

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273 or CHEMTREC 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:**
TRADE NAME: MAD DOG™ K PLUS
- 1.2 **RECOMMENDED USE:** GROUP 9 HERBICIDE
- 1.3 **MANUFACTURED FOR AND DISTRIBUTED BY:**
 LOVELAND PRODUCTS CANADA, INC.
 PO Box 5234 | 64137 Hwy 543 E • High River, Alberta T1V 1M4
- 1.4 **24 Hour Emergency Phone: (Chemtrec):** 1-800-424-9300 (Toll Free) - **Additional Emergency Phone** 1-800-561-8273
Loveland Technical Service: 1-800-328-4678

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Acute Toxicity - Oral	Category 4	H302
Acute Toxicity – Inhalation	Category 4	H332
Eye Damage/Irritation	Category 2B	H320
Skin Corrosion/Irritation	Category 2	H315

2.2 Label elements



Signal word: WARNING

Hazard Statement: H302 – Harmful if swallowed.
 H332 – Harmful if inhaled.
 H320 – Causes eye irritation.
 H315 – Causes skin irritation.

Precautionary Statement: (Prevention): P264 – Wash hands thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.
 P271 – Use only outdoors or in a well-ventilated area.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement: (Response): P301+P312 – IF SWALLOWED: Call a poison centre or doctor/physician if you feel unwell.
 P330 – Rinse mouth.
 P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 – Call a poison centre or doctor/physician if you feel unwell.
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 – If eye irritation persists: Get medical advice/attention.
 P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
 P320 – Specific treatment (see First Aid on the product label).
 P332+P313 – If skin irritation occurs: Get medical advice/attention.
 P362 – Take off contaminated clothing and wash it before reuse.

Precautionary Statement: (Storage): Not required or applicable.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container in accordance with local, provincial and national regulations.



SAFETY DATA SHEET

SDS NUMBER: 32457-16-LPI

SDS REVISIONS: NEW

DATE OF ISSUE: 12/13/2016

MAD DOG™ K PLUS

SUPERSEDES: NEW

2.3 Other hazards
None known.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Potassium salt of Glyphosate	70901-12-1	40-60% 540 g/L

Ingredients not listed are proprietary or non-hazardous

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

Ingestion:	Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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.
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 treatment advice.
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.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Spray mist or vapours may be irritating to the eyes and respiratory tract.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273

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

NOTES TO PHYSICIAN: No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient. Treat symptomatically.

5. FIRE FIGHTING MEASURES

- 5.1 **EXTINGUISHING MEDIA:**
Suitable Extinguishing Media: Carbon dioxide (CO₂), foam, water fog, dry chemical, or other extinguishing media suitable for the fire.
- 5.2 **SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:**
Specific Hazards During Firefighting: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: oxides of carbon, oxides of nitrogen and oxides of phosphorous.
- 5.3 **SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS**
Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream as it may spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 **PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**
Personal Precautions: Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.
- 6.2 **ENVIRONMENTAL PRECAUTIONS**
Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water.
- 6.3 **METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP**
Methods for Clean-Up: Contain or dike spilled material if possible. Should not be released into the environment. Large spills: Dike the spilled material where this is possible. Dig up heavily contaminated soil. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with small quantities of water. Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS

7. HANDLING AND STORAGE

- 7.1 **PRECAUTIONS FOR SAFE HANDLING:**
Advice on Safe Handling: Avoid contact with eyes, skin and clothing. Do not breathe mist or vapour. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.
- 7.2 **CONDITIONS FOR SAFE STORAGE:**
Requirements for Storage Areas and Containers: Store in a cool, dry place, away from children, animals, food, feed or fertilizers. Keep unused product in resealed original container. Store above -5 °C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 **CONTROL PARAMETERS:**
Not normally required.
- 8.2 **EXPOSURE CONTROLS:**
Engineering Measures
Avoid breathing mists, vapours, or aerosols. Provide adequate general and local exhaust ventilation. Provide eyewash station.

OCCUPATIONAL EXPOSURE LIMITS

Components	List	Type	Value
None listed			

Individual Protection Measures:

Eye / Face Protection: Chemical goggles are recommended.
Skin Protection: Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of neoprene gloves is recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment. Wear respiratory protection during operations where spraying or misting occurs. Wear NIOSH-certified air-purifying respiratory protection with an N, P or R95 or HE class filter and organic vapour cartridge if necessary. Wear air supplied respiratory protection if exposure concentrations are unknown or if air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE : Liquid
ODOUR: Odourless to slight amine-like.
ODOUR THRESHOLD: No data available.
COLOUR: Yellow.
pH: 4.4 (1% solution)
MELTING POINT / FREEZING POINT: No data available / 0 °C.
BOILING POINT: 113 °C.
FLASH POINT: > 113 °C (estimated).
FLAMMABILITY (solid, gas): No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
VAPOUR PRESSURE: 1.75×10^{-7} mm Hg @ 25 °C (free glyphosate acid).
SOLUBILITY: Miscible.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER: 4.5×10^{-4} (free Glyphosate acid).
AUTO-IGNITION TEMPERATURE: No data available.
DECOMPOSITION TEMPERATURE: No data available.
VISCOSITY: 0.043 cPs @ 20 °C | 0.018 cPs @ 40 °C.
SPECIFIC GRAVITY (Water = 1): 1.16 g/ml
DENSITY: 1.16 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal conditions. Can react with containers made of iron, galvanized steel and unlined steel to produce flammable hydrogen gas.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No reactions known under normal use conditions. Will not polymerize.

10.4 CONDITIONS TO AVOID

Heat, flame, direct sunlight.

10.5 INCOMPATIBLE MATERIALS

Iron, galvanized steel, unlined steel, and alkaline materials.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

During a fire, oxides of carbon, oxides of nitrogen, and/or phosphorous oxides may be generated.

11. TOXICOLOGICAL INFORMATION

11.1 LIKELY ROUTES OF EXPOSURE

Ingestion. Inhalation. Skin contact, eye contact.

LC₅₀ (rat): > 4.86 mg/L (4 HR).**LD₅₀ Oral (rat):** >5000 mg/kg**LD₅₀ Dermal (rat):** > 2000 mg/kg**Acute Toxicity Estimates:** No data available**Skin Irritation (rabbit):** Slight irritant**Eye Irritation (rabbit):** Irritant**Specific Target Organ Toxicity:** No data available.**Aspiration:** No data available.**Skin Sensitization (guinea pig):** Not a sensitizer**Carcinogenicity:** No data available.**Germ Cell Mutagenicity:** No data available**Interactive Effects:** None known.

12. ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Glyphosate acid	Rainbow trout	8.2 mg/L – 96-hour LC ₅₀
	Bluegill	14 mg/L – 96-hour LC ₅₀
	Fathead minnow	9.4 mg/L – 96-hour LC ₅₀
	Channel catfish	16 mg/L – 96-hour LC ₅₀
	Chinook salmon	20 mg/L – 96-hour LC ₅₀
	Coho salmon	22 mg/L – 96-hour LC ₅₀
	Daphnia magna	24 mg/L – 48-hour EC ₅₀

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Soil (1/2 life): approximately 3 – 30 days.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Considered to be low.

12.4 MOBILITY IN SOIL

Binds strongly in soil.

12.5 OTHER ADVERSE EFFECTS

Assessment: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Do not reuse containers for any purpose. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty 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 information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food or feed by storage or disposal.



14. TRANSPORT INFORMATION

14.1 LAND TRANSPORT

TDG Shipping Description: NOT REGULATED

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

1	Health	0	Least
0	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe

HMIS

1	Health
0	Flammability
0	Reactivity
X	PPE

CEPA – Domestic Substances List (DSL): All substances in this product are listed on the DSL or not required to be listed

Hazardous Products Act Information: CPR Compliance: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

WHMIS Classification: Exempt.

National Fire Code of Canada: Not applicable.

16. OTHER INFORMATION

SDS STATUS: New.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

PCP (Pest Control Products Act) Registration No. 32457

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