



P.O. Box 195, Brownsburg, IN 46112  
 Ph: 317-852-8966  
**Emergency Telephone No: 800-535-5053**

## MATERIAL SAFETY DATA SHEET

### I. PRODUCT IDENTIFICATION

Product Name or Chemical Name.....**Bromine**  
 Synonyms.....Cooling Tower Biocide  
 Chemical Family.....Halogenated Hydantoin  
 NFPA – Health Hazard.....3  
     Fire Hazard.....0  
     Reactivity Hazard.....1  
 NFPA Scale.....4=Extreme 3=High 2=Moderate 1=Slight 0=Insignificant

### II. HAZARDOUS INGREDIENTS

<u>Chemical Name(s)</u>	<u>CAS Number</u>	<u>% Wt</u>	<u>TLV-TWA</u>	<u>PEL</u>	<u>SEC.313</u>	<u>Carcinogen?</u>
Bromo Chloro Dimethylhydantoin	32718-18-6	>95	NE	NE	No	No

### III. SHIPPING DATA

DOT Proper Shipping Name:.....Oxidizing Solid, N.O.S (Bromo Chloro Dimethylhydantoin)  
 DOT Hazard Class.....Division 5.1  
 DOT Labels Required.....Oxidizer  
 UN/NA ID Number.....UN 1479  
 Packaging Group.....II  
 Non-Bulk Shipping Name.....Oxidizing Solid, N.O.S. (Bromo Chloro Dimethylhydantoin), 5.1,  
     UN 1479, PG II  
 Bulk Shipping Name.....N/A

### IV. PHYSICAL DATA

Boiling/Freezing Point @760 mmHg.....N/A  
 pH.....N/A  
 Vapor Pressure mmHg @20°C.....N/A  
 Vapor Density (Air=1).....N/A  
 Percent Volatile by Weight (%).....<0.5  
 Specific Gravity @20°C.....N/A  
 Solubility in Water.....0.2 grams/100 gms @25°C  
 Evaporation Rate.....(BuAc=1) <1  
 Appearance and Odor.....White to off-white briquette with very slight pungent odor.

### V. FIRE & EXPLOSION HAZARD DATA

Flash Point (Test Method).....Product decomposes at 320°F (160°C)  
 Autoignition Temperature.....N/A  
 Flammability Limits in Air (% V).....N/A  
 Extinguishing Media.....Dry chemical, carbon dioxide or water spray.  
 Special Fire Fighting Procedures.....Wear MSHA/NIOSH approved self-contained breathing  
     apparatus and protective clothing. Flood burning material with  
     water to reduce noxious gas formation. Cool fire exposed  
     containers with water spray.  
 Unusual Fire & Explosion Hazards.....May ignite combustible materials and produce noxious gases.  
     Airborne dusts in an enclosed space may constitute an  
     explosive hazard.

### VI. REACTIVITY DATA

Product Stability.....Stable  
     Conditions to Avoid.....Heating above decomposition temperature.  
 Chemical Incompatibility.....Strong acids and alkalis, high temperatures, moisture and  
     readily oxidizable material.



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#### VI. REACTIVITY DATA (continued)

Hazardous Decomposition Products ..... Thermal decomposition may produce toxic vapors/fumes of Hydrogen Bromide, Bromine, Hydrogen Chloride and oxides of carbon nitrogen.  
 Hazardous Polymerization..... Will not occur.

#### VII. HEALTH HAZARD DATA

Skin Contact ..... May result in severe irritation and chemical burns. Repetitive skin exposure may induce sensitization.  
 Eye Contact ..... Will result in severe irritation. Prolonged contact may produce irreversible cellular damage to the eye.  
 Inhalation ..... Inhalation can be severely irritating with potential systematic absorption and tissue damage.  
 Ingestion ..... Not a primary route of exposure.

#### VIII. EMERGENCY AND FIRST AID PROCEDURES

Skin ..... Remove contaminated clothing and flush exposed skin with soap and water. If irritation persists or develops, get medical attention. Launder contaminated clothing before reuse.  
 Eyes ..... Immediately flush eyes with large amounts of water for 15 minutes and get medical attention.  
 Ingestion ..... If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. Never give anything by mouth to an unconscious person.  
 Inhalation ..... Move to fresh air. Aid in breathing, if necessary, and get medical attention.

#### IX. ENVIRONMENTAL DATA

Spill or Leak Procedures ..... Carefully sweep up spilled material (avoid generating dust) and place in proper container for disposal. Neutralize residues with dilute alkaline sodium bisulfite or thiosulfate solution; absorb with sand or inert material and place in proper container for disposal.  
 Waste Disposal..... Pesticide. Material is toxic to fish. Do not discharge into waterways. Dispose of in accordance with all federal, state and local regulations.  
 Hazardous Water 40CFR261.. This material is an EPA registered pesticide.  
 Container Disposal ..... Empty containers may contain residuals. Thoroughly clean, then offer for recycling, reuse, or disposal in accordance with governmental regulations. See product label.

#### X. SPECIAL PROTECTION INFORMATION

Respiratory Protection ..... NIOSH/MSHA approved filter type mast for dusts, fumes and mists as needed to maintain P.E.L.  
 Ventilation ..... Local and/or mechanical exhaust to maintain exposure below P.E. L.  
 Protective Clothing ..... Neoprene gloves, apron, boots – as necessary to prevent skin contact.  
 Eye Protection ..... Chemical goggles.  
 Other Precautions..... Safety shower and eyewash fountains should be easily accessible.

#### XI. SUPPLIER INFORMATION

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of manufacturer. The data on this sheet relates only to the specific material designated herein. Manufacturer assumes no legal responsibility for use or reliance upon this data.

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