



SAFETY DATA SHEET
1 Step Brominating Concentrate

Product Name: 1 Step Brominating Concentrate
Date: 5/19/2015

SECTION 1 IDENTIFICATION

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

Distributor:

U.S. PERS Emergency Telephone: 1-800-633-8253

Product Name: 1 Step Brominating Concentrate

Synonyms: Sodium dichloroisocyanurate; Sodium Dichloro-S-Triazinetrione

Chemical Name: Dichloroisocyanuric Acid, Sodium of Salt

Chemical Formula: $C_3Cl_2N_3NaO_3$

CAS Number: 2893-78-9

Product Use: For sanitization, treatment of algae, and shock treatment for pools, spas and hot tubs.

SECTION 2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER



GHS Classification

Ox. Sol. 2, H272: May intensify fire; oxidiser.

Skin Corr. 1C, H314: Causes severe skin burns and eye damage

Acute Tox. 4, H302: Harmful if swallowed

STOT SE 3, H335: May cause respiratory irritation

Aquatic Acute 1, H400: Very toxic to aquatic life

Aquatic Chronic 1, H410: Very toxic to aquatic life with long lasting effects

Hazard Statement(s)

H272: May intensify fire; oxidizer

H314: Causes severe skin burns and eye damage

H302: Harmful if swallowed

H335: May cause respiratory irritation

H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P220: Keep/Store away from clothing/ combustible materials

P221: Take any precaution to avoid mixing with combustibles/other chemicals

P260: Do not breathe dust/fume/gas/mist/vapors/spray

P264: Wash hands thoroughly after handling

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

P271: Use only outdoors or in a well-ventilated area

P273: Avoid release to the environment



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SECTION 2 **HAZARDS IDENTIFICATION - Continued**

P370+P378: In case of fire: Use water for extinction
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P280: Wear protective gloves/protective clothing/eye protection/face protection
P363: Wash contaminated clothing before reuse
P310: Immediately call a POISON CENTER or doctor/physician
P391: Collect spillage

P405: Store locked up

P403+P233: Store in a well-ventilated place. Keep container tightly closed

P501: Dispose of contents/container in accordance with national and international regulations

Potential Environmental Effects: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

NFPA Ratings (Scale 0-4): Health = 3, Fire = 0, Reactivity = 1. Special Hazard Warning: OXIDIZER. Class 2 Oxidizer.

SECTION 3 **COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	Percent
Dichloroisocyanuric Acid, Sodium of Salt	2893-78-9	85%
Sodium Bromide	7647-15-6	15%

SECTION 4 **FIRST-AID MEASURES**

Eye Contact: 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.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion: Call 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.



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

Most important symptoms and effects, acute or delayed

Eye Contact: Causes severe eye damage.

Skin Contact: Harmful if absorbed through skin. Causes skin burns on contact with moisture, this material readily hydrolyzes to acid which may result in burns if not promptly removed.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation.

Ingestion: Harmful if swallowed.

Note To Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Medical Conditions Aggravated By Exposure: Respiratory disorders Skin disorders

SECTION 5 **FIRE FIGHTING MEASURES**

Suitable Extinguishing Media: Flood with large volumes of water.

Extinguishing Media Not To Be Used: ABC powder. Dry chemical.

Unusual Fire and Explosion Hazards: Halogen containing gases. Carbon oxides.

Fire Fighting Procedure: In the event of fire, wear self-contained breathing apparatus. Thoroughly decontaminate firefighting equipment including all fire fighting wearing apparel after the incident. Additional advice: Nitrogen trichloride can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Nitrogen trichloride can present an explosion hazard. Immediately after a fire has been extinguished, check for wet or damp material. Any spilled material from burned or broken containers should be assumed contaminated. Neutralize to a non-oxidizing material for safe disposal. Do not attempt to re-close broken containers, even for movement to the disposal area. They should be left open to disperse any nitrogen trichloride that may form. Material which appears undamaged except for being damp on the outside should be opened and inspected immediately. If the plastic liner (where applicable) of the container is damaged or the material is damp, the material should be chemically treated if allowable, to a non-oxidizing material for safe disposal. Bulging containers require extreme care. Contact the fire department.

SECTION 6 **ACCIDENTAL RELEASE MEASURES**

Personal Precautions: For small spills in a well-ventilated areas, wear a NIOSH approved half-face or full face tight fitting respirator or a loose fitting powered air purifying respirator equipped with chlorine cartridges. Chemical goggles should be worn when using a half-face respirator. In addition to respiratory protection, wear coveralls, chemical resistant gloves, chemical resistant footwear; and chemical resistant headgear for overhead exposure. For clean-up of large spills, or small dry spills in confined areas, wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator. Additionally, body protection should be impervious clothing covering entire body to prevent personal contact with material. CAUTION - Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.



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Methods For Cleaning Up: Using appropriate protective clothing and safety equipment, contain spilled material. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form.

SECTION 6 ACCIDENTAL RELEASE MEASURES - Continued

Environmental Precautions: Do not flush into surface water or sanitary sewer system.

Soil: Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

Water: This material is heavier than and soluble in water. Stop flow of material into water as soon as possible. Begin monitoring for available chlorine and pH immediately.

Air: Vapors may be suppressed by the use of water fog.

SECTION 7 HANDLING AND STORAGE

Handling: Contains a strong oxidizing agent. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Avoid breathing vapors. Do not mix with other chemicals. Mix only with water. Never add water to this product. Always add product to large quantities of water. Use only clean and dry utensils. Do not add this product to any dispensing devices containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion. In case of contamination or decomposition, do not reseal container. If possible, isolate container in open air or well ventilated area. Flood with large volumes of water. Wash hands thoroughly with soap and water after handling and before eating, drinking or using tobacco. Do not handle until all safety precautions have been read and understood.

Storage: Store in a dry, cool, well-ventilated area in the original container. Keep containers tightly closed when not in use. Keep away from heat, sparks and open flame. Keep out of reach of children. Keep away from animals.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

Components	ACGIH-TLV Data	OSHA (PEL) Data
Sodium Dichloroisocyanurate Dihydrate - 2893-78-9	Not Determined	Not Determined
Sodium Bromide - 7647-15-6	Not Determined	Not Determined

Ventilation Requirements: Provide adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Respiratory Protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Hand Protection: Rubber gloves.

Eye Protection: Safety glasses with side-shields.



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Skin and Body Protection: Impervious body covering clothes, boots and neoprene apron.

Hygiene Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	White granules
Odor:	Faint Halogen
Odor Threshold:	Not determined.
Boiling Point/Range:	Not Applicable
Melting Point/Range:	230-250°C (446-482°F)
Flash Point:	None
Flammability (Solid, gas):	Not determined.
Flammable/Explosion Limits:	Not determined.
Auto-Ignition Temperature:	Not applicable
Vapor Pressure:	Not applicable under standard conditions
Evaporation Rate (ether=1):	Not applicable under standard conditions
Vapor Density:	Not applicable under standard conditions
Viscosity:	Not applicable
pH:	4.5 saturated aqueous solution
Solubility:	Water – 25 g/100ml at 30°C Other Solvents – Not determined
Density:	0.90 – 0.96 g/cm ³
Decomposition Temperature:	Not determined.
Partition coefficient (n-octanol/water):	Not determined.

Section 10 **STABILITY AND REACTIVITY**

Reactivity: Contamination with moisture, organic matter or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.

Stability: Stable under normal conditions Do not package in paper or cardboard.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Moisture/high humidity. Poor ventilation. High temperatures. Contamination.

Materials to Avoid: Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; other swimming pool/spa chemicals in their concentrated form; alkalis. Avoid contact with all other chemicals.

Hazardous Decomposition Products: Halogen containing gases. Carbon oxides

SECTION 11 **TOXICOLOGICAL INFORMATION**

Note: Toxicological data have not been determined specifically for this product. The following data refer to Sodium dichloro-s-triazinetriene.

Likely Routes of Exposure: Skin, Inhalation, Ingestion, Eye contact



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Acute Toxicity: Rat Oral LD50 735 mg/kg
Rabbit Dermal LD50 >2000 mg/kg

Eye Irritation (rabbit): Severe irritant

Dermal Irritation (rabbit): Severe irritant

Dermal Sensitization: Not a sensitizer

Chronic Toxicity: Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.

Mutagenicity: Not known or reported to be mutagenic.

Carcinogenicity: Not classified by IARC, OSHA, EPA. Not included in NTP 12th Report on Carcinogens

SECTION 12 **ECOLOGICAL INFORMATION**

Note: Ecological data have not been determined specifically for this product. The following data refer to Sodium dichloro-s-triazinetrione.

Aquatic Toxicity: 96 Hour-LC50, Fish

0.22 mg/l (Rainbow trout)

0.28 mg/l (bluegill sunfish)

48 hour-LC50, Daphnia magna: 0.2 mg/l

Avian Toxicity: Oral LD50, Bobwhite quail 730 mg/kg
Oral LD50, Mallard duck 3300 mg/kg
Dietary LC50, Mallard duck >10,000 ppm
Dietary LC50, Bobwhite quail >10,000 ppm

Persistence and Degradability: Not readily biodegradable.

Bioaccumulative Potential: No data available

Mobility in Soil: No data

Germany, water endangering classes (WGK): 3

Note: Toxic to aquatic organisms. Toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

SECTION 13 **DISPOSAL CONSIDERATIONS**

Waste Disposal: Dispose of waste material in compliance with all federal, state, and local regulations. Contact with incompatible materials could cause a reaction or fire. If these wastes cannot be disposed of by use according to label instructions, contact your Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. For registered pesticides, contact your State Pesticide Agency. Do not contaminate ponds, waterways or ditches with chemical or used container. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Improper disposal of excess product, spray mixture or rinsate is a violation of Federal Law.

Disposal of Packaging: Do not reuse containers Rinse thoroughly before discarding in trash. Offer rinsed packaging material to local recycling facilities.



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SECTION 14 **TRANSPORTATION INFORMATION**

Inner packagings not over 5.0 kg (11 lbs) net capacity each for solids, packed in a strong outer packaging:

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.

SECTION 14 **TRANSPORTATION INFORMATION - Continued**

Inner packagings over 5.0 kg (11 lbs) net capacity each for solids, packed in a strong outer packaging:



DOT: UN Number: 1759
UN Proper Shipping Name: Corrosive Solid, n.o.s. (contains Sodium dichloro-s-triazinetrione)
Transport Hazard Class: 8
Packing Group: III

IMDG: UN Number: 1759
UN Proper Shipping Name: Corrosive Solid, n.o.s. (contains Sodium dichloro-s-triazinetrione)
Transport Hazard Class: 8
Packing Group: III

IATA: UN Number: 1759
UN Proper Shipping Name: Corrosive Solid, n.o.s. (contains Sodium dichloro-s-triazinetrione)
Transport Hazard Class: 8
Packing Group: III

SECTION 15 **REGULATORY INFORMATION**

USA: All ingredients are reported in the EPA TSCA Inventory.

FIFRA Information: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER
Corrosive
Causes irreversible eye damage
Causes skin burns
Harmful if swallowed or absorbed through skin or inhaled.
Strong oxidizing agent

This pesticide is toxic to fish and aquatic organisms.

SARA (311, 312): This product is categorized as an immediate health hazard, and fire and reactivity physical hazard. This product does not contain a chemical listed at or above de minimis concentrations (Sodium dichloro-s-



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triazinetriene)

Massachusetts Right-to-Know Hazardous Substances List: Listed (Sodium dichloro-s-triazinetriene)

New Jersey Right-to-Know Hazardous Substances List: Listed (Sodium dichloro-s-triazinetriene)

Pennsylvania Right-to-Know Hazardous Substances List: Listed (Sodium dichloro-s-triazinetriene)

Rhode Island Right-to-Know Hazardous Substances List: Listed (Sodium dichloro-s-triazinetriene)

Workplace Classification: This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200) (Sodium dichloro-s-triazinetriene)

Canada: All ingredients are listed in DSL

WHMIS Hazard Class: C oxidizing materials
D1B Toxic material causing immediate and serious toxic effects
D2B Toxic materials causing other toxic effects (Sodium dichloro-s-triazinetriene)
D2A Very toxic material causing other toxic effects (Sodium bromide)

SECTION 15 **REGULATORY INFORMATION - Continued**

EU: All ingredients are reported in EINECS

Japan: All ingredients are listed.

Australia: All ingredients are listed in AICS

New Zealand Inventory: All ingredients are listed in NZIoC

China: China Inventory: All ingredients are listed in IECSC

Korea: All the ingredients are listed KECI

Philippines: All ingredients are listed in PICCS

SECTION 16 **OTHER INFORMATION**

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: 5/19/2015
Phoenix Products Company