



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	Spa Bromine Tablets
CAS #	Mixture
Product use	Controls bacteria and algae in spas.
Manufacturer	Natural Chemistry, Inc. 40 Richards Ave. Norwalk, CT 06854 US Phone: (800) 753-1233 Emergency Phone: CHEMTREC (800) 424-9300

2. Hazards Identification

Emergency overview	DANGER -- CORROSIVE OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	Causes chemical burns. May cause blindness.
Skin	May cause chemical burns.
Inhalation	Dust may cause respiratory tract irritation or chemical burns.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Target organs	Eyes. Skin. Respiratory system.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. The product causes burns of eyes, skin and mucous membranes.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	16079-88-2	90 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Brush away excess of dry material. Immediately flush with cool water for 15 minutes. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Carbon dioxide. Water spray.

Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	This substance is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible substances.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. 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	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area).
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing. Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling.
Storage	Keep out of reach of children. Store in a tightly closed container in a cool, dry, well ventilated and dark place away from incompatible materials. Keep away from heat, open flames or other sources of ignition.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	Use only under good ventilation conditions or with respiratory protection.
Personal protective equipment	
Eye / face protection	Chemical splash goggles.
Hand protection	PVC gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Tablet
Color	White to off white
Form	Solid
Odor	Slight halogen
Odor threshold	Not available
Physical state	Solid

pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	May react with strong bases or oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Contact with organic materials and heat may cause fire.
Incompatible materials	Combustible materials. Oxidizers. Bases.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Hydrogen chloride. Hydrogen bromide.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
2,4-Imidazolidinedione, 1-bromo-3-chloro-5,5-dimethyl-	578 mg/kg rat

Effects of acute exposure

Eye	Causes chemical burns. May cause blindness.
Skin	May cause chemical burns.
Inhalation	Dust may cause respiratory tract irritation or chemical burns.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns. 0.4 mg/l, Rainbow Trout, 96.00 Hours, LC50
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Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Mobility in environmental media	Not available
Environmental effects	Not available
Aquatic toxicity	Not available
Partition coefficient	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Oxidizing solid, n.o.s. (2,4-IMIDAZOLIDINEDIONE, 1-BROMO-3-CHLORO-5,5-DIMETHYL-)
Hazard class	5.1
UN number	UN1479
Packing group	II
Additional information:	
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	<2.2 Pounds - Consumer Commodity ORM-D
ERG number	140



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	OXIDIZING SOLID, N.O.S. (2,4-IMIDAZOLIDINEDIONE, 1-BROMO-3-CHLORO-5,5-DIMETHYL-)
Hazard class	5.1
UN number	UN1479
Packing group	II
Additional information:	
Special provisions	16
Packaging exceptions	Limited quantity <1kg



15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS 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	



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

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

CERCLA (Superfund) reportable quantity

None

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory name

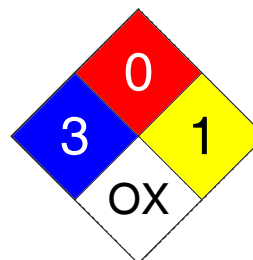
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	1
Personal Protection	B

**Disclaimer**

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

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

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.