: The mixture of this product with compounds containing halides or active halogens can cause release of the respective halogen if moisture is present. For example, mixture with chloride can cause release of chlorine gas; mixture with cyanides can cause release of hydrogen cyanide gas; and heavy metal salts such as those of cobalt, nickel, copper, or manganese cause the evolution of oxygen.

Specific End Use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8 **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control Parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure Controls

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued

Personal Protective Equipment:

Eye/Face Protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: 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.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Do not let product enter drains.

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Appearance:	White Granular
Odor:	Odorless
Odor Threshold:	Not Available
pH:	2 at 30 g/l at 77°C (171°F)
Melting Point/Freezing Point:	Not Available
Initial Boiling Point and Boiling Range:	@ 760 mm Hg Decomposes
Flash Point:	Not Available
Evaporation Rate:	Not Available
Flammability (solid, gas):	Not Available
Upper/Lower Flammability or Explosive Limits:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	1.100 - 1.400 g/cm3
Water Solubility:	25.6 wt% @ 20˚C (68˚F)
Partition Coefficient (n-octanol/water):	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	kJ/kg 251 and Btu/lb 108
Viscosity:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	The substance or mixture is classified as oxidizing with the category 3.

SECTION 10 *STABILITY AND REACTIVITY*

Reactivity: Not Available
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Not Available
Conditions to Avoid: Excess heat.

Incompatible Materials: Strong bases, Acids, Bases, Powdered metals, Strong oxidizing agents, Organic materials, Alcohols, acids, phosphorous, Halogens, Anhydrides, Phosphorus, Strong reducing agents

Hazardous Decomposition Products: Decomposes when heated or dampened, releasing oxygen and heat of decomposition.

SECTION 11 *TOXICOLOGICAL INFORMATION*

Oral LD50 (rat): 2,000 mg/kg
Dermal LD50 (rabbit): > 11,000 mg/kg
Inhalation 4-hr LC50 (rat): >5 mg/L
Skin Irritation: Severe skin irritant.
Eye Irritation: Severe eye irritant.
Skin Sensitization: Not a skin sensitizer in animals.
Germ Cell Mutagenicity: Not Available

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.

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.

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.

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.

Reproductive Toxicity: Not Available
Specific Target Organ Toxicity - Single Exposure: Not Available
Specific Target Organ Toxicity - Repeated Exposure: Not Available
Aspiration Hazard: Not Available

SECTION 12 *ECOLOGICAL INFORMATION*

Aquatic Toxicity: 96 hour LC50 – rainbow trout: 53 mg/L
48 hour EC50 – daphnia magna: 3.5 mg/L

Ecotoxicity: Not Available.
Mobility in Soil: Not Available.
Products of Biodegradation: Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

SECTION 13 *DISPOSAL CONSIDERATIONS*

Waste Treatment Methods

Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging: Dispose of as unused product.

SECTION 14 *TRANSPORTATION DATA*

DOT:	**UN Number:**	NOT REGULATED
	UN Proper Shipping Name:	NOT REGULATED
	Transport Hazard Class:	NOT REGULATED
	Packing Group:	NOT REGULATED

SECTION 15 *REGULATORY INFORMATION*

California Proposition 65 – None of the ingredients are listed

SECTION 16 *ADDITIONAL INFORMATION*

HMIS: Health - 3; Flammability - 0; Physical Hazard - 1

Representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 2/26/19
Phoenix Products Company

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SAFETY DATA SHEET
Metal & Stain Control- 0251

Product Name: Metal & Stain Control
Date: 2/26/2019

SECTION 1 *IDENTIFICATION*

Supplier:
Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor:
Essentials
5070 Wallace Drive
Cumming, GA 30041
(626) 305-1182

U.S. Emergency Telephone: 1-800-222-1222
Product Name: **Metal & Stain Control**
Synonyms: Etidronic Acid; 1-Hydroxyethylidene-1,1-diphosphonic acid; HEDP
Chemical Name: (1-Hydroxyethylidene)diphosphonic acid
Chemical Formula: $C_2H_8O_7P_2$
CAS Number: 2809-21-4
Product Use: Prevents and removes mineral stains in pools and spas.

SECTION 2 *HAZARDS IDENTIFICATION*

EMERGENCY OVERVIEW
Danger

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Corrosive to metals (Category 1)
Serious eye damage (Category 1)

OSHA Hazards: Irritant
Target Organs: Bone, Kidney

Hazard Statement(s)
H290: May be corrosive to metals
H318: Causes serious eye damage

Precautionary Statement(s)
P280: Wear protective gloves/eye protection/face protection.
P234: Keep only in original container.
P321: Specific treatment (see First Aid Measures on this label).
P310: Immediately call a POISON CENTER or doctor/physician
P390: Absorb spillage to prevent material damage.
P406: Store in corrosive resistant stainless steel container with a resistant inner liner.

HMIS Classification	
Health Hazard	2
Flammability	0
Physical Hazards	0

SECTION 2 ***HAZARDS IDENTIFICATION - Continued***

NFPA Rating	
Health Hazard	2
Fire	0
Reactivity Hazard	0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

SECTION 3 ***COMPOSITION, INFORMATION ON INGREDIENTS***

Component	**CAS Number**	**Percent**
(1-Hydroxyethylidene)diphosphonic acid	2809-21-4	5%-25%

SECTION 4 ***FIRST-AID MEASURES***

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 ***FIRE FIGHTING MEASURES***

Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Oxides of phosphorus.

Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6 ***ACCIDENTAL RELEASE MEASURES***

Personal Precautions: Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7 *HANDLING AND STORAGE*

Precautions for Safe Handling: Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Control Parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure Controls

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/Face Protection: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: 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.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Do not let product enter drains.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Appearance:	Colorless to pale yellow liquid.
Odor:	Mild. Vinegar like.
Odor Threshold:	Not Available
pH (1% solution):	<2.0
Melting Point	198-199˚C
Boiling Point:	578.8˚C at 760 mmHg
Flash Point:	303.8˚C
Stability:	Stable under ordinary conditions.
Evaporation Rate:	Not Available
Flammability (solid, gas):	Not Available
Upper/Lower Flammability or Explosive Limits:	Not Available
Vapor Pressure (mm Hg):	8.34E-16mmHg at 25˚C
Density @ 25˚C:	1.45 g/mL
Specific Gravity:	1.43 – 1.46
Solubility in Water:	Completely miscible with water in all proportions.
Partition Coefficient (n-octanol/water):	log Pow: -3,49
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	Not Available
Molecular Weight:	201.9987

SECTION 10 *STABILITY AND REACTIVITY*

Reactivity: Not Available.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Corrosive in contact with metals.

Conditions to Avoid: Not Available

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions. – Carbon oxides, Oxides of phosphorus.

SECTION 11 *TOXICOLOGICAL INFORMATION*

Acute Toxicity: LD50 Oral – rat – 2610 mg/kg
LD50 Dermal – rabbit – 8630 mg/kg
Inhalation: Not Available

Skin Corrosion/Irritation: Skin – rabbit – no skin irritation – Draize Test

Serious Eye Damage/Eye Irritation: Eyes – rabbit – Severe eye irritation – OECD Test Guideline 405

Respiratory or Skin Sensitization: Not Available

Germ Cell Mutagenicity: Not Available

SECTION 11 ***TOXICOLOGICAL INFORMATION - Continued***

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.

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.

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.

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.

Reproductive Toxicity: Not Available

Specific target organ toxicity - single exposure: Not Available

Specific target organ toxicity - repeated exposure: Not Available

Aspiration Hazard: Not Available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 ***ECOLOGICAL INFORMATION***

Toxicity

-Toxicity to fish: mortality – Salmo gairdneri – 217 mg/l – 96h

-Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 – Daphnia magna (water flea) – 572 mg/l – 48h

-Toxicity to Algae: Growth inhibition – SELENASTRUM – 42 mg/l – 14 d

Persistence and Degradability: Not Available

Bioaccumulative Potential: Not Available

Mobility in Soil: Not Available

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: And environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13 *DISPOSAL CONSIDERATIONS*

Waste Treatment Methods

Product: Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated Packaging: Dispose of as unused product.

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SECTION 14 *TRANSPORTATION DATA*

DOT:	**UN Number:**	ORM-D
	UN Proper Shipping Name:	ORM-D
	Transport Hazard Class:	ORM-D
	Packing Group:	ORM-D

Consumer commodity (ORM-D) means a material that is packaged and distributed in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for purposes of personal care or household use. Valid until December 31, 2020.

TDG:	**UN Number:**	3265
	UN Proper Shipping Name:	Corrosive liquid, acidic, organic, n.o.s. (1 Hydroxyethylidene)diphosphonic acid
	Transport Hazard Class:	8
	Packing Group:	III
	Marine Pollutant:	No
MEX:	**UN Number:**	3265
	UN Proper Shipping Name:	Corrosive liquid, acidic, organic, n.o.s. (1 Hydroxyethylidene)diphosphonic acid
	Transport Hazard Class:	8
	Packing Group:	III
	Marine Pollutant:	No
IMDG:	**UN Number:**	3265
	UN Proper Shipping Name:	Corrosive liquid, acidic, organic, n.o.s. (1 Hydroxyethylidene)diphosphonic acid
	Transport Hazard Class:	8
	Packing Group:	III
	EMS-No:	F-A, S-B
	Marine Pollutant:	No
IATA:	**UN Number:**	3265
	UN Proper Shipping Name:	Corrosive liquid, acidic, organic, n.o.s. (1 Hydroxyethylidene)diphosphonic acid
	Transport Hazard Class:	8
	Packing Group:	III

SECTION 15 *REGULATORY INFORMATION*

OSHA Hazards: Irritant

DSL Status: All components of this product are on the Canadian DSL list.

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: 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.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components:	CAS-No.	Revision Date
Etidronic acid	2809-21-4	

New Jersey Right To Know Components:	CAS-No.	Revision Date
Etidronic acid	2809-21-4	

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 *ADDITIONAL INFORMATION*

HMIS Classification	
Health Hazard	2
Flammability	0
Physical Hazards	0

NFPA Rating	
Health Hazard	2
Fire	0
Reactivity Hazard	0

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 2/26/2019
Phoenix Products Company

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SAFETY DATA SHEET
pH & Alkalinity Up - 0160

Product Name: pH & Alkalinity Up
Date: 2/26/2019

SECTION 1 *IDENTIFICATION*

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor: Essentials
5070 Wallace Drive
Cumming, GA 30041
(626) 305-1182

U.S. Emergency Telephone: 1-800-222-1222
Product Name: **pH & Alkalinity Up**
Synonyms: Baking Soda, Sodium Acid Carbonate, Sodium Hydrogen Carbonate, Bicarbonate of Soda
Chemical Name: Sodium Bicarbonate
Chemical Formula: $NaHCO_3$
CAS Number: 144-55-8
Product Use: Raises total alkalinity level safely in pool water.

SECTION 2 *HAZARDS IDENTIFICATION*

Emergency Overview

OSHA Regulatory Status: This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122). Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Potential Health Effects

Routes of Exposure: Ingestion. Eye contact.

Eyes: Dust or powder may irritate eye tissue. If irritation should occur, it is expected to be transient.

Skin: Health injuries are not known or expected under normal use.

Inhalation: Health injuries are not known or expected under normal use.

Ingestion: Expected to be a low ingestion hazard. May cause temporary irritation of the throat, stomach, and gastrointestinal tract.

Target Organs: Eyes.

Chronic Effects: None known.

Potential Environmental Effects: 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.

SECTION 3 *COMPOSITION, INFORMATION ON INGREDIENTS*

Component	CAS Number	Percent
Sodium Bicarbonate	144-55-8	100%

SECTION 4 *FIRST-AID MEASURES*

Eye Contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists.

Skin Contact: Wash off with soap and water. Get medical attention if irritation develops or persists.

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Ingestion: Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately.

Notes To Physician: Treat symptomatically

SECTION 5 *FIRE FIGHTING MEASURES*

Flammable Properties: This product is not flammable.

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: None known.

Protection of Firefighters

Protective Equipment and Precautions For Firefighters: Firefighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Special Protective Equipment For Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 *ACCIDENTAL RELEASE MEASURES*

Personal Precautions: Keep unnecessary personnel away. Ventilate the area. Wear appropriate protective equipment and clothing during clean-up.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.

Methods For Containment: If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

Methods For Cleaning Up: Avoid dust formation.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.
*Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

SECTION 7 *HANDLING AND STORAGE*

Handling: Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Storage: Keep containers tightly closed.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Exposure Guidelines: No exposure standards allocated.

Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment:

Eye/Face Protection: Use tight fitting goggles if dust is generated.

Skin Protection: Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory Protection: Wear respirator if there is dust formation.

General Hygiene Considerations: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Appearance:	Crystalline
Form:	Powder
Color:	White
Odor:	Odorless
Odor Threshold:	Not Available
Solubility:	7.8g/100g water @ 18ºC (64ºF)
Density:	2.2
pH:	8.3 (0.1 molar @ 25ºC (77F)
% Volatiles by volume @ 21ºC (70ºF):	0
Boiling Point:	Not Applicable
Melting Point:	122˚F (50˚C)
Flash Point:	Not Available
Flammability Limits in Air, Upper, % By Volume:	Not Available
Flammability Limits in Air, Lower, % By Volume:	Not Available
Vapor Density (Air=1):	Not Available
Vapor Pressure (mm Hg):	Not Available
Evaporation Rate (BuAc=1):	Not Available
Specific Gravity:	2.159
Relative Density:	Not Available
Partition Coefficient (n-octanol/water):	Not Available
Auto-ignition Temperature:	Not Available
Molecular Weight:	84.01 g/mol

SECTION 10 ***STABILITY AND REACTIVITY***

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Gaseous carbon dioxide.

Hazardous Polymerization: Will not occur.

Incompatibilities: Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy.

Conditions to Avoid: Heat, moisture, incompatibles.

SECTION 11 ***TOXICOLOGICAL INFORMATION***

Sensitization: Not a skin sensitizer.

Acute Effects: May be harmful if swallowed.

Local Effects: May cause eye irritation.

Chronic Effects: None known.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Skin Corrosion/Irritation: Not applicable.

Epidemiology: No epidemiological data is available for this product.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive Effects: Contains no ingredient listed as toxic to reproduction

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.

Environmental Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and Degradability: No data is available on the degradability of this product.

Partition Coefficient (n-octanol/water): Not available

SECTION 13 ***DISPOSAL CONSIDERATIONS***

Disposal Instructions: Dispose of contents/container in accordance with local/regional/national/international regulations. Incinerate the material under controlled conditions in an approved incinerator.
Contaminated Packaging: Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14 *TRANSPORTATION DATA*

DOT: Not Regulated
TDG: Not Regulated
MEX: Not Regulated
IMDG: Not Regulated
IATA: Not Regulated

SECTION 15 *REGULATORY INFORMATION*

US Federal Regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances: Not applicable.

CERCLA (Superfund) Reportable Quantity: None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard – No

Section 311 Hazardous Chemical: No

Food and Drug Administration (FDA):

Total food additive
Direct food additive
GRAS food additive

Inventory Status

Country(s) or Region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

California Proposition 65 – None of the ingredients are listed

SECTION 15 ***REGULATORY INFORMATION - Continued***

Saf-T-Data:

Health: 1 - Slight
Flammability: 0 - None
Reactivity: 1 - Slight
Contact: 1 - Slight
Lab Protective Equip: C - GOGGLES; LAB COAT; PROPER GLOVES
Storage Color Code: G - Green (General Storage)

SECTION 16 ***ADDITIONAL INFORMATION***

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 2/26/2019
Phoenix Products Company

amerse™ SPA CARE

SAFETY DATA SHEET
pH & Alkalinity Down - 0140

Product Name: pH & Alkalinity Down
Date: 2/26/2019

SECTION 1 *IDENTIFICATION*

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor: Essentials.
5070 Wallace Drive
Cumming, GA 30041
(626) 305-1182

U.S. Emergency Telephone: 1-800-222-1222
Product Name: **pH & Alkalinity Down**
Synonyms: Sodium Acid Sulfate; Sodium Hydrogen Sulfate; Nitre Cake; GBS
Chemical Name: Sodium Bisulfate
Chemical Formula: $NaHSO_4$
CAS Number: 7681-38-1
Product Use: Reduces pH in swimming pools and spas.

SECTION 2 *HAZARDS IDENTIFICATION*

Emergency Overview
Danger

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Serious eye damage (Category 1), H318

Hazard Statement(s)
H318: Causes serious eye damage
H335: May cause respiratory irritation
H303: May be harmful if swallowed

Precautionary Statement(s)
P233: Keep container tightly closed.
P280: Wear protective gloves/eye protection/face protection.
P262: Do not get in eyes, on skin, or on clothing.
P271: Use only outdoors or in a well-ventilated area.
P305+351+338: 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.

Potential Acute Health Effects

Inhalation: Inhalation of dust may irritate nose, throat and/or lungs.

Ingestion: Small amounts (tablespoonful) swallowed are not likely to cause injury; however swallowing large amounts may irritate or burn digestive tract.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: Causes serious eye irritation.

SECTION 2 *HAZARDS IDENTIFICATION*

Potential Chronic Health Effects

Chronic Effects: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental Effects: No known significant effects or critical hazards.
Fertility Effects: No known significant effects or critical hazards.

Target Organs: Contains material which may cause damage to the following organs: mucous membranes, skin, eyes.

SECTION 3 *COMPOSITION, INFORMATION ON INGREDIENTS*

Component	CAS Number	Percent
Sodium Bisulfate	7681-38-1	95%

SECTION 4 *FIRST-AID MEASURES*

Eye Contact: Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. If redness or irritation persists, get prompt medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. If skin irritation occurs, seek medical attention.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If irritation or discomfort persists, seek medical attention.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control center immediately.

Protection of First-Aiders: If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to Physician: Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5 *FIRE FIGHTING MEASURES*

Flammability of the Product: Non-flammable.

Extinguishing Media

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Not Suitable: None known.

Special hazards arising from the substance or mixture: Sulfur oxides, Sodium oxides

Special Protective Equipment for Fire-Fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6 *ACCIDENTAL RELEASE MEASURES*

Personal Precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods For Cleaning Up

Small Spill: Stop leak if without risk. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large Spill: Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

SECTION 7 *HANDLING AND STORAGE*

Handling: Put on appropriate personal protective equipment (see Section 8). Avoid breathing dusts. Wash thoroughly after handling.

Storage: Material is hygroscopic and will readily absorb moisture. DO NOT store dry product where exposed to moist conditions. Keep container tightly closed.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Components With Workplace Control Parameters: Contains no substances with occupational exposure limit values.

Recommended Monitoring Procedures: Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering Measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene Measures: Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Personal Protective Equipment

Eye/Face Protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued*

Body Protection: 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.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Do not let product enter drains.

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Appearance:	Crystalline White Granular
Odor:	Odorless
Odor Threshold:	Not Available
Solubility:	Easily soluble in hot water. Soluble in cold water.
pH:	<1 [Conc. (% w/w): 5%]
Melting/Freezing Point:	177˚C (350.6˚F)
Boiling Point:	Not Applicable
Flash Point:	Not Available
Specific Gravity:	1.28 g/cm^3
Vapor Density (Air=1):	Not Available
Vapor Pressure (mm Hg):	Not Available
Evaporation Rate (BuAc=1):	Not Available
Partition Coefficient (n-octanol/water):	Not Available
Auto-ignition Temperature:	Not Available
Molecular Weight:	120.6 g/mole

SECTION 10 *STABILITY AND REACTIVITY*

Chemical Stability: The product is stable.

Conditions to Avoid: DO NOT store dry product where exposed to moist conditions.

Incompatible Materials: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. DO NOT MIX dry or concentrated solutions of this product with concentrated solutions of chlorine bleach, ammonia cleansers or similar products.

Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 11 ***TOXICOLOGICAL INFORMATION***

Acute Toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Sodium Bisulfate	LD50 Oral	Rat	2800 mg/kg	

Skin Corrosion/Irritation
Skin – rabbit Result: No skin irritation – 4h (OECD Test Guideline 404)

Serious Eye Damage/Eye Irritation
Eyes – rabbit Result: Risk of serious damage to eyes. (OECD Test Guideline 405)

Mutagenicity: Not Available
Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive Toxicity: Not Available
Specific target organ toxicity - single exposure: Not Available
Specific target organ toxicity - repeated exposure: Not Available
Aspiration Hazard: Not Available

Additional Information: RTECS: VZ1860000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 ***ECOLOGICAL INFORMATION***

Environmental Effects: This product readily dissolves in water to form a weak acid solution. A 0.05 percent or greater (by weight) solution of this product will likely be acutely harmful to aquatic life.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Other Adverse Effects: No known significant effects or critical hazards.

SECTION 13 *DISPOSAL CONSIDERATIONS*

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Contaminated Packaging: Dispose of as unused product.

SECTION 14 *TRANSPORTATION DATA*

DOT:	**UN Number:**	NOT REGULATED
	UN Proper Shipping Name:	NOT REGULATED
	Transport Hazard Class:	NOT REGULATED
	Packing Group:	NOT REGULATED

SECTION 15 *REGULATORY INFORMATION*

United States

HCS Classification : Irritating material
U.S. Federal regulations : United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Sodium bisulfate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium bisulfate: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs): Not listed
Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Not listed

State Regulations

Massachusetts : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : None of the components are listed.
California Prop. 65: No products were found.

Canada

WHMIS (Canada): Class D-2B: Material causing other toxic effects (Toxic).
Canadian Lists

Canadian NPRI: None of the components are listed.
CEPA Toxic substances: None of the components are listed.
Canada inventory: All components are listed or exempted.

International Lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

SECTION 16 ***ADDITIONAL INFORMATION***

NFPA Ratings:	Health: 1	Flammability:	0	Reactivity:	0		
HMIS Ratings:	Health: 1	Chronic Health:	-	Flammability:	0	Physical:	0

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 2/26/2019
Phoenix Products Company

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier Spa Bromine Tablets

Other means of identification Not available

Recommended use Controls bacteria and algae in spas.

Recommended restrictions None known.

Manufacturer

Natural Chemistry L.P.
40 Richards Ave.
Norwalk, CT 06854 US
Phone: (800) 753-1233
Emergency Phone: CHEMTREC (800) 424-9300

2. Hazards Identification

Physical hazards	Oxidizing solids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Keep away from heat. Take any precaution to avoid mixing with combustibles. Keep/Store away from clothing and other combustible materials. Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If swallowed: Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. In case of fire: Use appropriate media to extinguish.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-		16079-88-2	100

4. First Aid Measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact	Take off immediately all contaminated clothing. Wash off with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire Fighting Measures

Suitable extinguishing media	Dry chemical. Carbon dioxide. Water spray.
Unsuitable extinguishing media	DO NOT use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents). An explosive compound can be formed.
Specific hazards arising from the chemical	May intensify fire; oxidizer.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	May intensify fire; oxidizer.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Hydrogen bromide.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Keep away from heat. Take any precaution to avoid mixing with combustibles. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Do not get this material on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Do not store near combustible materials.

8. Exposure Controls/Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Chemical splash goggles.
Skin protection	
Hand protection	PVC gloves. Confirm with a reputable supplier first.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Wash hands after handling and before eating.

9. Physical and Chemical Properties

Appearance	Tablet.
Physical state	Solid.
Form	Solid.
Color	White to off-white
Odor	Slight halogen
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	May react with strong bases or oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials. Excessive heat.
Incompatible materials	Combustible materials. Strong oxidizing agents. Bases.

Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Hydrogen bromide.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Information on toxicological effects	
Acute toxicity	Harmful if swallowed. May cause respiratory irritation.

Components	**Species**	**Test Results**
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl- (CAS 16079-88-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	578 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Not classified.
Further information	Not available.
Name of Toxicologically Synergistic Products	Not available.

12. Ecological Information

Ecotoxicity The product is 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. See below

Product		Species	Test Results
Spa Bromine Tablets (CAS Mixture)			
Fish	LC50	Rainbow Trout	0.4 mg/l, 96 Hours

Components		Species	Test Results
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl- (CAS 16079-88-2)			
Crustacea	LC50	Daphnia	0.75 mg/l, 48 Hours
Fish	LC50	Rainbow Trout	0.4 mg/l, 96 Hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1479
Proper shipping name	Oxidizing solid, n.o.s. (2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-)
Hazard class	5.1
Packing group	II
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	<2.2 pounds - Consumer Commodity ORM-D
Packaging non bulk	212
Packaging bulk	240

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1479
Proper shipping name	OXIDIZING SOLID, N.O.S. (2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-)
Hazard class	5.1
Packing group	II
Special provisions	16
Packaging exceptions	Limited quantity <1kg

DOT

TDG

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS status Controlled

WHMIS classification Class C - Oxidizing Material, Class E - Corrosive Material

WHMIS labeling

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl- (CAS 16079-88-2) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - Yes

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

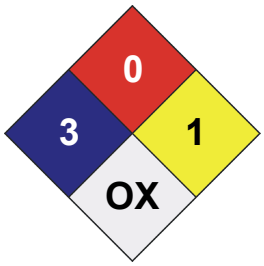
Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Prepared by Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.