



Safety Data Sheet (SDS)

Issue Date: 20-Nov-2020

Revision Date: 20-Nov-2020

Version 1

1. IDENTIFICATION

Product identifier

Product Name **Badge[®]**

Other means of identification

SDS # ADAMA-317

Registration Number(s) 16164 (*Pest Control Products Act*)

UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use Herbicide

Details of the supplier of the safety data sheet

Registrant

ADAMA Agricultural Solutions Canada Ltd.
300-191 Lombard Avenue
Winnipeg, Manitoba R3B 0X1
1-855-264-6262

Emergency telephone number

Emergency Telephone For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact ProPharma Group:
1-877-250-9291

2. HAZARD IDENTIFICATION

This chemical is a product registered under the *Pest Control Products Act* (PCPA) of Canada and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-PCPA registered chemicals. Please see Section 15 for additional information. This product has been classified according to Canada's *Hazardous Product Regulations* (WHMIS 2015).

Appearance: Amber to brown liquid

Physical state: Liquid

Odor: Slight aromatic odor

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Carcinogenicity	Category 2
Aspiration toxicity	Category 1

Hazard Pictogram(s)



Signal Word

DANGER

Hazard statement(s) Harmful if swallowed

Harmful if inhaled
 Causes eye irritation
 May cause an allergic skin reaction
 Suspected of causing cancer
 May be fatal if swallowed and enters airways

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 If exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up.
 Keep out of the reach of children.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight %
MCPA, 2-ethylhexyl ester	29450-45-1	30-35
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	1689-99-2	30-35
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	25-30

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Description of first aid measures

General Advice

When possible, have the product label or product name and Pest Control Product Registration Number with you when calling a poison control center or doctor or going for treatment.

Eye Contact	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.
Skin Contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
Ingestion	Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms	Harmful if swallowed. Harmful if inhaled. Causes eye irritation. May cause an allergic skin reaction. Suspected of causing cancer. May be fatal if swallowed and enters airways.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	This product contains petroleum distillates greater than 10%, vomiting may cause aspiration pneumonia. High concentrations of MCPA may cause severe irritation to the eyes. Symptoms of overexposure to MCPA could include slurred speech, twitching, jerking and spasms, drooling, low-blood pressure and unconsciousness. Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam (alcohol resistant preferred). Carbon dioxide (CO₂). Dry chemical. Water spray (fog).

Unsuitable Extinguishing Media	Not determined.
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Specific Hazards Arising from the Chemical

When heated above the flash point, this material emits vapors which, when mixed with air, can burn or be explosive. Heavier than air, vapors may travel to an ignition source.

Hazardous combustion products	Hydrogen bromide, other bromine compounds, carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur and other potentially toxic combustion products may be present.
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Explosion Data

Sensitivity to Mechanical Impact	No sensitivity expected based on similar products.
Sensitivity to Static Discharge	Sensitivity possible based on solvent data.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
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Environmental precautions

Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section
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12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material.
- Methods for Clean-Up** Surround and absorb spills with inert material such as perlite, clay granules, vermiculite, sand or dirt. Contain all affected material in a closed, labeled container for proper disposal. Isolate from other waste materials. Clean contaminated area such as hard surfaces with detergent and water, collecting cleaning solution for proper disposal. Large spills to soil or similar surfaces may necessitate removal of top soil.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Open and handle container with care.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Protect from freezing. Keep containers tightly closed in a dry, cool and well-ventilated place, but not below 0°C/ 32°F (This BADGE formulation will solidify at temperatures below -20°C but will become usable at temperatures above 0°C). Store locked up. Keep out of the reach of children. Keep/store only in original container. Do not use food or drink containers for mixing or storage. Keep away from food, drink and animal feeding stuffs.
- Packaging Materials** Do not reuse container.
- Incompatible Materials** Avoid contact with strong acidic, basic or oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

- Engineering Controls** Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Use splash goggles or face shield when contact may occur.
- Skin and Body Protection** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.
- Respiratory Protection** Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.
- General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Characteristic phenolic and hydrocarbon
Appearance	Amber to brown liquid	Odor Threshold	NA
<u>Property</u>		<u>Values</u>	<u>Remarks • Method</u>
pH		Approximately 3-5 (1% aqueous)	
Melting Point/Freezing Point		Not determined	
Boiling Point/Boiling Range		N/A	
Flash Point		>63°C/145.4°F	Pensky-Martens Closed Cup
Evaporation Rate		N/A	
Flammability (Solid, Gas)		N/A	
Flammability Limits in Air			
Upper Flammability Limits		N/A	
Lower Flammability Limit		N/A	
Vapor Pressure		N/A	
Vapor Density		N/A	
Relative Density		Approx. 1.11 g/mL	
Water Solubility		Product is emulsifiable in water	
Solubility in other solvents		Not determined	
Partition Coefficient		Not determined	
Auto-ignition Temperature		Not determined	
Decomposition Temperature		Not determined	
Kinematic Viscosity		Not determined	
Dynamic Viscosity		Not determined	
Explosive Properties		Not determined	
Oxidizing Properties		Not determined	
<u>Other information</u>			
N/A		N/A	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

See Sec. 7 Handling & Storage.

Incompatible materials

Avoid contact with strong acidic, basic or oxidizing agents.

Hazardous decomposition products

Hydrogen bromide, other bromine compounds, carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur and other potentially toxic combustion products may be present.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	Causes serious eye irritation.
Skin Contact	Avoid contact with skin.
Inhalation	Harmful if inhaled.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Bromoxynil octanoate (octanoic acid, 2,6-dibromo-4-cyanophenyl ester)	= 250 mg/kg (Rat) = 238 mg/kg (Rat)	= 1675 mg/kg (Rabbit) > 2 mg/kg (Rat)	-
MCPA, 2-ethylhexyl ester	= 1300 mg/kg (Rat)	-	-
Solvent naphtha (petroleum), heavy aromatic	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Aspiration hazard May be fatal if swallowed and enter airways

Sensitization May cause an allergic skin reaction.

Numerical measures of toxicity

Acute Inhalation LC₅₀ (Rat): 700 mg/L (4-hr)

Acute Oral LD₅₀ (Rat): 5050 mg/Kg (female)

Acute Dermal LD₅₀ (Rat): 2.34 mg/Kg

Eye Irritation: Moderately irritating

Dermal Irritation: Slightly irritating

Dermal Sensitization: Skin sensitizer

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects. This pesticide is toxic to estuarine and marine invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
MCPA, 2-ethylhexyl ester	72 h EC ₅₀ : <i>Pseudokirchneriella subcapitata</i> (microalgae) 0.46 mg/L 96 h EC ₅₀ : <i>Pseudokirchneriella subcapitata</i> 0.43 mg/L	96 h LC ₅₀ : <i>Lepomis macrochirus</i> (bluegill sunfish) 3.2 - 4.6 mg/L flow-through 96 h LC ₅₀ : <i>Lepomis macrochirus</i> 0.55 mg/L static 96 h LC ₅₀ : <i>Oncorhynchus mykiss</i> (rainbow trout) 3.2 mg/L flow-through	48 h EC ₅₀ : <i>Daphnia magna</i> (water flea) 0.29 mg/L
Solvent naphtha (petroleum), heavy aromatic	72 h EC ₅₀ : <i>Skeletonema costatum</i> (phytoplankton) 2.5 mg/L	96 h LC ₅₀ : <i>Pimephales promelas</i> (fathead minnow) 41 mg/L 96 h LC ₅₀ : <i>Pimephales promelas</i> 19 mg/L static 96 h LC ₅₀ : <i>Pimephales promelas</i> 45 mg/L flow-through 96 h LC ₅₀ : <i>Lepomis macrochirus</i> 1740 mg/L static 96 h LC ₅₀ : <i>Oncorhynchus mykiss</i> 2.34 mg/L flow-through	48 h EC ₅₀ : <i>Daphnia magna</i> 0.95 mg/L

Persistence/Degradability

Bromoxynil octanoate ester degrades readily to bromoxynil phenol I in the environment. Representative soil half-lives are 2 days for the octanoate and 14 days for the phenol.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient

Solvent naphtha (petroleum), heavy aromatic	2.9 - 6.1
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Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods**Disposal of Wastes**

Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

Dispose in accordance with all local, state/provincial and federal regulations.

Contaminated Packaging

Follow advice on product label.

Do not re-use empty containers.

Triple rinse containers.

Puncture container to avoid re-use.

Consult state and local regulations regarding the proper disposal of container.

14. TRANSPORT INFORMATION

Note

The transport classification(s) and information provided in this section are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by mode of transportation, container volume and package sizes. The transportation of materials and related activities are subject to all applicable laws, rules and requirements of regional and/or country regulations. Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT**UN/ID No**

UN3082

Proper Shipping Name

Environmentally hazardous substances, liquid or solid, n.o.s. (Bromoxynil, MCPA)

Hazard class

9

Packing Group

III

Marine Pollutant

Yes

<119 Gal (450 Liters): Not regulated when transported on land by motor vehicle or rail car in non-bulk containers.

≥119 Gal (450 Liters): REGULATED

Refer to 49 CFR §171.4, 172.101 Appendix A & 173.132(b)(3)

IATA**UN number**

UN3082

Proper Shipping Name

Environmentally hazardous substances, liquid or solid, n.o.s. (Bromoxynil, MCPA)

Transport hazard class(es)

9

Packing Group

III

Marine Pollutant

Yes

IMDG**UN number**

UN3082

Proper Shipping Name

Environmentally hazardous substances, liquid or solid, n.o.s. (Bromoxynil, MCPA)

Transport hazard class(es)

9

Packing Group

III

Marine Pollutant

Yes

TDG**UN/ID No**

UN3082

Proper Shipping Name

Environmentally hazardous substance, liquid or solid, n.o.s. (Bromoxynil, MCPA)

Hazard class

9

Packing Group

III

Marine Pollutant

Yes

Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by road or railway vehicle.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 Kg or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL / NDSL	EINECS / ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	X	X	X					X
MCPA, 2-ethylhexyl ester			X		X			X
Solvent naphtha (petroleum), heavy aromatic	X	X	X		X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

SARA 313

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	1689-99-2	30-35	1.0

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations**California Proposition 65**

Chemical Name	California Proposition 65
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	X		

CANADIAN REGULATIONS

There are Canada-specific environmental requirements for handling, use and disposal of this pest control product that are indicated on the product label.

Hazardous Products Regulations Information:

This product has been classified in accordance with the amended *Hazardous Products Act* (HPA) and the Hazard Criteria of the *Hazardous Products Regulations* (HPR), and the SDS contains all the information required by the HPR.

Hazardous Products Act Information:

Pest control products, as defined in subsection 2(1) of the *Pest Control Products Act* (PCPA), are excluded from the application of the *Hazardous Products Act* (that is, pest control products are exempt from the supplier labelling and SDS requirements of the *Hazardous Products Act and Regulations*). This product is exempt under WHMIS 2015 but has voluntarily been classified according to the WHMIS 2015 standard.

Pest Control Products Act Registration Number: 16164

Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product.

Product Statement

This chemical is a pest control product registered and regulated by Health Canada's Pest Management Regulatory Agency (PMRA) and is subject to certain labelling requirements under the *Pest Control Products Act*. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets, and for workplace labels of non-PCPA registered chemicals. Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product. The following is the hazard information required on the pest control product label:

PCPA Label Hazard Communications

WARNING POISON

KEEP OUT OF REACH OF CHILDREN

Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes immediately. Avoid working in spray mist. After use wash hands and other exposed skin.

Difference between SDS and Pest Control Products Act label

	PCPA	SDS
Signal Word	Warning Poison	Danger
Acute toxicity - Inhalation	N/A	Harmful if inhaled
Acute toxicity - Oral	N/A	Harmful if swallowed
Acute toxicity - Dermal	N/A	N/A
Serious Eye Damage/Eye Irritation	N/A	Causes eye irritation
Skin Corrosion/Irritation	N/A	N/A
Skin sensitization	N/A	May cause an allergic skin reaction
Carcinogenicity	N/A	Suspected of causing cancer
Aspiration	N/A	May be fatal if swallowed and enters airways

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	2	2	0	None
<u>HMIS</u>	Health Hazards	Flammability	Physical hazards	Personal Protection
	2	2	0	See Section 8

Issue Date: 20-Nov-2020
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Revision Note: New

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet