

MATERIAL SAFETY DATA SHEET

BADGE

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1. IDENTIFICATION

Product name: **BADGE (PCP REG. NO. 16164)**
Chemical name of active ingredient(s): Bromoxynil : 2,6,-Dibromo-4-cyanophenyl octanoate
MCPA : 4-chloro-2-methylphenoxyacetic acid
Manufacturer/Registrant: Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Road, Suite 300
Raleigh, NC 27609
Phone: 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 Prostar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (CARCINOGEN)
Bromoxynil (present as octanoate ester)	1689-99-2	31.38	NA	NA	NA	NA
MCPA (present as 2-ethylhexyl ester)	29450-45-1	32.49	NA	NA	NA	NA
Heavy aromatic petroleum hydrocarbons:	64742-94-5	28.93	100 ppm 525 mg/m ³	NA	NA	NA
Contains Naphthalene (% of total)	91-20-3	2.89	10 ppm 50 mg/m ³	10 ppm 52mg/m ³	NA	NTP – 2* IARC –2B**

* Substances, which may reasonably be anticipated to be carcinogens.

** Substance is possibly carcinogenic to humans.

3. HAZARDS IDENTIFICATIONS

PHYSICAL PROPERTIES

Appearance: Brown liquid

Odor: Aromatic

EMERGENCY OVERVIEW: WARNING. Avoid contact with skin, eyes and clothing. Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Wash concentrate from skin or eyes immediately. Avoid working in spray mist. After use wash hands and other exposed skin. 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. Avoid contamination of ponds, streams, rivers and other water sources.

IMMEDIATE EFFECTS:

Eye: Causes redness, tearing. Vapors and mists can cause irritation.

Skin: Harmful if absorbed through skin. May cause irritation, redness, swelling.

Ingestion: Harmful if ingested. May cause nausea, vomiting, abdominal pain, weakness of arms and/or legs, dizziness, loss of coordination. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.

Inhalation Harmful if inhaled. May cause upper respiratory tract irritation, coughing, wheezing, nausea, headache, depression.

Chronic or Delayed Long-Term: Prolonged contact may cause chronic dermatitis, developmental problems. Prolonged contact can cause liver damage, kidney damage, central nervous system damage, anemia. This product contains ingredients that are considered to be probable or suspected human carcinogens.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease.

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PRIMARY ROUTES OF EXPOSURE: Eye and skin contact, and inhalation.

4. FIRST AID

FIRST AID:

Remove person from contaminated area, remove contaminated clothing. Keep patient warm, comfortable, at rest. Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

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/Clothing 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.

5. FIRE FIGHTING MEASURES

FLASH POINT: 63.0°C

FLAMMABLE LIMITS: LFL/UFL: N/A

EXTINGUISHING MEDIA: Recommended (small fires): dry chemical, carbon dioxide. Recommended (large fire): alcohol foam, polymer foam. Not Recommended: water (fire could spread readily as a burning liquid)

HAZARDOUS DECOMPOSITION PRODUCTS: N/A.

FIRE AND EXPLOSION HAZARDS: Under fire conditions, toxic, corrosive fumes are emitted. Containers may explode (due to the build-up of pressure) when exposed to extreme heat. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.

SPECIAL FIRE-FIGHTING PROCEDURES: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation. Cool containers exposed to fire with water.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Dike spill using absorbent or impervious materials such as earth, sand, or clay. Prevent material from entering public sewer system or any waterway. If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal.

Clean up small spills immediately, use proper personal protection. Absorb spill with absorbent material such as pet litter. Sweep up and place in a chemical container. Seal the container and handle in an approved manner. Keep spills out of streams and domestic water supplies. Dike to prevent contamination of local water sources. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. Dispose of all waste and rinsate in the appropriate manner. Decontaminate tools and equipment following cleanup.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Keep container closed when not in use. Handle and open container in a manner as to prevent spillage. Do not get on skin or in eyes. Do not ingest. Avoid breathing vapors and mists. If freezing occurs, thaw and remix before using. Wash hands and face carefully before eating, drinking,

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using tobacco, applying cosmetics, or using the toilet. Wash exposed skin promptly to remove accidental splashes of contact with this material.

PRECAUTIONS TO BE TAKEN IN STORAGE: This BADGE EMULSIFIABLE SELECTIVE WEEDKILLER formulation will solidify at temperatures below -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.

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., goggles or full-face shield).

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

HAND PROTECTION: Chemical-resistant nitrile gloves.

RESPIRATOR REQUIREMENTS: In areas with inadequate ventilation a NIOSH-approved chemical cartridge respirator with organic vapor cartridges and pesticide pre-cartridges or a self-contained breathing apparatus may be required when working with this product.

ENGINEERING CONTROLS: Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Brown liquid

ODOR: Aromatic

FLASH POINT: 63°C

pH: 3.5-5.5

DENSITY: 1.11 g/mL

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.

CONDITIONS TO AVOID: Elevated temperatures; Open flame; Spark; Static electricity.

MATERIALS TO AVOID: Strong oxidizing agents; Bases; Mineral acids.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition Type: thermal Hydrogen bromide; Oxides of nitrogen; Oxides of sulfur; Carbon oxides

11. TOXICOLOGICAL INFORMATION

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ACUTE TOXICITY/IRRITATION STUDIES

Acute Oral LD50 (Rat):	600-2,000 mg/kg
Acute Dermal LD50 (Rat):	> 5,000 mg/kg
Acute Inhalation LC50 (Rat):	4.8 mg/L (4-hr)
Eye Irritation (Rabbit):	Not irritating.
Dermal Irritation (Rabbit):	Not irritating.
Dermal Sensitization (Guinea Pig):	Moderate skin sensitizer

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. Avoid contamination of ponds, streams, rivers and other water sources.

ECOLOGICAL TOXICITY:

96 H-LC50 Rainbow trout [mg/l]: 0.041 (Bromoxynil octanoate); 56-560 (MCPA)
48 H-EC50 Daphnia magna [mg/l]: 0.046 (Bromoxynil octanoate); >190 (MCPA)
72 H-EC50 Algae [mg/l]: 0.043 (Bromoxynil octanoate); >392 (MCPA)
LD50 Birds [mg/kg]: Bobwhite quail 170 (Bromoxynil octanoate); 377 (MCPA)
Bees LD50 [µg/Bee]: Not toxic to bees
Persistence and degradability (soil): The product is not persistent.

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: RECYCLABLE 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: Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. 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. RETURNABLE CONTAINER DISPOSAL: Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer). REFILLABLE CONTAINER DISPOSAL: For disposal, 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

DOT CLASSIFICATION:

Non-bulk : Not regulated

Bulk (>5L): UN 3082, Environmentally Hazardous Substances, Liquid, N.O.S. (Bromoxynil), 9, PGIII, Marine Pollutant

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN 3082, Environmentally Hazardous Substances, Liquid, N.O.S. (Bromoxynil), 9, PGIII, Marine Pollutant

IATA (air): Not regulated.

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:

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Naphthalene CAS #:91-20-3 (2.89%)

DOMESTIC SUBSTANCES LIST:

Heavy aromatic petroleum hydrocarbons CAS #: 64742-94-5 (28.93%)

NON-DOMESTIC SUBSTANCES LIST:

Bromoxynil (present as octanoate ester) CAS #:1689-99-2 (31.38%)

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)

Section 313: Bromoxynil (present as octanoate ester) CAS #:1689-99-2 (31.38%)

CERCLA RQ: Naphthalene RQ=100 lbs

CA Prop 65: This material contains a substance (Bromoxynil Octanoate Technical) known to the State of California to cause development toxicity.

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

HAZARD RATINGS	NFPA	HMIS	
HEALTH:	2	2	0 MINIMAL
FLAMMABILITY:	1	1	1 SLIGHT
REACTIVITY:	0	0	2 MODERATE
			3 HIGH
			4 SEVERE

MSDS DATE: 5-6-09.

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.