

# SAFETY DATA SHEET

MAD DOG® K PLUS



## Section 1. Identification

**Product identifier** : MAD DOG® K PLUS  
**SDS #** : 131  
**Other means of identification** : Pest Control Product Registration Number: 32457  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

**Identified uses**  
Herbicide.

**Uses advised against**  
Not available.

**Supplier's details** : Loveland Products Canada, Inc.  
789 Donnybrook Drive  
Dorchester, Ontario N0L 1G5  
**Telephone no.** : 1-800-328-4678 (Customer Service)  
**Email** : retail-SDS2@nutrien.com

**Emergency telephone number (with hours of operation)** : CHEMTREC: 1-800-424-9300  
Medical: 1-800-561-8273  
(24 h)

## Section 2. Hazard identification

**Classification in accordance with Canada WHMIS 2015 regulation.**

**Classification of the substance or mixture** : ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2B

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning  
**Hazard statements** : Causes skin and eye irritation.  
Harmful if inhaled.

### Precautionary statements

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.  
**Prevention** : Wear protective gloves. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash thoroughly after handling.  
**Response** : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or 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 or attention.  
**Storage** : Not applicable.

## Section 2. Hazard identification

**Disposal** : Not applicable.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
glycine, N-(phosphonomethyl)-, potassium salt	47 - 50	70901-12-1
Proprietary	50 - 53	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

### Description of necessary first aid measures

- Eye contact** : Begin eye irrigation immediately. Exposures to eye irritants may require medical evaluation following decontamination if pain or irritation persists. Immediately rinse eyes with large quantities of water or saline for a minimum of 15 minutes. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Inhalation** : If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Remove person to fresh air and keep comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation. May be harmful in contact with skin.
- Ingestion** : May be harmful if swallowed. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

## Section 4. First-aid measures

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : Treat symptomatically.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Not considered to be flammable. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides

**Special protective actions for fire-fighters** : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Contain and collect the water used to fight the fire for later treatment and disposal.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

## Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Put on appropriate personal protective equipment (see Section 8). Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Use appropriate equipment to put the spilled substance in a container for reuse or disposal. Recycle to process, if possible.  
or  
Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Read label before use. Apply this product only as specified on the label. Do not handle until all safety precautions have been read and understood. Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store locked up. **DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

#### Biological exposure indices

No exposure indices known.

## Section 8. Exposure controls/personal protection

**Appropriate engineering controls** : 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.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.**

**General information** : Refer to product label or packaging for specific PPE requirements. Do not handle until all safety precautions have been read and understood.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when the product label or a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the product label or risk assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if the product label or risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body must be used as specified on the product label or if a risk assessment indicates this is necessary.

**Other skin protection** : Appropriate footwear and any additional skin protection measures must be used as specified on the product label or if a risk assessment indicates this is necessary.

**Respiratory protection** : A respirator meeting the appropriate standard or certification must be selected based on the product label or the hazard and potential for exposure. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

**Physical state** : Liquid. [Clear.]

**Color** : Yellow.

**Odor** : Faint odor. / Amine-like.

**Odor threshold** : Not available.

**pH** : 4 to 5

**Melting point/freezing point** : Not available.

**Boiling point, initial boiling point, and boiling range** : Not available.

**Flash point** : Closed cup: >104°C (>219.2°F)

## Section 9. Physical and chemical properties and safety characteristics

<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Density</b>	: 1.33 to 1.37 g/cm <sup>3</sup> [20°C (68°F)]
<b>Solubility in water</b>	: Not available.
<b>Miscible with water</b>	: Yes.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Keep away from incompatible materials.
<b>Incompatible materials</b>	: Strong oxidizing materials, strong acids, strong alkalis. Corrosive to galvanized metal. Corrosive to unlined mild steel.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
MAD DOG® K PLUS	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

<b>Skin</b>	: Causes skin irritation.
<b>Eyes</b>	: Causes eye irritation.
<b>Respiratory</b>	: No known significant effects or critical hazards.

#### Sensitization

## Section 11. Toxicological information

Not available.

### Conclusion/Summary

**Skin** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** : In 2015, the International Agency for Research on Cancer (IARC) classified glyphosate as probably carcinogenic to humans. The IARC classification is a hazard classification and not a health risk assessment. Both before and after 2015, US EPA concluded that there are no risks of concern to human health when glyphosate is used according to the label and that it is not a carcinogen. Other authorities have made similar determinations.

### Classification

Product/ingredient name	IARC	NTP	ACGIH
glycine, N-(phosphonomethyl)-, potassium salt	2A	-	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation.

### Potential acute health effects

**Eye contact** : Causes eye irritation.

**Inhalation** : Harmful if inhaled.

**Skin contact** : Causes skin irritation. May be harmful in contact with skin.

**Ingestion** : May be harmful if swallowed. No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

## Section 11. Toxicological information

### Short term exposure

**Potential immediate effects** : See above.

**Potential delayed effects** : See below.

### Long term exposure

**Potential immediate effects** : See above.

**Potential delayed effects** : See below.

### Potential chronic health effects

Not available.

**General** : See above.

**Carcinogenicity** : See above.

**Mutagenicity** : See above.

**Reproductive toxicity** : See above.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
MAD DOG® K PLUS	N/A	2500	N/A	11	N/A

**Other information** : Not available.

## Section 12. Ecological information

### Toxicity

Not available.

**Conclusion/Summary** : Apply this product only as specified on the label. Toxic to aquatic life. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : Read label before use. Follow disposal instructions on label. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Make the empty container unsuitable for further use. Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14. Transport information

	<b>TDG Classification</b>	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : None of the components are listed.  
**CEPA Toxic substances** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : Not determined.  
**Canada** : Not determined.  
**China** : Not determined.  
**Eurasian Economic Union** : **Russian Federation inventory:** Not determined.

## Section 15. Regulatory information

<b>Japan</b>	: <b>Japan inventory (CSCL):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

### Canada PMRA

**Pest Control Product Registration Number** : 32547

CAUTION POISON

WARNING - EYE AND SKIN IRRITANT

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED.

HARMFUL IF INHALED.

CAUSES EYE AND SKIN IRRITATION.

Avoid contact with eyes, skin or clothing.

Avoid inhaling spray mist.

Wear a long-sleeved shirt and long pants during mixing, loading, application, clean-up and repair. In addition, wear goggles or a face shield and chemical-resistant gloves during mixing and loading, clean-up and repair.

*There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.*

## Section 16. Other information

### History

<b>Date of issue/Date of revision</b>	: 6/5/2023
<b>Date of previous issue</b>	: No previous validation
<b>Version</b>	: 1

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- HPR = Hazardous Products Regulations
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

### Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4	Weight of evidence
SKIN IRRITATION - Category 2	Weight of evidence
EYE IRRITATION - Category 2B	Weight of evidence

✔ Indicates information that has changed from previously issued version.

### Notice to reader

## Section 16. Other information

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

### DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

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