

Section 1: IDENTIFICATION

Product Name: Logic M
Pest Control Product Number: 28109
Product Use: Phenoxy (Broadleaf) Herbicide.
Restrictions on Use: Not available.
Manufacturer/Supplier: Interprovincial Cooperative LTD. (IPCO)
945 Marion Street
Winnipeg, MB R2J 0K7
Phone Number: 204.233.3461
Emergency Phone: 204.233.3461
CANUTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or
*666 on a cellular phone.
Date of Preparation of SDS: April 3, 2020

Section 2: HAZARD(S) IDENTIFICATION**GHS INFORMATION**

Classification: Flammable Liquids, Category 4
Acute Toxicity - Oral, Category 4
Skin Irritation, Category 2
Eye Damage, Category 1
Sensitization - Skin, Category 1
Reproductive Toxicity, Category 2
Aspiration Hazard, Category 1

LABEL ELEMENTS**Hazard****Pictogram(s):****Signal Word:** Danger

Hazard Statements: Combustible liquid.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
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.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing mist, vapours, or spray.



Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing and eye protection.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical attention.
Immediately call a POISON CENTER or doctor.
Rinse mouth.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry chemical, CO2, water spray or regular foam to extinguish.

Storage: Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal: Dispose of contents and container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: None.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Table with 4 columns: Hazardous Ingredient(s), Common name / Synonyms, CAS No., % wt./wt.
Rows include: (4-Chloro-2-methylphenoxy)acetic acid, Octanoic acid, 2,6-dibromo-4-cyanophenyl ester, Distillates (petroleum), hydrotreated light *

* Distillates (petroleum), hydrotreated light may contain Naphthalene (CAS No. 91-20-3) and/or 1,2,4-Trimethylbenzene (CAS No. 95-63-6).

Section 4: FIRST-AID MEASURES

Inhalation: If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness.

Eye Contact: If in eyes: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

Acute and delayed symptoms and effects: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Acute and delayed symptoms and effects: May cause an allergic skin reaction. Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: If swallowed: Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: Harmful if swallowed. May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Combustible liquid. Containers may explode when heated.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO₂, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Do not scatter spilled material with high pressure water streams. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of carbon. Oxides of nitrogen. Hydrochloric acid. Chlorine. Bromide.

Protection of Firefighters: Fire may produce irritating, corrosive and/or toxic gases. Some liquids produce vapors that may cause dizziness or suffocation. Runoff from fire control may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet). Keep unauthorized personnel away. Stay upwind.

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. Prevent dust cloud.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. Large spills should be removed with explosion proof vacuum equipment.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:
Do not swallow. Avoid breathing mist, vapours, or spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. See Section 8 for information on Personal Protective Equipment.

Storage:
Store in a well-ventilated place. Keep cool. Store locked up. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Guidelines
Component**

(4-Chloro-2-methylphenoxy)acetic acid (MCPA) [CAS No. 94-74-6]

ACGIH: No TLV established.

OSHA: No PEL established.

Bromoxynil octanoate [CAS No. 1689-99-2]

ACGIH: No TLV established.

OSHA: No PEL established.

Distillates (petroleum), hydrotreated light [CAS No. 64742-47-8]

ACGIH: 100 ppm (TWA); (1980); For Stoddard solvent

OSHA: 500 ppm (TWA), 2900 mg/m³ (TWA); For Stoddard solvent.
100 ppm (TWA) [Vacated]; For Stoddard solvent.

Naphthalene [CAS No. 91-20-3]

ACGIH: 10 ppm (TWA); Skin; A3 (2013)

OSHA: 10 ppm (TWA), 50 mg/m³ (TWA)
15 ppm (STEL) [Vacated];

1,2,4-Trimethylbenzene [CAS No. 95-63-6]

ACGIH: 25 ppm (TWA); (1970)

OSHA: No PEL established.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating, and lighting equipment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear chemical safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection:

Wear protective gloves. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing. Flame resistant clothing that meets the NFPA 2112 and CAN/CGSB 155.20 standards is recommended in areas where material is stored or handled.

Respiratory Protection:

If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, with organic vapor cartridge, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown liquid.
Colour:	Brown.
Odour:	Solvent.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH (1% solution):	4.5
Melting Point / Freezing Point:	< 0 °C (32 °F)
Initial Boiling Point:	184 °C (363.2 °F) (Distillates, petroleum, hydrotreated light)
Boiling Range:	184 to 205 °C (363.2 to 401 °F) (Distillates, petroleum, hydrotreated light)
Flash Point:	65 °C (149 °F) (TCC)
Evaporation Rate:	< 0.06 (n-BuAc = 1) (Distillates, petroleum, hydrotreated light)
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	1.8 % (Distillates, petroleum, hydrotreated light)
Upper Flammability Limit:	11.4 % (Distillates, petroleum, hydrotreated light)
Vapor Pressure:	0.4 kPa at 20 °C (68 °F) (Distillates, petroleum, hydrotreated light)
Vapor Density:	Not available.
Relative Density:	1.12 (Water = 1) at 20 °C (68 °F)
Solubilities:	Emulsifies in water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	433 °C (811.4 °F) (Distillates, petroleum, hydrotreated light)
Decomposition Temperature:	Not available.
Viscosity:	14 cP at 20 °C (68 °F)
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: Stable under normal storage conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral: 726 mg/kg (rat)

Dermal: 3172 mg/kg (rabbit)

Inhalation: 7.66 mg/L (rat); 4H

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
(4-Chloro-2-methylphenoxy)acetic acid (MCPA)	94-74-6	700 mg/kg (rat)	> 2000 mg/kg (rabbit)	1370 mg/m ³ (rat); 4H
Bromoxynil octanoate	1689-99-2	250 mg/kg (rat)	1675 mg/kg (rabbit)	Not available.
Distillates (petroleum), hydrotreated light	64742-47-8	Not available.	Not available.	Not available.
Naphthalene	91-20-3	490 mg/kg (rat)	> 2500 mg/kg (rat)	> 340 mg/m ³ (rat); 1H
1,2,4-Trimethylbenzene	95-63-6	5000 mg/kg (rat)	Not available.	18000 mg/m ³ (rat); 4H

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion. Skin absorption.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Liver. Kidneys. Central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness.

Eye: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.



Skin: May cause an allergic skin reaction. Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: Harmful if swallowed. May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Exposure to Naphthalene may aggravate glucose-6-phosphate dehydrogenase deficiency.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Liver. Kidneys. Reproductive system. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. 1,2,4-Trimethylbenzene may cause CNS changes, asthmatic bronchitis, and changes in the blood such as anemia or thrombocytopenia (i.e. low thrombocyte count that may affect the blood's ability to clot).

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Naphthalene	A3	Group 2B	List 2	OSHA Carcinogen.	Listed.

Mutagenicity: For MCPA, there have been some positive and some negative studies, but the weight of evidence is that the substance is not mutagenic.

Reproductive Effects: Suspected of damaging fertility or the unborn child. Testicular effects have been noted in animal studies on MCPA. Lower male fertility has been observed in animal studies on MCPA.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: MCPA studies in laboratory animals have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

When transported by ground, the product is exempt from the requirements of the Canadian Transport of Dangerous Goods Regulations and those of the US Hazardous Materials Regulations.

For air or marine transport:

U.S. Department of Transportation (DOT)

Proper Shipping Name: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bromoxynil octanoate), 9, PG III

Class: 9

UN Number: UN3082

Packing Group: III

Label Code:



Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bromoxynil octanoate), 9, PG III

Class: 9

UN Number: UN3082

Packing Group: III

Label Code:



Section 15: REGULATORY INFORMATION

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III Component

SARA Title III Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
MCPA	Not listed.	Not listed.	Not listed.	313	Not listed.	Not listed.
Bromoxynil octanoate	Not listed.	Not listed.	Not listed.	313	Not listed.	Not listed.
Naphthalene	Not listed.	Not listed.	100	313	U165	Not listed.
1,2,4-Trimethylbenzene	Not listed.	Not listed.	Not listed.	313	Not listed.	Not listed.

State Regulations**Massachusetts**

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Distillates (petroleum), hydrotreated light	64742-47-8	Listed.
Naphthalene	91-20-3	Listed.
1,2,4-Trimethylbenzene	95-63-6	Listed.

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
(4-Chloro-2-methylphenoxy)acetic acid (MCPA)	94-74-6	Listed.
Bromoxynil octanoate	1689-99-2	Listed.
Distillates (petroleum), hydrotreated light	64742-47-8	Listed.
Naphthalene	91-20-3	SHHS
1,2,4-Trimethylbenzene	95-63-6	Listed.

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Distillates (petroleum), hydrotreated light	64742-47-8	Listed.
Naphthalene	91-20-3	E
1,2,4-Trimethylbenzene	95-63-6	E

Note: E = Environmental Hazard

California**California Prop 65:**

WARNING This product can expose you to chemicals including Bromoxynil octanoate and Naphthalene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Section 16: OTHER INFORMATION**Disclaimer:**

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: April 3, 2020

Version: 1.0

GHS SDS Prepared by: Deerfoot Consulting Inc.

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