



# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Bromoxynil  
SYNONYMS: 3,5-Dibromo-4-hydroxybenzonitrile  
PRODUCT NUMBER: B155  
CAS NO: 1689-84-5  
NIOSH/RTECS NO: DI3150000  
COMPANY INFO: *PhytoTechnology Laboratories*®  
PO Box 12205 Shawnee Mission, KS 66282-2205  
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442  
www.phytotechlab.com

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent	Hazardous
Bromoxynil	1689-84-5	>98 %	No exposure limits established by OSHA or ACGIH

## 3. PHYSICAL & CHEMICAL PROPERTIES

Product Description: Bromoxynil  
Formula:  $C_7H_3Br_2NO$   
Molecular Weight: 276.92 g/mol  
Storage Temperature: RT  
pH (1.00 g/L): Under Developed (3.0 – 5.0 suspected range) (solvent dependent)  
Vapor Density: N/A  
Melting Point: 194 – 195 °C  
Specific Gravity: N/A  
Solubility: Soluble in DMSO  
Appearance: White to off-white powder  
Odor: Odorless

## 4. HAZARDS IDENTIFICATION

Label Hazard Warnings: Toxic if swallowed. Irritating to eyes, respiratory system, and skin.  
Label Precautionary Statements: In case of accident or if you feel unwell, seek medical advice immediately. Wear suitable protective clothing.  
Laboratory Protective Equipment: Safety glasses, protective gloves, lab coat, and respirator recommended.

HMIS Rating:	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Personal Protection Equipment</b>
	4	0	0	N/A
NFPA Rating:	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Special Hazards</b>
	4	0	0	N/A

Storage and Handling Precautions: Store in a tightly sealed container in a cool, dry place. Do not breathe dust. Wash thoroughly after handling

## 5. POTENTIAL HEALTH HAZARDS/ TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg):	190
	LD <sub>50</sub> (Oral-Rabbit)(mg/Kg):	260
	LD <sub>50</sub> (Oral-Mouse)(mg/Kg):	111
Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No
Effects of Overexposure:	Irritation, itching, gastrointestinal upset, nausea, vomiting, fever, weight loss, urinary problems, possible reproductive effects, other harmful or toxic effects	
Target Organs:	None identified	
Medical Conditions Aggravated By Exposure:	None identified	
Routes of Entry:	Ingestion, inhalation, and skin contact	

## 6. EMERGENCY AND FIRST AID

Route of Entry	Symptoms	First Aid Procedures
Ingestion	Toxic if swallowed.	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>
Inhalation	May be fatal if inhaled. May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b>
Skin Contact	May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

## 7. FIRE HAZARDS & FIRE FIGHTING MEASURES

Flash Point (Closed Cup):	N/A	
Flammable Limits:	Upper – N/A %	Lower – N/A %
Fire Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.	
Special Fire-Fighting Procedures:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.	
Unusual Fire & Explosion Hazards:	May emit toxic fumes under fire conditions.	
Toxic Gases Produced:	Carbon dioxide, carbon monoxide, nitrogen oxides, bromine	

## 8. REACTIVITY & CONDITIONS TO AVOID

Stability:	Stable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Incompatibles
Incompatibles:	Strong oxidizing agents, bases
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide, nitrogen oxides, bromine

## 9. SPECIAL PRECAUTIONS/PROTECTIVE EQUIPMENT

Ventilation:	Ventilation hood recommended
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.
Eye/Skin Protection:	Have eye-washing facilities readily available where eye contact can occur. Wear chemical safety goggles. Use appropriate chemical protective gloves when handling. Showering and changing into street clothes after work is recommended.

## 10. SPILLS & LEAKS

Spill or Discharge:	Wear suitable protective clothing and a self-contained breathing apparatus if available. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water.
Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations.
EPA Hazardous Waste Number:	N/A

## 11. TRANSPORTATION DATA

Domestic (D.O.T.):	Proper Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S. (Bromoxynil phenol)
	Hazard Class:	6, 1
	UN/NA:	2811
	Labels:	TOXIC
International: IMDG:	Proper Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S. (Bromoxynil phenol)
	Hazard Class:	6, 1
	UN/NA:	2811
	Labels:	TOXIC
IATA:	Proper Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S. (Bromoxynil phenol)
	Hazard Class:	6, 1
	UN/NA:	2811
	Labels:	TOXIC

## 12. REGULATORY INFORMATION

U.S. Federal Regulatory Information

**PRODUCT NAME: Bromoxynil**  
**PRODUCT NUMBER: B155**

**Page #: 3 of 4**  
**Last Revised: 25 Aug 2010**

TSCA: No

SARA TITLE III:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: Yes

Section 304 (EHS/CERCLA) Ingredients: No

SARA TITLE III NOTIFICATION INFORMATION

Acute Health Hazard: No

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

International Regulatory Information

Risk Phrases: 25 – Toxic if swallowed  
36/37/38 – Irritating to eyes, respiratory system, and skin

Safety Phrases: 45 – In case of accident or if you feel unwell, seek medical advice immediately  
36 – Wear suitable protective clothing

***Phyto*Technology Laboratories® provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. *Phyto*Technology Laboratories® shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.**