

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### FORMULATED FOR:

Loveland Products, Inc.  
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300

Medical Emergencies: 1-800-301-7976

PRODUCT NAME: BROZINE®

CHEMICAL NAME: Bromoxynil; (3,5-dibromo-4-hydroxybenzotrile); Atrazine; (2-chloro-4-ethylamino-6-isopropylamine-S-triazine)

CHEMICAL FAMILY: Nitrile Herbicide-Triazine Herbicide

EPA REG. NO.: 51036-255-34704

MSDS Number: 51036255-03

MSDS Revisions: New

Date Of Issue: 10/28/03

Supersedes: New

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Bromoxynil Octanoate	15.74	1689-84-5	none established
Atrazine	21.62	1912-24-9	5 mg/m <sup>3</sup>
Aromatic Hydrocarbon	±50.00	64742-94-5	none established
Inert Ingredients	12.64		

This product is hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

## 3. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – CAUTION – Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail.)** Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with eyes, skin or clothing.

This product is light beige liquid with an aromatic odor.

### Warning Statements:

**NOTE TO PHYSICIAN:** This product contains a petroleum distillate – vomiting may cause aspiration pneumonia. All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote is available. This product is irritating to the mucous membranes. If large amounts (greater than 1 ml/kg body weight) of the product have been ingested, the stomach should be evacuated by gastric intubation with the aid of a cuffed endotracheal tube to prevent exposure to the esophagus. After removal of stomach contents, wash stomach by instilling 30-50g of activated charcoal in 3-4 ounces of water through the stomach tube and again remove stomach contents. Avoid oily laxatives.

## 4. FIRST AID MEASURES

<b>If swallowed:</b>	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.
<b>If in eyes:</b>	Hold eye open and rinse slowly and gently with water 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.
<b>If on skin or clothing:</b>	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.
<b>If inhaled:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-800-301-7976**. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

## 5. FIRE FIGHTING MEASURES

<b>FLASH POINT (°F/Test Method):</b>	>199°F/>93.°C (PMCC)
<b>FLAMMABLE LIMITS (LEL &amp; UEL):</b>	LEL: 1.0%; UEL: 6.0% (aromatic hydrocarbon)
<b>EXTINGUISHING MEDIA:</b>	Dry chemical, carbon dioxide, foam, water spray or fog.
<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	Hydrogen bromide, oxides of nitrogen, oxides of sulfur, and oxides of carbon.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	If water is used to fight fire and cool the containers, contain run-off by diking to prevent contamination of water supplies. Containers in fire may burst or explode from excessive heat. Vapors may travel a considerable distance to source of ignition and flash back along vapor trail.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Wash the spill with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container and handle in an approved manner. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue. For large spills: contain liquid by diking the area, keep product out of water supplies. Large spills that soak into ground should be dug up to a depth of 1 to 2 inches, placed in drums and disposed of in accordance with instructions provide under DISPOSAL, section 13 of this MSDS. Any recovered spilled liquid should be similarly collected and disposed of.

**CAUTION:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**7. HANDLING AND STORAGE**

**HANDLING:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Store in a cool, well-ventilated place away from children, feed and food products, fertilizer and seed. Store in original container, tightly closed. Do not use or store near heat or open flame. Store at temperatures below 100°F/37.8°C. If frozen, place in a warm room and remix before using.

**EPA HANDLER REQUIREMENTS**  
**Worker Protection Standard – 40 CFR 170**

**Personal Protective Equipment: Applicators and other handlers must wear:** coveralls over long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, or Viton® gloves, a chemical-resistant apron when cleaning equipment, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant footwear plus socks. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** When handlers use enclosed cabs, or aircraft in a manner that meets the requirements listed in the worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**RESPIRATORY PROTECTION:** Not normally required; if vapors or mists become excessive, wear a NIOSH approved pesticide respirator with cartridges for pesticide vapors.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Xylene (mixed isomers)	435 mg/m <sup>3</sup>	434 mg/m <sup>3</sup>
Trimethylbenzene	not listed	123 mg/m <sup>3</sup>
Cumene	245 mg/m <sup>3</sup> (Skin)	246 mg/m <sup>3</sup>

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Light beige liquid with aromatic odor.

**SPECIFIC GRAVITY (Water= 1):** 1.104 g/ml

**VAPOR PRESSURE:** Not established

**PERCENT VOLATILE (by volume):** > 40%

**BULK DENSITY:** 9.21 lbs/gal.

**BOILING POINT:** >284°F/>140°C

**EVAPORATION RATE:** Not established

**SOLUBILITY:** Emulsifies

**pH:** 6.0 (1% solution)

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Temperatures above 110°F/43.3°C and below 15°F/-9.4°C.

**INCOMPATIBILITY:** Alkaline and acidic conditions and materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen bromide, oxides of nitrogen, oxides of sulfur, and oxides of carbon.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (rat):** >3,000 mg/kg

**Eye Irritation (rabbit):** Moderate irritant

**Inhalation LC<sub>50</sub> (rat):** >1.0 mg/L (4 hr).

**Carcinogenic Potential:** Nothing listed in ACGIH, NTP, or OSHA. IARC has classified Atrazine in Group 3 (Unclassifiable as to Carcinogenicity in Humans). EPA has classified Bromoxynil in Group C (Possible Human Carcinogen – Limited evidence of carcinogenicity in animals in the absence of human data). Bromoxynil is considered a developmental toxicant. Women of childbearing age should avoid handling this product.

**Acute Dermal LD<sub>50</sub> (rabbit):** >2,000 mg/kg

**Skin Irritation (rabbit):** Moderate irritant

**Skin Sensitization (guinea pig):** Possible sensitizer

**12. ECOLOGICAL INFORMATION**

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water by disposing of equipment wash waters.

**13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local, state and federal regulations.  
 Plastic Jugs: Triple rinse (or equivalent), then offer for recycling at an ACRC site or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state and federal regulations.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** COMBUSTIBLE LIQUID, N.O.S. (XYLENE RANGE SOLVENTS), NA1993, III, ERG GUIDE 128  
**U.S. Surface Freight Classification:** COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS: 60)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

**15. REGULATORY INFORMATION**

NFPA & HMIS Hazard Ratings:		NFPA		HMIS			
		2	Health	0	Least	2	Health
		2	Flammability	1	Slight	2	Flammability
		0	Instability	2	Moderate	0	Reactivity
				3	High	H	PPE
				4	Severe		

**SARA Hazard Notification/Reporting**

<b>SARA Title III Hazard Category:</b>	Immediate	<u>Y</u>	Fire	<u>Y</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** Xylene (mixed isomers) (CAS: 1330-20-7) 100 pounds; Cumene (CAS: 98-82-8) 5000 pounds  
**SARA, Title III, Section 313:** Bromoxynil (CAS: 1689-84-5) 15.74%; Atrazine (CAS: 1912-24-9) 21.62%; 1,2,4-Trimethylbenzene (CAS: 95-63-6) 16.0% maximum; Xylene (mixed isomers) (CAS: 1330-20-7) 1.5% maximum; Cumene (CAS: 98-82-8) 0.75% maximum

**RCRA Waste Code:** Not listed.

**CA Proposition 65:** This product contains Bromoxynil (CAS: 1689-84-5), a chemical known to the State of California to cause reproductive toxicity.

**16. OTHER**

**MSDS STATUS:** New

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental/ Regulatory Services

®Brozine is a registered trademark of Platte Chemical Company

®Viton is a registered trademark of DUPONT DOW ELASTOMERS L.L.C.

This product is a Restricted Use Pesticide (Ground and Surface Water Concerns)

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