

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/Importer/Supplier/Distributor information

Manufacturer

Company name	NC Brands
Address	40 Richards Ave. Norwalk, CT 06854 United States
Telephone	(800) 753-1233
E-mail	info@naturalchemistry.com

Emergency phone number	CHEMTREC (800) 424-9300
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2. Hazards Identification

Physical hazards	Oxidizing solids	Category 3
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Combustible dust	

Label elements



Signal word	Danger
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Hazard statement	May form combustible dust concentrations in air. May intensify fire; oxidizer. Causes severe skin burns and eye damage. Harmful if swallowed. Harmful if inhaled. May cause an allergic skin reaction.
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Precautionary statement

Prevention	Prevent dust accumulation to minimize explosion hazard. Keep away from heat. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace.
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Response	In case of fire: Use appropriate extinguishing media to extinguish. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see information on this label). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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Storage	Store locked up.
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Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazard(s) not otherwise classified (HNOC)	None known.
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Supplemental information	None.
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3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Bromochloro-5,5-dimethylhydantoin		32718-18-6	98

4. First Aid Measures

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 centre 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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
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. Symptoms may be delayed. Probable mucosal damage may contraindicate the use of gastric lavage.
General information	Take off all contaminated clothing immediately. Contact with combustible material may cause fire. 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. Wash contaminated clothing before reuse. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields. Contact with combustible material and heat may cause fire. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Dry chemical powder. Water spray. Carbon dioxide. Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. 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	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May intensify fire; oxidizer. May form combustible dust concentrations in air. Contact with combustible material may cause fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Keep away from clothing and other combustible materials. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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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. Ventilate the contaminated area. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Wear appropriate protective equipment and clothing during clean-up. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid breathing dust. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill.

Conditions for safe storage, including any incompatibilities

PESTICIDE STORAGE: Keep this product dry in the tightly closed, original container when not in use. Store in dark, cool, below 86°F (30°C), dry, well-ventilated area. Keep product away from energy sources, combustible organic materials, oxidizers, strong bases and moisture. Store locked up. Keep away from heat. Store in a cool, dry place out of direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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.

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

As required by employer code. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Use of impervious boots is recommended.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards

Not applicable.

General hygiene considerations

Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink.

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	1.8 - 2
Partition coefficient (n-octanol/water)	< 1
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
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	9.35 x 10 ⁻³ Pa @ (25°C)
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	0.22 g/100 mL @ 25°C
Auto-ignition temperature	Not available.
Decomposition temperature	320 °F (160 °C)
Viscosity	Not available.
Other information	
Explosive properties	Not explosive. Dust may form a weak explosive mixture with air (class St1), but is considered insensitive to ignition from electrostatic discharges.
Oxidizing properties	May intensify fire; oxidizer.

10. Stability and Reactivity

Reactivity	Keep away from combustible material. This product may react with strong 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	Keep away from heat, sparks and open flame. Do not mix with other chemicals. Minimize dust generation and accumulation.
Incompatible materials	Bases. Reducing agents. Combustible materials.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen. Hydrogen chloride. Hydrogen bromide.

11. Toxicological Information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed. May cause stomach distress, nausea or vomiting.

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. Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects**Acute toxicity**

In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if inhaled. Harmful if swallowed. May cause an allergic skin reaction.

Components	Species	Test Results
Bromochloro-5,5-dimethylhydantoin (CAS 32718-18-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Duck	> 5620 ppm, (Mallard duck, dietary)
	Quail	> 5620 ppm, (Bobwhite Quail, dietary)
	Rat	1.1 mg/l/4h, (powder)
<i>Oral</i>		
LD50	Mouse	700 mg/kg
	Quail	1839 mg/kg, (Bobwhite Quail)
	Rat	929 mg/kg
		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

May cause an allergic skin reaction.

Germ cell 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. See below.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not classified.

Chronic effects

Not classified.

Further information

Not available.

12. Ecological Information

Ecotoxicity	96 Hour-LC50, Fish: 1.2 mg/l (Eastern oyster, Acute flow through) 1.9 mg/l (Mysid shrimp, Acute flow through) 0.4 mg/l (Rainbow trout, Static) 0.46 mg/l (Bluegill sunfish, Static) 1.6 mg/l (Sheepshead minnow, Acute flow through) 48 hour-LC50, Daphnia magna: 0.75 mg/l (Static)
Persistence and degradability	BCDMH and the main degradation product DMH are biodegradable and do not persist in the environment.
Bioaccumulative potential	Based on low Kow values, BCDMH would not be predicted to significantly accumulate in aquatic organisms, or absorb to organic material in soil or sediment.
Mobility in soil	There will be no exposure of BCDMH to soil. the main degradation product DMH is mobile in soil.
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	Do not contaminate water, food or feed by storage or disposal. PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture 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. 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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

General	IMDG Regulated Marine Pollutant.
U.S. Department of Transportation (DOT)	
Basic shipping requirements:	
UN number	UN3085
Proper shipping name	Oxidizing solid, corrosive, n.o.s.
Technical name	Bromochloro-5,5-dimethylhydantoin
Hazard class	5.1
Subsidiary hazard class	8
Packing group	III
Marine pollutant	Yes
Special provisions	62, IB8, IP3, T1, TP33
Packaging exceptions	152
Packaging non bulk	213
Packaging bulk	240

DOT



15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
EPA Reg. # 8622-41-45729
EPA Est. # 69470-WV-2

PRECAUTIONARY STATEMENTS:
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER
CORROSIVE. STRONG OXIDIZER.

Causes irreversible eye damage and skin burns. Eye contact may cause loss of vision. Harmful if inhaled. Irritating to nose and throat. Harmful if absorbed through skin or swallowed. Users must wear chemical resistant gloves while placing the tablet in the swimming pool/spas. Avoid breathing dust or spray mist. Do not get in eyes, on skin or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear goggles with side shields, face shield or safety glasses; protective clothing and chemical resistant gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

SPECIAL PRECAUTIONS: PLEASE READ BEFORE OPENING CONTAINER. MISUSE MAY RESULT IN SERIOUS PERSONAL INJURY REQUIRING HOSPITALIZATION. RELATED COMPLICATIONS MAY LEAD TO DEATH.

GENERAL PRECAUTIONS AND RESTRICTIONS: USE WITH ADEQUATE VENTILATION. Do not smoke, drink or eat when handling. Do not ship with foods, feeds, drugs, or clothing. Keep container tightly closed when not in use.

PREVENTION OF PHYSICAL INJURY: 1. This product emits a powerful bromine gas. Do not open container indoors. Hold away from face when opening to avoid breathing fumes. 2. Mixing with other chemicals may cause a violent and instantaneous chemical reaction. Do not add this product to water in a pail. Do not add water to this product in a pail. 3. Follow label instructions exactly. Do not take advice from others. Do not experiment.

PREVENTION OF PROPERTY DAMAGE: Contact between this product in its undissolved state and vinyl liners, painted surfaces or other property in or around the pool will result in permanent bleaching of the color.

ENVIRONMENTAL HAZARDS: This product is toxic to fish and aquatic organisms.
PHYSICAL OR CHEMICAL HAZARDS STRONG OXIDIZING AGENT.
Do not mix with other chemicals. Mix with water only. Reaction with combustible organic materials, bases, moisture or with oxidizers may generate heat, hazardous gases and possibly fire or explosion. Do not add to dispensers or other equipment that is not dry and clean of any chemical residues. Does not burn but will decompose from about 320°F (160°C) releasing toxic gases. Avoid comminution and dusting.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

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

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations See below

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

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.

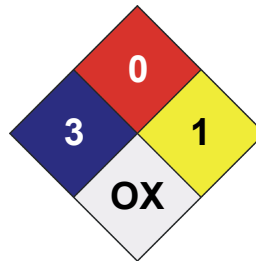
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X



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. The information in the sheet was written based on the best knowledge and experience currently available.

Issue date 14-November-2017

Version # 01

Further information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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).

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