



**MATERIAL
SAFETY DATA
SHEET**

VERICIDE BRONOPOL

DATE: 06/24/2008

CAS NO: 52-51-7
SUPERSEDES: 03/28/2008

1. **CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: VERICIDE BRONOPOL
SYNONYMS: Bronopol
CHEMICAL FAMILY: Not Applicable
MOLECULAR FORMULA: C₃H₆BrNO₄
MOLECULAR WEIGHT: 200

VERICHEM, 3499 Grand Avenue, Pittsburgh, PA 15225 (412-331-7299, 8:30 am to 5:00 pm)
EMERGENCY PHONE: For any emergency involving spill, leak, fire, exposure, or accident call CHEMTREC: 1-800-424-9300. Outside the USA and Canada call: 703-527-3887.

2. **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: White to yellow crystalline solid with a slight odor
HAZARDS: DANGER! CORROSIVE KEEP OUT OF REACH OF CHILDREN
Flammable Solid. Causes severe eye burns. May be fatal if swallowed. Causes burns to the mouth and throat. May be fatal if absorbed through skin. Causes respiratory tract irritation. May cause skin irritation. May form explosive dust-air mixture. Highly toxic to fish and/or other aquatic organisms. Toxic fumes may be released in fire situations.

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

REGULATED COMPONENTS

COMPONENT	CAS NUMBER	PERCENT	WORKER EXPOSURE	REFERENCE
2-Bromo-2-Nitro-1,3-Propanediol	52-51-7	95.0 – 100.0	Not Established	

4. **FIRST AID MEASURES (IN CASE OF CONTACT)**

IF IN EYES: Immediately hold eyes open and rinse slowly and gently with water for at least 30 minutes. Get medical attention. Remove contact lenses, if present, after the first 5 minute, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN: Take off contaminated clothing. Wash skin immediately with plenty of soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and leather items that can not be cleaned thoroughly must be discarded.

IF INHALED: Move person to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have a 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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. **FIRE FIGHTING MEASURES**

FLAMMABLE PROPERTIES

FLASH POINT: >100° C (>212° F)
FLAMMABLE LIMITS (% BY VOLUME):..... Not Available
AUTOIGNITION TEMPERATURE:..... Not Available
DECOMPOSITION TEMPERATURE: 140 °C
HAZARDOUS POLARIZATION: Does Not occur

FIRE FIGHTING MEASURES cont.

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION

Use water fog, water, waterspray, alcohol resistant foam, CO₂ or dry chemical extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turn out gear. If product is heated above 140° C, the solid or solid residue from solutions decomposes exothermically, liberating toxic hydrogen bromide fumes and oxides of nitrogen, carbon dioxide, carbon monoxide and wells up to give a tarry mass which burns readily. If fire cannot be controlled and containers are heated, EVACUATE THE AREA!

6. **ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. See Section 8 for PPE requirement. Dyke area to contain spill. Soak up pooled liquid with a suitable absorbent such as clay, sawdust kitty litter or fuller's earth. Sweep up the absorbed material and place into an appropriate chemical waste container for disposal. Generously cover contaminated area with slurry of common, powdered household laundry detergent and water. Using a stiff brush, work the slurry into cracks and crevices. Allow to stand for 2-3 minutes then flush with water. Repeat if necessary. Do not discharge unless in accordance with Federal, State and Local Regulations.

7. **HANDLING AND STORAGE**

Storage Requirements: Store away from-heat sources, flames, or any ignition source. Store in original container separate from other pesticides, fertilizers, food and feed. Store in a cool dry place at recommended temperatures greater than 25° C. Keep containers tightly closed when not in use.

8. **PERSONAL PROTECTION**

EYE PROTECTION REQUIREMENTS: Wear tight fitting chemical resistant goggles or side-shield safety glasses. **SKIN PROTECTION REQUIREMENTS:** Wear chemical resistant gloves, Tyvek suit, and boots. **VENTILATION REQUIREMENTS:** Use local exhaust to control dusts. Mechanical may be adequate. **RESPIRATOR REQUIREMENTS:** Where dusts are generated, wear a NIOSH approved full-face respirator.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR: White to yellow crystalline solid with a slight odor
BOILING POINT: Not Applicable
EVAPORATION RATE: N/A
MELTING POINT: 125-130° C (257-266° F)
PERCENT VOLATILE (BY WEIGHT): N/A
pH: 4.5 –8.5
SATURATION IN AIR (PERCENT BY VOLUME): N/A
SOLUBILITY IN WATER: Soluble
SPECIFIC GRAVITY: 1.22 (water = 1)
VAPOR PRESSURE: 0.066 pascals

10. **STABILITY AND REACTIVITY**

STABILITY/THERMAL (CONDITIONS TO AVOID): Stable. Avoid oxidizing agents, bases, Aluminum and Heat **HAZARDOUS DECOMPOSITION PRODUCTS by Fire and Thermal Decomposition:** Hydrogen bromide, Nitrogen oxides **REACTIVITY:** Incompatibilities: Amines, Metals, Strong Alkalies. Hazardous polymerization will not occur. Corrosive to metal. Not an oxidizer.

11. **TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS

ORAL: LD₅₀ (Rat) >200 mg/kg
DERMAL: LD₅₀ (Rat) 1600 mg/kg
INHALATION: LC₅₀ (4hr) > 0.12 mg/l
EYE IRRITATION: Irritating-Severe (Rabbit)
SENSITIZATION: May cause allergic reaction in some individuals
SKIN IRRITATION: Irritating-Moderate (Rabbit)
SKIN ABSORPTION LD₅₀ 64 to 160 mg/kg

12. **ECOLOGICAL INFORMATION**

Rainbow Trout:	LC ₅₀ (96 hr) 26.4 mg/L
Daphnia Magna	LC ₅₀ 1.4 mg/l
Mallard Duck	LD ₅₀ Oral 510 mg/kg
.....	LD ₅₀ Dietary > 10,000 ppm
Green Algae	EC ₅₀ 96 hr 0.0537 mg/l

13. **DISPOSAL CONSIDERATION**

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If waste 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. **CONTAINER DISPOSAL:** Dispose of in a licensed facility. Recommend crushing or other means to prevent unauthorized reuse. **WASTE DISPOSAL:** Incinerate (assure that emissions comply with applicable regulations) or bury in a licensed facility in compliance with Federal, State, and Local Solid Waste Regulations. Do not discharge into waterways or sewer systems.

14. **TRANSPORT INFORMATION**

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

DOT Shipping Information

Shipping Name: 2-Bromo-2-Nitropropane-1,3-Diol Hazard Class: 4.1 Packing Group: III Subsidiary Class: N/A
UN/ID Number: 3241
Transport Label Required: Yes
D.O.T. Hazardous Substances: Flammable Solid

IMO Shipping Information

Shipping Name: 2-Bromo-2-Nitropropane-1,3-Diol Hazard Class: 4.1 Packing Group: III Subsidiary Class: N/A
UN/ID Number: 3241
Transport Label Required: Yes

ICAO/IATA

Shipping Name: 2-Bromo-2-Nitropropane-1,3-Diol Hazard Class: 4.1 Packing Group: III Subsidiary Class: N/A
UN/ID Number: 3241
Transport Label Required: Yes
Packing Instructions
 Passenger: 434
 Cargo: 434
Max. Net Quantity
 Passenger: 25 kg
 Cargo: 50 kg

TRANSPORT CANADA

Shipping Name: 2-Bromo-2-Nitropropane-1,3-Diol Hazard Class: 4.1 Packing Group: III Subsidiary Class: N/A
UN/ID Number: 3241
Transport Label Required: Yes

15. **REGULATORY INFORMATION**

INVENTORY INFORMATION

EPA: This product is an EPA registered pesticide (67869-37).
US TSCA: When used as a pesticide, its intended purpose, this product is exempt from TSCA.
CANADA DSL: Yes
EC EINECS: Yes
SARA 311/312 (Hazard categories):
 Acute Health Hazard
 Fire Hazard

SARA 303 (Extremely Hazardous Substance): To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

SARA 313 (Toxic Chemicals): To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

RCRA: It is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste.

16. OTHER INFORMATION

NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)

FIRE:	2
HEALTH:	3
REACTIVITY:	0

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