



Safety Data Sheet

Issue Date: 13-Dec-2016

Revision Date: 21-Apr-2017

Version 2

1. IDENTIFICATION

Product Identifier

Product Name **Thrasher II**

Other means of identification

SDS # ADAMA-207

Registration Number(s) Not registered in the US
Pest Control Product Reg. No. 30372

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

Manufacturer Address

ADAMA Agricultural Solutions Canada Ltd.
302 – 179 McDermot Avenue
Winnipeg, MB R2B 0S1
1-855-264-6262

Emergency Telephone Number

Emergency Telephone (24 hr) 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 PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Canadian Pest Control Products Act 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) and the US Hazard Communication Standard (HCS 2012).

Appearance Amber to brown liquid

Physical state Liquid

Odor Characteristic phenolic and hydrocarbon

Classification

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

Signal Word

Danger

Hazard statements

Harmful if swallowed

Harmful if inhaled

Causes serious eye irritation

Causes skin irritation

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

Precautionary Statements - Response

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

Take off contaminated clothing and wash before reuse

If skin irritation occurs: Get medical advice/attention

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: Immediately call a POISON CENTER or doctor/physician

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

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Chemical Name	CAS No.	Weight-%
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	1689-99-2	28-32
2,4-D,2-ethylhexyl ester	25168-26-7	28-32
Solvent #1	Proprietary	30-34
Emulsifier	Proprietary	<10
Solvent #2	Proprietary	<1

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.

4. FIRST AID MEASURES

First Aid Measures

General Advice	IF exposed: Call a poison center or doctor/physician.
Eye Contact	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.
Skin Contact	Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Ingestion	Immediately call a poison center or doctor/physician. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects

Symptoms	Harmful if swallowed. Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. 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 at greater than 10%, vomiting may cause aspiration pneumonia. This product may cause mild irritation to the eyes. Overexposure to 2,4-D may cause coughing, burning, dizziness or temporary loss of muscle coordination. Other possible effects of overexposure include fatigue, muscle weakness or nausea. Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Alcohol resistant foam. Carbon dioxide (CO₂). Dry chemical.

Unsuitable Extinguishing Media Not determined.

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.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use safety equipment and procedures appropriate to the size of the spill. Keep potential ignition sources and unnecessary people away.

Environmental precautions

Environmental precautions Avoid runoff to natural waters and sewers.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- 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** 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Store locked up. Keep out of the reach of children.
- Incompatible Materials** Avoid contact with strong acidic, basic or oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Solvent #2	TWA: 10 ppm S* (Skin)	TWA: 10 ppm TWA: 50 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³

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** Goggles or face shield when handling concentrate.
- Skin and Body Protection** Chemical-resistant gloves such as nitrile. Long sleeved shirt, long pants, socks and shoes suggested as minimum work clothing. Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5L. Use other equipment appropriate to specific situations.
- Respiratory Protection** Use an approved pesticide respirator if ventilation is not adequate or exposure to sprays, mists or concentrated vapors is likely.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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	Not determined
Color	Amber to brown		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	3.3 (1% dilution)		
Melting Point/Freezing Point	Approx. -20°C/-4°F		
Boiling Point/Boiling Range	NA		
Flash Point	>100°C/212°F		
Evaporation Rate	NA		
Flammability (Solid, Gas)	Liquid-Not applicable		
Flammability Limits in Air			
Upper Flammability Limits	NA		
Lower Flammability Limit	NA		
Vapor Pressure	NA		
Vapor Density	NA		
Relative Density	1.16	(Water = 1)	
Water Solubility	Product is emulsifiable in water		
Solubility in other solvents	NA		
Partition Coefficient	Not determined		
Auto-ignition Temperature	NA		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

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

Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid

None known.

Incompatible Materials

Avoid contact with strong acidic, basic or oxidizing agents.

Hazardous Decomposition Products

Hydrogen bromide. Other bromine compounds. Hydrogen chloride. Other chlorine compounds. Carbon dioxide (CO₂). 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

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Solvent #1	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester) CAS No. 1689-99-2	= 250 mg/kg (Rat) = 238 mg/kg (Rat)	= 1675 mg/kg (Rabbit) > 2 mg/kg (Rat)	-
2,4-D,2-ethylhexyl ester CAS No. 25168-26-7	= 982 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Emulsifier	> 90 mL/kg (Rat)	-	-
Solvent #2	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	(= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

Information on physical, chemical and toxicological effects

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 Suspected of causing cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
2,4-D,2-ethylhexyl ester CAS No. 25168-26-7		Group 2B		X
Solvent #2	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Aspiration hazard May be fatal if swallowed and enters airways.

Numerical measures of toxicity

Acute Oral LD50 (Rat): 606 mg/kg

Acute Dermal LD50 (Rabbit): >2,000 mg/kg

Acute Inhalation LC50 (Rat): 2.04 mg/L (4-hr)

Eye Irritation: Moderately irritating.

Dermal Irritation: Moderately irritating.

Dermal Sensitization: Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

Toxic to small mammals, birds, aquatic organisms and non-target terrestrial plants.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Solvent #1	2.5: 72 h Skeletonema costatum mg/L EC50	41: 96 h Pimephales promelas mg/L LC50 1740: 96 h Lepomis macrochirus mg/L LC50 static 2.34: 96 h Oncorhynchus mykiss mg/L LC50 19: 96 h Pimephales promelas mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through	0.95: 48 h Daphnia magna mg/L EC50
Solvent #2	0.4: 72 h Skeletonema costatum mg/L EC50	5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through 1.99: 96 h Pimephales promelas mg/L LC50 static 0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 31.0265: 96 h Lepomis macrochirus mg/L LC50 static	1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static 1.96: 48 h Daphnia magna mg/L EC50 Flow through 2.16: 48 h Daphnia magna mg/L LC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Solvent #1	2.9 - 6.1
Solvent #2	3.6

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Please review product label for Canadian container disposal requirements.

Other Information

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

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
2,4-D,2-ethylhexyl ester 25168-26-7	U240			U240
Solvent #2	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145		U165

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Solvent #2			Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Solvent #2	Toxic

14. TRANSPORT INFORMATION

DOT

UN/ID No UN3082
Proper Shipping Name Environmentally Hazardous Substance, liquid, n.o.s. (Bromoxynil, 2,4-D)
Hazard Class 9
Packing Group III
Marine Pollutant Yes

TDG

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 a road or railway vehicle.

IATA

UN/ID No UN3082
Proper Shipping Name Environmentally Hazardous Substance, liquid, n.o.s. (Bromoxynil, 2,4-D)
Hazard Class 9
Packing Group III
Marine Pollutant Yes

IMDG

UN/ID No UN3082
Proper Shipping Name Environmentally Hazardous Substance, liquid, n.o.s. (Bromoxynil, 2,4-D)
Hazard Class 9
Packing Group III
Marine Pollutant Yes

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINC S	ENCS	IECSC	KECL	PICCS	AICS
Solvent #1	X	X	X		X	Present	X	X
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	X	X	X					X
2,4-D,2-ethylhexyl ester			X					X
Emulsifier	X	X	X		X	Present	X	X
Solvent #2	X	X	X	Present	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/ELINC S - 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

Chemical Name	Hazardous Substances RQs	Reportable Quantity (RQ)
2,4-D,2-ethylhexyl ester 25168-26-7	100 lb	RQ 100 lb final RQ 45.4 kg final
Solvent #2	100 lb	RQ 100 lb final RQ 45.4 kg final

SARA 313

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester)	1689-99-2	28-32	1.0
Solvent #2		<1	0.1

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
2,4-D,2-ethylhexyl ester	100 lb			X
Solvent #2	100 lb	X	X	X

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	California Proposition 65
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester) - 1689-99-2	Developmental
Solvent #2 -	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Bromoxynil octanoate (octanoic acid,2,6-dibromo-4-cyanophenyl ester) 1689-99-2	X		
2,4-D,2-ethylhexyl ester 25168-26-7		X	X
Emulsifier			X
Solvent #2	X	X	X

Pesticide Registration Number Reg. No. 30372

Pest Control Product Statement

This chemical is a product registered by the Canadian Pest Control Products Act 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.

Pesticide Label

WARNING POISON
CAUTION: EYE IRRITANT
CAUTION: SKIN IRRITANT
KEEP OUT OF THE REACH OF CHILDREN

Difference between SDS and pesticide label

	PCPA	OSHA
Signal Word	Warning/Poison	Danger
Acute toxicity - Oral	Harmful or fatal if swallowed.	Harmful if swallowed
Acute toxicity - Inhalation	N/A	Harmful if inhaled
Skin corrosion	Skin irritant	Causes skin irritation
Eye Damage	Eye irritant	Causes serious eye irritation
Carcinogenicity	N/A	Suspected of causing cancer
Aspiration	N/A	May be fatal if swallowed and enters airways

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

Not determined

Not determined

Not determined

Not determined

HMIS**Health Hazards****Flammability****Physical hazards****Personal Protection**

Not determined

Not determined

Not determined

Not determined

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Revision Note:

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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