



Material Safety Data Sheet

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

Section 1—Chemical Product and Company Identification		
Product Name:	AgriSolutions™ Bison®	EPA Reg No. 9779-347
Common Name:	Bromoxynil Octanoate ester + MCPA Ethylhexyl ester	
Chemical Description:	Benzonitrile and phenoxy herbicides	
Manufacturer's Name: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	Medical Emergency Telephone Number: 1-877-424-7452 MSDS Revision Date: 07/16/2010 Supersedes document dated 04/25/2008	

Section 2—Hazards Identification
Emergency Overview: Dark amber liquid with aromatic odor. Product may cause oxygen deficiency in enclosed spaces; follow all OSHA regulations pertaining to confined space entry. See health effects below. Toxic to wildlife and fish. CAUTION: Keep out of reach of children. Route(s) of Entry: Eyes, Inhalation, Skin, and Ingestion.
Health Hazards (Acute and Chronic): Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract. Eyes: May cause moderate eye irritation. Skin: Contact may cause irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis, or other skin reactions. Ingestion: Harmful if swallowed.
Medical Conditions Generally Aggravated by Exposure: None known. Preexisting respiratory conditions may be aggravated by exposure to mists.

Section 3—Composition Information on Ingredients		
Ingredient	% (wt)	CAS reg. #
Bromoxynil octanoate	31.7%	1689-99-2
MCPA ethylhexyl ester	34.0%	29450-45-1
Naphthalene	<3.0%	91-20-3

*Ingredients not listed above are considered to be non-hazardous and are claimed as confidential business information.

NFPA HAZARD RATING:			
0	Least		
1	Slight	1	Health
2	Moderate	0	Flammability
3	High	0	Reactivity
4	Severe		

Section 4—First Aid Measures	
Inhalation:	Remove person to fresh air and assist breathing as needed. Seek medical attention if irritation persists.
Ingestion:	Seek medical attention or call a poison control center immediately. Do not induce vomiting.
Eyes:	Flush with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. Seek medical attention if eye irritation persists.
Skin:	Remove contaminated clothing and wash before re-using. Flush skin with water, and then wash with soap and water. Seek medical attention if skin becomes irritated.
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5—Fire and Explosion Hazard Data

Extinguishing Media: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components. Evacuate area and fight fire from upwind from a safe distance to avoid possible hazardous fumes and decomposition products. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.
Hazardous Combustion Products: Hydrogen chloride, hydrogen bromide, nitrogen oxides, sulfur oxides and oxides of carbon.
Unusual Fire and Explosion Hazards: May decompose in fire due to thermal decomposition, releasing irritating and toxic gases. Contain run-off by diking to prevent contamination of water supplies.

Section 6—Accidental Release Measures

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills should be cleaned up immediately to prevent spreading.
Large Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Contain spills and absorb liquids by covering with clay or other absorbent material. Vacuum, scoop, or sweep up waste and place in a container for disposal.

Section 7—Precautions for Safe Handling and Use

Precautions to Be Taken in Handling and Storage: Store in original container with lid tightly closed in cool, dry areas away from children, feed and food products and sources of heat or ignition. Immediately clean up spills that occur during handling or storage. Store above 35°F. Keep containers closed when not in use. Use only in a well-ventilated area.
Other Precautions: Consult Local, State, and Federal regulations pertaining to storage and disposal.

Section 8—Control Measures/Personal Protection

Exposure Limits: MCPA ethylhexyl ester (CAS #29450-45-1), 10 mg/M3(OSHA PEL and ACIGH TLV);
Naphthalene (CAS #91-20-3), 10 ppm (OSHA PEL and ACIGH TLV)

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a properly FIT TESTED MSHA/NIOSH-approved respirator.

Ventilation: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, or viton gloves
Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.
Other Protective Clothing or Equipment: Wear chemical resistant footwear plus socks, coveralls over a short-sleeved shirt and short pants. Wear chemical resistant apron when mixing or loading.
Work/Hygienic Practices: Never eat, drink, nor smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.
NOTE: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Section 9—Physical/Chemical Characteristics

Physical State:	Liquid	Specific Gravity (H₂O=1):	1.10 – 1.16
Vapor Pressure (mm Hg):	Not determined	Freezing Point:	Not determined
Vapor Density (Air=1):	Not determined	Boiling Point:	Not determined
Solubility in Water (wt %):	Emulsifies	pH:	4.0
Appearance and odor:	Dark amber liquid with aromatic odor	Flash Point:	>200°F

Section 10—Reactivity Data

Stability: Product stable at room temperature in closed containers under normal storage and handling conditions. May decompose if heated.
Chemical Incompatibilities: Acidic and oxidizing materials, halogenated organics, brass, copper, zinc and aluminum metals.
Conditions to Avoid: Avoid temperatures above 115°F (46°C) and below 25°F (-5°C).
Hazardous Decomposition Products: Hydrogen chloride, oxides of nitrogen, chlorinated pyridine.
Hazardous Polymerization: Product will not undergo polymerization.

Section 11—Toxicological Information

Eye Effects:	Mild irritation
Skin Effects:	LD50 > 5,000 mg/kg (male rat); Potential sensitizer; Moderate irritant
Acute Inhalation Effects:	LC50 > 2.0 mg/L (rat)
Acute Oral Effects:	LD50 = 325 mg/kg (rat)
Chronic Effects:	Not determined
Mutagenicity:	Not determined
Teratogenicity:	Bromoxynil phenol is considered a possible developmental toxicant.
Carcinogenicity:	NTP: Not listed IARC: Not listed OSHA: Not listed

Section 12—Ecological Information

Environmental Summary: Bromoxynil and MCPA are toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or near any body of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes.

Fish Toxicity: (Bromoxynil octanoate acid) 96 hour LC50, Rainbow trout – 0.05 ppm (highly toxic) 96 hour LC50, Bluegill – 0.05 ppm (highly toxic)	Avian Toxicity: (Bromoxynil octanoate acid) Oral LD50, Bobwhite quail – 145 mg/kg Oral LD50, Mallard duck – 2,050 mg/kg
Fish Toxicity: (MCPA acid) 96 hour LC50, Rainbow trout – 230 mg/L 96 hour LC50, Bluegill – unknown	Avian Toxicity: (MCPA acid) Oral LD50, Bobwhite quail – 370 mg/kg Oral LD50, Mallard duck – unknown

Section 13—Disposal Considerations

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Triple rinse (or equivalent) the empty containers. Then offer for recycling or reconditioning. For more detailed instructions refer to the product label.
RCRA characteristics: U165 (naphthalene) for disposal of this product as formulated.

Section 14—Transport Information

Not regulated by the U.S. DOT as a hazardous material in containers of 325 gallons or less.
Containers > 325 gallons: UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, PG III, RQ (naphthalene)
Emergency Response Guide #: 171

Section 15—Regulatory Information

TSCA Inventory: This product is exempt from listing requirements.			
SARA Title III, Section 302: None listed			
SARA Title III, Section 311/312:	Immediate: Yes	Delayed: No	
Sudden Release of Pressure: No	Fire: No	Reactive: No	
SARA Title III, Section 313: Bromoxynil octanoate (CAS #1689-99-2) at 31.7%; Naphthalene (CAS #91-20-3) at <3.0%			
CERCLA: Naphthalene has an RQ of 100 lbs (approx. 325 gallons of product)			
PROPOSITION 65: WARNING: This product may contain chemicals known to the State of California to cause cancer and birth defects or reproductive harm.			

Section 16—Other

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