



MATERIAL SAFETY DATA SHEET

TBCH

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SECTION 1

OSHA HAZARD CLASSIFICATIONS

Danger! Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. Do not get in eyes, on skin, or on clothing. Strong Oxidizer.

SECTION 2

HAZARDOUS COMPONENTS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% by Weight</u>	<u>TLV</u>
1-Bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	96	Not available.

Buckman Laboratories reports the component(s) listed above as known OSHA hazardous material(s) contained in this product.

SECTION 3

FIRST AID INFORMATION

Eye Exposure: 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 Exposure: 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.

Notes to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 4

PRIMARY ROUTES OF EXPOSURE

1. Effects from Acute Exposure:

Eye Exposure: Causes irreversible eye damage. Do not get in eyes.

Skin Exposure: Causes severe skin burns. Do not get on skin.

Inhalation: Irritating to nose and throat. Avoid breathing dust or fumes.

Ingestion: Ingestion is not expected to be a primary route of exposure.

2. Effects from Chronic Exposure:

There are no known chronic hazards.

SECTION 5***Toxicological Information*****Acute Effects:**

Eyes: Toxicological studies indicate this product to be corrosive to eyes.

Dermal LD₅₀: The dermal LD₅₀ is greater than 2.0 g/kg (rabbit). The primary skin irritation index is 6.1 and the product is considered corrosive to skin

Oral LD₅₀: 5778 mg/kg (rat).

Irritant / Sensitization Effects:

Causes irreversible eye damage. Do not get in eyes.

Causes severe skin burns. Do not get on skin.

Irritating to nose and throat. Avoid breathing dust or fumes.

Carcinogenic Potential:

Not tested by Buckman Laboratories. Not shown as a carcinogen by OSHA, IARC, or NTP.

Target Organs Effects:

May cause damage to the following organs: upper respiratory tract, skin, eyes.

Other Health Effects:

Existing dermatitis may be aggravated by exposure.

SECTION 6***Environmental Toxicological Information***

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, 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 7***Physical and Chemical Properties***

Appearance	White tablet, solid
Odor	Halogenous (Slight.)
Density	60.1 lb/ft³
Flash Point	Not available.
Melting/Freezing Point	Not available.
Boiling Point	Not available.
Solubility	0.15 g/100g water
pH (Neat)	Not available.
pH (100 ppm in water)	Not available.
Vapor Pressure	Not applicable for solids.
o/w Partition Coefficient	Not available.
Oxidizing/Reducing Properties .	strong oxidizing agent
Viscosity	Not available.
Additional pH Information	0.1% solution in DI water = 4.5

NOTE: The physical data presented above are typical values and should not be construed as specifications.

SECTION 8***Fire and Explosion Information***

Flammable Limits Not available.

Extinguishing Media In case of fire or smoke, call the fire department. Do not attempt to extinguish the fire without a self-contained breathing apparatus (SCBA). Do not let the fire burn. Flood with copious amounts of water. DO NOT use ABC or other dry chemical extinguishers since there is the potential for a violent reaction.

Special Firefighting Procedures

Fires fueled by other materials may release hydrogen bromide, bromine, hydrogen chloride or chlorine. Wear self-contained breathing apparatus. Ammonium phosphate (ABC) fire extinguishers should not be used.

EXPLOSION HAZARDS: A dust explosion severity determination was performed using the Hartmann Dust Explosibility Bomb designed at the U. S. Bureau of Mines. The product was determined not to be ignitable.

GENERAL HAZARD: In large fires fueled by other materials, this product may smolder for prolonged periods emitting a dense black smoke. Any spilled material should be considered contaminated. Neutralize to a non-oxidizing material for safe disposal. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. If the material is damp, it should be neutralized to a non-oxidizing material for safe disposal.

SECTION 9***Reactivity Information***

Stability This product is stable under normal conditions.

Incompatibility 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; cyanuric acid containing compounds; calcium hypochlorite; alkalis. Avoid contact with all other chemicals.

Conditions to avoid: High temperature. Poor ventilation. Contamination. Moisture/high humidity.

Hazardous Decomposition Products

Hydrogen bromide, bromine, hydrogen chloride, chlorine.

SECTION 10***Handling Precautions***

Engineering controls: General room ventilation plus local exhaust should be used to minimize exposure to dust/vapors.

Personal Protective Equipment:

Eyes and Face: Wear goggles or safety glasses with side shields when handling this product.

Skin: Wear rubber gloves when handling this product. Avoid contact with skin.

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

Work hygienic practices: Remove and wash contaminated clothing before reuse.

Other use precautions: Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

General procedures: Avoid contact with eyes, skin, or clothing. Avoid breathing dust.

Handling: STRONG OXIDIZING AGENT: Do not mix with other chemicals. Mix only with water. Never add water to product. Always add product to large quantities of water. Use clean dry utensils. Do not add this product to any dispensing device 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 will 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 area with large volumes of water.

Storage: keep this product dry in original tightly closed container when not in use. Store, in a cool, dry, well ventilated area, away from heat or open flame. Moisture may decompose this product and cause a violent reaction leading to fire and explosion. In cases of decomposition, isolate container if possible and flood area with large amounts of water to dissolve all material before discarding this container. Do not contaminate food or feed by storage or disposal.

SECTION 11*Satisfactory Materials of Construction*

Not available.

SECTION 12*Spill, Leak, and Disposal Procedures***SPILL AND LEAK RESPONSE GUIDELINES:**

GENERAL PROCEDURES: STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Using appropriate protective clothing and safety equipment, contain spilled material. Do not add water to 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 use floor sweeping compounds to clean up spills. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form. Do not transport wet or damp material. Keep product out of sewers, watersheds, and water systems. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Dispose of according to local, state, and federal regulations.

DISPOSAL METHOD: Pesticide wastes are toxic. 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. Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction or fire.

EMPTY CONTAINER: Do not reuse container. Rinse thoroughly before discarding in trash.

SECTION 13*Transportation and Shipping Information**DOT Shipping Information:*

OXIDIZING SOLID, N.O.S., (Bromo, chloro-5, 5-dimethylhydantoin), Class 5.1, UN1479, P.G. II, (ERG Guide 140)

IMO/IMDG Shipping Information:

OXIDIZING SOLID, N.O.S., (Bromo, chloro-5, 5-dimethylhydantoin), Class 5.1, UN1479, P.G. II, MARINE POLLUTANT (EmS No. F-A, S-Q, ERG Guide 140, HazMat Code 4918761)

IATA Shipping Information:

OXIDIZING SOLID, N.O.S., (Bromo, chloro-5, 5-dimethylhydantoin), Class 5.1, UN1479, P.G. II, (ERG Guide 140, ERG Guide 5L)

DOT "RQ": NONE

Unless otherwise stated, the shipping information provided above applies only to non-bulk containers of this product. Proper shipping name and general shipping information may vary depending on packaging and mode of shipment. All products shipped from Buckman locations have been properly packaged and labeled according to appropriate hazardous materials shipping regulations. If any alteration of packaging, product, or mode of transportation is further intended, different shipping information, including but not limited to proper shipping name, RQ designation, and labeling may apply. For further information pertaining to the shipping requirements for this product, contact Buckman's Transportation Department or DOT Coordinator.

SECTION 14*Regulatory Information*

The following Regulations are known to apply to the use and disposal of this product. Additional Federal, State and Local regulations may also be applicable.

SARA (Superfund Amendments and Reauthorization Act)

SARA 302 Extremely Hazardous Substances List ...

No components of this product are listed.

SARA 312 Hazard Category ...

Immediate (Acute) Health Hazard

SARA 313 Toxic Chemicals List ...

No components of this product are present above the *de minimus* levels.**CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)**

1-Bromo-3-chloro-5,5-dimethylhydantoin RQ = 100 lbs. (45.36 kg)

RCRA (Resource Conservation and Recovery Act) Listed Hazardous Waste

This material may be classified as a RCRA hazardous waste with the characteristic of ignitability.

Hazardous waste number: D001.

CWA (Clean Water Act) Listed Substances

No components of this product are listed.

FDA (Food and Drug Administration)This product is approved under the following FDA (21 CFR) sections : 176.300.**TSCA (Toxic Substances Control Act) Applicability**

All components are listed on the TSCA Inventory. Registered pesticides are exempt from the requirements of TSCA.

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act)

This product is a registered pesticide. EPA Reg. No. 1448-420

HMIS/NPCA Rating ... Health 3 Flammability 0 Reactivity 1**NFPA Ratings** Health 3 Flammability 0 Reactivity 1**State Regulations***Various State Right To Know Acts ...*

Non-proprietary hazardous chemicals are listed in Section 2 of this MSDS. Should you require further information on specific proprietary or inert ingredients please contact Buckman Laboratories' Regulatory Affairs Department.

The information on this Material Safety Data Sheet reflects the latest information and data that we have on hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Data Sheet is the responsibility of the user. This Material Data Safety Sheet was prepared to comply with the OSHA Hazard Communication regulations. While some components are claimed Trade Secret under OSHA Hazard Communication regulations, all known OSHA hazards associated with the Trade Secret component(s), if contained in this product, are fully disclosed.

Buckman Laboratories, Inc. warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions.

Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including **NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE**. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty.

The exclusive remedy against seller shall be in a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort.

Any controversy or claim arising out or relating to this contract, or breach thereof, shall be settle by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgement upon the rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.