

MATERIAL SAFETY DATA SHEET

This information must be made available to all personnel using this product.

WESTERN WATER MANAGEMENT, INC.
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OXIDIZER

PRODUCT NAME BromiCide
PRODUCT TYPE Cooling Water Biocides
EPA Registration # 5785-65-7547 (Granules)
5785-63-7547 (Tablets)

OSHA HAZARD CLASSIFICATION
OXIDIZER; CORROSIVE

DOT SHIPPING DESCRIPTION OXIDIZING SUBSTANCES, SOLID, N.O.S., 5.1, UN1479,
PGII (CONTAINS 1-BROMO-3-CHLORO-5,5-DIMETHYLHYDANTOIN)
NMFC 500086 CLASS 55

NFPA HAZARD RANKING 3-Health/ 0-Fire/ 0-Reactivity/ OX-Special
HMIS HAZARD RANKING 3-Health/ 0-Fire/ 0-Reactivity/ R-Personal Protection Index

SECTION 1 HAZARDOUS INGREDIENTS

Ingredient	CAS#	TLV
1-Bromo-3-chloro-5,5-dimethylhydantoin (93.5% active for Granules) (92.5% active for Tablets)	126-06-7	OSHA & ACGIH: none established

This product does not contain 1% or greater of hazardous ingredients listed in Subpart D of SARA, Title III, Section 313 (40CFR372.65), the CERCLA "... List of Extremely Hazardous Substances and Threshold Planning Quantities" (40 CFR355.40 Appendix A), or the CERCLA "List of Hazardous Substances and Reportable Quantities" (40CFR302.4). This third list also identifies hazardous substances for reporting purposes related to the Clean Water Act, part 311(b)(2)(A).

All of the ingredients in this product are listed in the TSCA inventory.

None of the ingredients present in this product as 0.1% or greater are listed as carcinogens by NTP, IARC, or OSHA.

SECTION 2 PHYSICAL DATA

Appearance and Odor	white solid in granular, tablet and stick form with halogen odor
Specific Gravity	not applicable
Percent Volatile	not applicable
Evaporation Rate	not applicable
Bulk Density	Granules = 64.5 lbs./cu. ft. Tablets = 60 lbs./cu.ft.
Solubility in Water	0.15 g/100g at 77 F.
Melting range (F.)	320-329 (160-165 C.)
Vapor Pressure (mm Hg)	not applicable
Vapor Density (air=1)	not applicable

SECTION 3 HEALTH HAZARD INFORMATION

Effects of Overexposure EYES: Contact can cause irreversible eye damage. Contact with dilute solutions (0.1% or less) is non-irritating to the eyes. SKIN: This material is considered to be corrosive to the skin. The primary skin irritation index is calculated to be 6.1. Contact with dilute solutions (0.1% or less) is non-irritating to

SECTION THREE HEALTH HAZARD INFORMATION CONTINUED ON NEXT PAGE-

the skin. The acute dermal toxicity is greater than 2.0 g/kg for both male and female rabbits. No signs of systemic toxicity were observed. **INGESTION:** The combined oral LD50 in rats is 1.39 g/kg. **INHALATION:** Inhalation of dust can cause irritation to nose and throat. **CHRONIC EXPOSURE:** The effects of long-term low-level exposures have not been determined. Safe handling on a long-term basis should minimize repeated acute overexposures.

Emergency and First Aid Procedures **EYES:** Immediately flush with plenty of water continuously for at least 15 minutes. Hold eyelids open to ensure flushing of the entire eye surface. Rinsing eyes within one minute and not less than 15 minutes is essential to achieve maximum effectiveness. Get emergency medical treatment. Continue flushing with water if medical attention is not immediately available. **SKIN:** Flush contaminated areas with water for at least 15 minutes. Remove contaminated clothing and footwear. Get emergency medical treatment. Continue flushing with water if medical attention is not immediately available. **INGESTION:** Have conscious patient drink several glasses of water (or milk, if available) for dilution. **DO NOT INDUCE VOMITING. DO NOT FORCE FLUIDS IN AN UNCONSCIOUS VICTIM.** Get emergency medical attention. **INHALATION:** Remove patient to fresh air. Observe for possible delayed reaction. If breathing has stopped, give artificial respiration. If breathing with difficulty, give oxygen, provided a qualified operator is available. Get emergency medical attention.

SECTION 4 FIRE & EXPLOSION HAZARDS

Flash Point none **Flammable Limits** not flammable
Extinguishing Media water

Special Fire Fighting Procedures Do not use ammonium phosphate fire extinguishers. Cool non-leaking fire-exposed containers with water spray to prevent rupture. Firefighters should always wear protective clothing and positive pressure self-contained breathing apparatus when fighting fires near chemicals.

Unusual Fire & Explosion Hazards In fires fueled by other materials, this product may smolder for prolonged periods emitting a dense black smoke. Thermal decomposition (as may be experienced in a fire) may produce hydrogen bromide or bromine.

SECTION 5 REACTIVITY

Stability stable
Conditions to Avoid Do not mix with any other concentrated chemicals.
Incompatibility (Materials to Avoid) Organics and any other readily oxidizable materials (strong reducing agents).
Hazardous Decomposition Products hydrogen chloride, chlorine, Thermal decomposition (as may be experienced in a fire) may produce hydrogen bromide and bromine.
Hazardous Polymerization will not occur

SECTION 6 SPECIAL PROTECTION

Respiratory Protection NIOSH approved particulate respirator if dusty conditions exist in excess of recommended TLV
Ventilation General mechanical ventilation is adequate.
Eye Protection chemical goggles
Protective Gloves rubber
Other Protective Equipment emergency eye wash station, safety shower, long-sleeved shirt, and long pants

SECTION 7 SPILL OR LEAK CLEANUP AND DISPOSAL INFORMATION

Steps to be Taken in Case Material is Released or Spilled Clean up spills immediately by sweeping or shoveling up the material. The spill area should then be flushed with water. Persons performing clean-up work should wear adequate personal protective equipment and clothing.

SECTION SEVEN SPILL OR LEAK CLEANUP AND DISPOSAL INFORMATION CONTINUE ON NEXT PAGE-

Reportable Quantity not applicable

Waste Disposal Method Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. DO NOT REUSE EMPTY CONTAINER. Triple rinse the container (or equivalent). Then offer for recycling or reconditioning or incinerate. Burn the container only if allowed by state and local authorities. If burned, stay out of smoke.

SECTION 8 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing CORROSIVE material, handle with care. Do not get in eyes, on skin, or on clothing. Do not breathe dust or solution mists. Use with adequate ventilation and use protective equipment (see Section 6). Wash thoroughly after handling. A water source and a shower should be installed in storage and work areas. Wash contaminated clothing before reuse. Do not add water to concentrated product. Do not mix with any other concentrated chemicals. Store in a cool, dry away from incompatible materials (see Section 5). Keep container tightly closed when not in use. Protect container from physical damage. Do not wear contact lenses when working with chemicals. Always practice good housekeeping when handling and storing any chemicals.