

MATERIAL SAFETY DATA SHEET

THRASHER II

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1. IDENTIFICATION

Product name: **THRASHER II (PCP Reg. No. 30372)**
Chemical name of active ingredient(s): Bromoxynil present as octanoic ester: 3,5-dibromo-4-hydroxybenxonitrile
2,4-D present as 2-ethylhexyl ester: (2,4-dichlorophenoxy) acetic acid
Manufacturer/Registrant: Makhteshim Agan of North America, Inc.
3120 Highwoods Boulevard, Suite 100
Raleigh, NC 27604
Phone: 1-919-256-9300
For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053
For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (CARCINOGEN)
Bromoxynil octanoate	1689-99-2	28-32	NA	NA	NA	NA
2,4-D, 2-ethylhexyl ester	25168-26-7	28-32	10 mg/m ³ (TWA)	10 mg/m ³ (TWA)	NA	NA
Aromatic hydrocarbons containing:	64742-94-5	30-34	525 mg/m ³ (TWA)	NE	NE	NA
Naphthalene	91-20-3	< 1	50 mg/m ³ (TWA)	52 mg/m ³ (TWA)	NA	IARC: 2B NTP: 2
Emulsifiers and other proprietary ingredients	NA	< 10	NA	NA	NA	NA

NA=Not applicable; NE: Not Established.

IARC Group 2B: The agent is possibly carcinogenic to humans. The exposure circumstance entails exposures that are possibly carcinogenic to humans.

NTP Group 2: Substances or groups of substances, and medical treatments, which may reasonably be anticipated to be carcinogens.

3. HAZARDS IDENTIFICATIONS

PHYSICAL PROPERTIES:

Appearance: Amber to brownish liquid

Odor: Characteristic phenolic and hydrocarbon

EMERGENCY OVERVIEW: Warning Poison. Eye and skin irritant. Harmful or fatal if swallowed. May irritate eyes and skin. Keep out of reach of children. Avoid contact with skin, eyes and clothing. 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. Avoid contamination of ponds, streams, rivers and other water sources. Avoid spray drift onto crops other than those recommended.

PRINCIPLE ROUTES OF EXPOSURE: Eye contact. Skin absorption. Inhalation. Oral.

EFFECTS OF ACUTE EXPOSURE:

INGESTION: Harmful or fatal if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness, central nervous system depression, unconsciousness, respiratory failure, or in extreme cases, death. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possibly death.

SKIN CONTACT: Causes moderate skin irritation. Harmful if absorbed through the skin. Overexposure by skin absorption may cause symptoms similar to those for ingestion. May cause allergic reaction in sensitive individuals.

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INHALATION: Low to moderate inhalation toxicity based on laboratory animal testing of a similar formulation as a mist. Inhalation toxicity by vapour is unlikely under normal conditions, however, high concentrations of vapours from undiluted product may cause headache, dizziness, respiratory tract irritation and symptoms similar to those from ingestion.

EYE CONTACT: Causes moderate eye irritation.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen bromide, other bromine compounds, hydrogen chloride, other chlorine compounds, carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur and other potentially toxic combustion products may be present.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin exposure may aggravate preexisting skin conditions. Inhalation of spray mist may aggravate preexisting respiratory conditions.

4. FIRST AID

FIRST AID:

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: 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.

IN ON SKIN/CLOTHING: 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.

IF INHALED: 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.

Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: 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.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 100°C

FLAMMABLE LIMITS:

LFL: NA. Approximately 11-13 for hydrocarbon component.

UFL: NA. Approximately 1.5-2.1 for hydrocarbon component.

EXTINGUISHING MEDIA: Water fog, alcohol foam, carbon dioxide, dry chemical.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen bromide, other bromine compounds, hydrogen chloride, other chlorine compounds, carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur and other potentially toxic combustion products may be present.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible mixture. When heated above flash point, this material emits vapours which, when mixed with air, can burn or be explosive. Heavier than air vapours may travel to an ignition source.

FIRE-FIGHTING PROCEDURES: Firefighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Minimize and contain water runoff.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Use safety equipment and procedures appropriate to the size of the spill. Keep potential ignition sources and unnecessary people away. Avoid runoff to natural waters and sewers. Surround and absorb spills with inert material such as perlite, clay granules, vermiculite, sand or dirt. Contain all

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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 TO BE TAKEN IN HANDLING: This product is not extremely combustible, but it is suggested to handle as a combustible liquid. Keep away from potential ignition sources. This material may accumulate a static charge that can discharge violently. Empty, unrinsed containers can retain combustible liquid product or vapours. Improper handling of these may cause injury, or in extreme cases, death. Keep away from food and feed products. Avoid storage in close proximity to insecticides, fungicides, fertilizers, plants and seeds. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

PRECAUTIONS TO BE TAKEN IN STORAGE: Product will solidify below minus 20°C but will become usable at temperatures above 0°C. Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination. Shake well before using.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear (e.g., full-face shield or safety glasses).

SKIN PROTECTION: Coveralls over long-sleeved shirt and long pants, shoes plus socks and head covering (for overhead exposure).

HAND PROTECTION: Chemical-resistant nitrile gloves.

RESPIRATOR REQUIREMENTS: Use an approved pesticide respirator if ventilation is not adequate or exposure to sprays, mists or concentrated vapours is likely.

ADDITIONAL PROTECTIVE MEASURES: Discarded 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 and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 situation.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Use in a well ventilated area. General ventilation with a good source of make-up air recommended as minimum for indoor situations. Ventilation should be adequate to maintain air concentrations below flammable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Amber to brownish liquid

ODOR: Characteristic phenolic and hydrocarbon

FLASH POINT: > 100°C

pH: 3.3 (1% dilution)

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DENSITY: 1.16 g/mL

SOLUBILITY IN WATER: Emulsifiable in water.

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.

CONDITIONS TO AVOID: None known

MATERIALS TO AVOID: Avoid contact with strong acidic, basic or oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen bromide, other bromine compounds, hydrogen chloride, other chlorine compounds, carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur and other potentially toxic combustion products may be present.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD50 (Rat):	606 mg/kg
Acute Dermal LD50 (Rat):	>2,000 mg/kg
Acute Inhalation LC50 (Rat):	>2.04 mg/L (4-hr)
Eye Irritation (Rabbit):	Moderately irritating.
Dermal Irritation (Rabbit):	Moderately irritating.
Dermal Sensitization (Guinea Pig):	Not available.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: 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. This product will harm other broadleaved plants in the vicinity of the treatment area. Do not directly spray or allow the spray to drift onto ornamentals or gardens.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PRODUCT DISPOSAL: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

CONTAINER DISPOSAL: Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site: 1) Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. 2) Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For disposal of returnable containers, this empty container may be returned to the point of purchase (distributor/dealer). For disposal of returnable-refillable containers, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

14. TRANSPORT INFORMATION

CANADIAN TDG DESCRIPTION (Road & Rail): Contact manufacturer for updates to transport information.

Refer to carton markings.

2012 and earlier production: UN 2902, PESTICIDE, LIQUID, TOXIC, N.O.S. (BROMOXYNIL), 6.1, PG III.

2013 and later production: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bromoxynil), Class 9, PG III

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.

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15. REGULATORY INFORMATION

CANADIAN REGULATIONS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the CPR.

INGREDIENT DISCLOSURE LIST:

Naphthalene CAS #:91-20-3 (< 1%)

DOMESTIC SUBSTANCES LIST:

Heavy aromatic petroleum hydrocarbons CAS #: 64742-94-5 (30%-34%)

NON-DOMESTIC SUBSTANCES LIST:

Bromoxynil (present as octanoate ester) CAS #:1689-99-2 (28%-32%)

U.S. FEDERAL REGULATIONS:

REGULATIONS UNDER FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

Delayed health hazard (chronic)

Fire

Section 313: Bromoxynil octanoate CAS #: 1689-99-2 (28%-32%)

CA PROPOSITION 65: This material contains a substance (bromoxynil octanoate) known to the State of California to cause development toxicity. This material contains a substance (naphthalene) known to the State of California to cause cancer.

CERCLA RQ: 2,4-D RQ=100 lbs. Naphthalene RQ=100 lbs

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

MSDS DATE: 11-20-13. Changes made to Section 14.

The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.