



BUCTRIL® BRAND HERBICIDE

MSDS Version 2.3

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BUCTRIL® BRAND HERBICIDE
Chemical Name Bromoxynil Octanoate Ester; Octanoic Acid Ester of Bromoxynil
Synonym
MSDS Number 29
Chemical Family
Chemical Formulation C15H17Br2NO2
EPA Registration No. 264-437
Canadian Registrat. No.

Bayer CropScience
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For Product Use Information: (866)-992-2937 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

Product Use Description FIFRA regulated use only.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
BROMOXYNIL OCTANOATE	1689-99-2	32.4000	34.4000
Trimethyl benzene (1,2,4)	95-63-6	14.0000	14.9000
Xylene	1330-20-7	9.9500	10.6000
Ethyl benzene	100-41-4	1.6100	1.7200

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SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview

Warning! Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Combustible liquid.

Physical State

Liquid

Odor

Aromatic

Appearance

Brown

Immediate Effects

Eye

May cause redness, tearing. Vapors and mists can cause irritation.

Skin

May cause irritation, redness, swelling.

Ingestion

Harmful if ingested. May cause nausea, vomiting, abdominal pain, weakness of arms and/or legs. dizziness, loss of coordination. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.

Inhalation

Harmful if inhaled. May cause upper respiratory tract irritation, coughing, wheezing, nausea, headache, depression.

Chronic or Delayed Long-Term

Prolonged contact may cause chronic dermatitis, reproductive disorders, developmental problems. This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Medical Conditions Aggravated by Exposure

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

SECTION 4. FIRST AID MEASURES

Eye

Flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin

Wash with plenty of soap and water. Get medical attention if irritation develops or persists.

Ingestion

Get medical attention. Do not induce vomiting. Contains petroleum distillates. Do not give anything by mouth to an unconscious person.

Inhalation

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.

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Note to Physician 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.

Contains petroleum distillates. May pose an aspiration pneumonia hazard.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	39 °C / 102 °F Method: Tagliabue Closed Cup Combustible liquid.
Auto Ignition Temperature	454 °C / 849 °F
Lower Flammable Limit	1 %(V)
Upper Flammable Limit	6 %(V)
Fire and Explosion Hazards	Product will burn under fire conditions. Under fire conditions, toxic, corrosive fumes are emitted. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.
Suitable Extinguishing Media	Small Fires:, Dry chemical, Carbon dioxide (CO2) Large Fires:, Alcohol foam, Polymer foam Not Recommended:, Water, fire could spread readily as a burning liquid
Fire Fighting Instructions	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal	Evacuation Procedures and Safety: Wear appropriate gear for the situation. See Personal Protection information in Section 8. Eliminate all sources of ignitions until the area is determined to be free from explosion or fire hazards. Cleanup and Disposal of Spill: Pump any free liquid into an appropriate closed container. Recover material, if possible. Absorb with vermiculite or other inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Decontaminate tools and equipment following cleanup.
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Land Spill or Leaks

Containment of Spill: Dike spill using absorbent or impervious materials such as earth, sand or clay. Follow procedure under Cleanup and Disposal of Spill.

Environmental and Regulatory Reporting: Prevent material from entering public sewer system or any waterway. If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures

Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe vapors and mists.

If freezing occurs, thaw and remix before using.

Storing Procedures

Do not use or store near heat or open flame.

Do not contaminate water, food, or feed by storage or disposal.

Store in an area away from food, feedstuffs, fertilizers and seed.

Work/Hygienic Procedures

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Wash exposed skin promptly to remove accidental splashes of contact with this material.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as practical, wash thoroughly and change into clean clothing.

Min/Max Storage Temperatures

Do not transport or store below -16 °C

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering Controls** Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: Local exhaust ventilation at the point of generation.
- Eye/Face Protection** Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles.
- Chemical resistant headgear for overhead exposure.
- An emergency eye wash must be readily accessible to the work area.
- Hand Protection** Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
- Body Protection** Coveralls over long sleeved shirt and long pants.
- Chemical resistant apron when cleaning equipment, mixing or loading.
- Chemical resistance footwear plus socks.
- Respiratory Protection** When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.
- Under normal conditions, in the absence of other airborne contaminants, the following should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridge/canister approved for use against pesticides.
- Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.
- General Protection** 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/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Exposure Limits

Trimethyl benzene	95-63-6	NIOSH	REL	25 ppm	125 mg/m3
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(1,2,4)

		ACGIH	TWA	25 ppm	123 mg/m3
		OSHA Z1A	TWA	25 ppm	125 mg/m3
		US CA OEL	TWA PEL	25 ppm	125 mg/m3
		ACGIH	TWA		25 ppm
Xylene	1330-20-7	OSHA Z1	PEL	100 ppm	435 mg/m3
		OSHA Z1A	TWA	100 ppm	435 mg/m3
		OSHA Z1A	STEL	150 ppm	655 mg/m3
		US CA OEL	TWA PEL	100 ppm	435 mg/m3
		US CA OEL	Ceiling		300 ppm
		US CA OEL	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		ACGIH	TWA		100 ppm
		ACGIH	STEL		150 ppm
Ethyl benzene	100-41-4	ACGIH	TWA		100 ppm
		ACGIH	STEL		125 ppm
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	125 ppm	545 mg/m3
		OSHA Z1	PEL	100 ppm	435 mg/m3
		OSHA Z1A	TWA	100 ppm	435 mg/m3
		OSHA Z1A	STEL	125 ppm	545 mg/m3
		US CA OEL	TWA PEL	100 ppm	435 mg/m3
		US CA OEL	STEL	125 ppm	545 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown
Physical State	Liquid
Odor	Aromatic
pH	Not applicable
Vapor Density (air = 1)	3.5
Specific Gravity	1.04 at 20 °C

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Boiling Point	149 °C at 760 mmHg
Melting/Freezing Point	Freezing Point Range: -16°C to -20°C (3°F to -4°F) Melting Point Range: Not Available
Solubility (in water)	Insoluble
Molecular Weight	403.13 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	This material is stable under normal handling and storage conditions described in Section 7.
Conditions to Avoid	Elevated temperatures Open flame Spark Static electricity
Incompatibility	Strong oxidizing agents Bases Mineral acids
Hazardous Products of Decomposition	Decomposition Type: thermal Hydrogen bromide Oxides of nitrogen Oxides of sulfur Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Rat: LD50: 780 mg/kg
Acute Dermal Toxicity	Rabbit: LD50: 2,000 mg/kg
Acute Inhalation Toxicity	Rat: LC50: > 1.1 mg/l 4 h
Skin Irritation	Rabbit: Moderately irritating.
Eye Irritation	Rabbit: Moderately irritating.
Chronic Toxicity	BROMOXYNIL COMPOUNDS: EPA has classified Bromoxynil as a Class C carcinogen. Based upon the results of rat and rabbit teratogenicity studies, Bromoxynil phenol is considered to be a developmental toxicant. Women of childbearing age should be particularly careful when handling this product to avoid ingestion and skin contact. Although three in vitro genetic toxicity studies

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were positive for Bromoxynil phenol, four additional in vitro studies and two in vivo studies were negative. Therefore, the weight of evidence indicates that Bromoxynil phenol does not produce genetic toxicity.

Assessment Carcinogenicity

ACGIH

Xylene	1330-20-7	Group A4
Ethyl benzene	100-41-4	Group A3

NTP

None

IARC

Xylene	1330-20-7	3
Ethyl benzene	100-41-4	2B

OSHA

None

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

This product is toxic to fish and wildlife. 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 mean high water mark. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Classification

1330-20-7 Xylene

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U239

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SECTION 14. TRANSPORT INFORMATION

Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT Classification

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or

DOT CLASSIFICATION:

Not regulated for transportation

FREIGHT CLASSIFICATION:

Compounds, Tree or Weedkilling, N.O. I.; other than poison, having a density of 20 LBS or greater per cubic foot

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

EPA Registration No. 264-437

TSCA list

BROMOXYNIL OCTANOATE	1689-99-2
Trimethyl benzene (1,2,4)	95-63-6
Xylene	1330-20-7
Ethyl benzene	100-41-4

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

BROMOXYNIL OCTANOATE	1689-99-2	1.0%
Trimethyl benzene (1,2,4)	95-63-6	1.0%
Xylene	1330-20-7	1.0%
Ethyl benzene	100-41-4	1.0%

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

US State right-to-know ingredients

BROMOXYNIL OCTANOATE	1689-99-2	NJ
Trimethyl benzene (1,2,4)	95-63-6	CA, IL, MN, NJ, PA, RI
Xylene	1330-20-7	CA, CT, IL, MI, MN, NJ, PA, RI
Ethyl benzene	100-41-4	CA, CT, IL, MN, NJ, PA, RI

Canadian Regulations

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Canadian Registrat. No.

Canadian Domestic Substance List

Trimethyl benzene (1,2,4)	95-63-6
Xylene	1330-20-7
Ethyl benzene	100-41-4

Environmental

CERCLA

Xylene	1330-20-7	100 lbs
Ethyl benzene	100-41-4	1,000 lbs

Clean Water Section 307 Priority Pollutants

Ethyl benzene	100-41-4
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Safe Drinking Water Act Maximum Contaminant Levels

Xylene	1330-20-7
Ethyl benzene	100-41-4

International Regulations

EU Classification

BROMOXYNIL OCTANOATE	1689-99-2	Harmful Dangerous for the environment
R Phrases	Harmful in contact with skin and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of harm to the unborn child.	
S Phrases	Keep out of the reach of children. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.	
Xylene	1330-20-7	Harmful
R Phrases	Flammable. Harmful by inhalation and in contact with skin. Irritating to skin.	
S Phrases	Keep out of the reach of children. Avoid contact with the eyes.	

European Inventory of Existing Commercial Substances (EINECS)

BROMOXYNIL OCTANOATE	1689-99-2
Trimethyl benzene (1,2,4)	95-63-6
Xylene	1330-20-7
Ethyl benzene	100-41-4

SECTION 16. OTHER INFORMATION

NFPA	Health 2	Flammability 2	Reactivity 0	Others
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MSDS REVISION INDICATOR: Revise Sections: 2 (Composition/Information on Ingredients); 4 (First Aid Measures); 7 (Handling and Storage); 8 (Exposure Controls/Personal Protection); 12 (Ecological Information); 13 (Disposal Considerations)

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Print Date: 09/10/2003

Supersedes MSDS, which is older than: 09/10/2003

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