



Material Safety Data Sheet

PCP0849 GUARDSMAN GLYPHOSATE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: PCP0849

Product Name: GUARDSMAN GLYPHOSATE

Synonyms: glyphosate-isopropylammonium; glyphosate isopropylamine salt; glyphosate IPA salt; N-(phosphonomethyl)glycine isopropylamine salt

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glyphosate-potassium; glyphosate potassium salt; glyphosate K salt; N-(phosphonomethyl)glycine potassium salt

Chemical Family: None Known

Application: Herbicide.

Distributed By:

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Prepared By: The Environment, Health and Safety Department of Univar Canada Ltd.

Preparation date of MSDS: 08/Mar/2016

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2. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: May cause eye irritation.

Skin Contact: May cause skin irritation. This product is no more than slightly toxic and no more than slightly irritating based on toxicity studies. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

Inhalation: This product is no more than slightly toxic if inhaled based on toxicity studies.

Ingestion: Harmful if swallowed. No more than slightly toxic if swallowed. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
glyphosate-isopropylammonium 38641-94-0	29-33	Not available.
glyphosate-potassium 70901-12-1	22-24	Not available.

Note: Ingredients not precisely identified are proprietary or non hazardous.

4. FIRST AID MEASURES

Eye Contact: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice. Eye wash fountain should be located in immediate work area.

Skin Contact: If on skin or 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.

Inhalation: 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.

Ingestion: If swallowed, 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.

Notes to Physician: Treat symptomatically. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: None.

Flash Point Method: Not applicable.

Autoignition Temperature: Not available.

Flammable Limits in Air (%): Not Available.

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Does not ignite. Use self-contained breathing apparatus, eye protection, and protective clothing. Minimize and contain water runoff. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.

Hazardous Decomposition/Combustion Materials (under fire conditions): Oxides of carbon. Oxides of nitrogen. Oxides of phosphorus.

Special Protective Equipment: Fire fighters must wear full face, positive pressure, self-contained breathing apparatus and appropriate protective clothing. Thoroughly decontaminate bunker gear and other fire-fighting equipment before re-use.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 1, INSTABILITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: Not Available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

Procedure for Clean Up: Use safety equipment and procedures appropriate to the size of the spill. Keep unnecessary people away. Avoid runoff to natural waters and sewers. Surround and absorb spills with inert material such as perlite, sawdust, clay granules, vermiculite, sand or dirt. (Soak up small amounts of spill with absorbent clays.) Contain all 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

Handling: KEEP OUT OF REACH OF CHILDREN. MAY CAUSE EYE IRRITATION. HARMFUL IF SWALLOWED. Avoid contact with eyes or prolonged contact with skin. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Avoid direct applications to any body of water. Do not contaminate water by disposal of waste or cleaning of equipment. Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fibreglass, plastic and plastic lined steel containers. 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. Keep the containers closed when not in use. For good hygiene practice, wear a long-sleeved shirt, long pants, goggles or a face shield and chemical resistant gloves during mixing, loading, cleanup or repair activities.

Storage: Keep only in the original container. Keep containers tightly closed. Product is stable under normal conditions of storage and handling for at least 5 years. Store in a cool, well-ventilated place away from feed, foodstuffs, seed, plants, reducing agents and acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Undiluted product should be used in a well ventilated area. General ventilation with a good source of make-up air recommended as minimum for indoor situations.

Respiratory Protection: For Handling of the Undiluted Product: Undiluted product is not likely to present an airborne exposure concern during normal handling. If there is an accidental discharge of the material during manufacture or handling that produces a heavy vapor or mist, workers should use NIOSH/MSHA approved equipment. Use an approved pesticide respirator if ventilation is not adequate or exposure to sprays, mists or vapours is likely. In work situations where an air purifying respirator is appropriate to be used, use of a full face respirator equipped with purifying elements for protection against organic vapor and dust/mist approved for pesticides is recommended. Use cartridges or canister with NIOSH/MSHA approval. Full facepiece replaces the need for chemical goggles. Observe respirator use limitations specified by the manufacturers and NIOSH/MSHA.

For Application of Product Diluted in accordance with label instructions: Respirators are not required for applications of use – dilutions of this product.

Gloves:

All cleanable impervious glove types are acceptable.

Skin Protection: Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Eyes: Wear chemical splash goggles during mixing/pouring operations or other activities in which eye contact with undiluted product is likely to occur.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
glyphosate-isopropylammonium	Not available.	Not available.	Not Available.
glyphosate-potassium	Not available.	Not available.	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Clear Green to Amber

Odor: Odorless to Slight Amine

pH 4.9 (1% dilution)

Specific Gravity: 1.29 - 1.30 @ 25°C

Boiling Point: >100°C / >212°F

Freezing/Melting Point: 200°C / 392 °F (Glyphosate with decomposition).

Vapor Pressure: Not Available.

Vapor Density: Not Available.

% Volatile by Volume: Not Available.

Evaporation Rate: Not Available.

Solubility: Soluble in water.

VOCs: Not Available.

Viscosity: Not Available.

Molecular Weight: Not Available.

Other: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur This product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid base reaction.

Conditions to Avoid: None known.

Materials to Avoid: Strong acids and bases. Galvanized steel, unlined mild steel.

Hazardous Decomposition Products: Oxides of carbon. Oxides of nitrogen. Oxides of phosphorus.

Additional Information:

No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Harmful if swallowed. No more than slightly toxic if swallowed. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea.

Skin Contact: May cause skin irritation. This product is no more than slightly toxic and no more than slightly irritating based on toxicity studies. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

Inhalation: This product is no more than slightly toxic if inhaled based on toxicity studies.

Eye Contact: May cause eye irritation.

Additional Information: Eye Irritation: Rabbits; Mild irritation.

Skin Irritation: Rabbits 4-hr exp.; Slightly irritating.

This product is not considered a dermal sensitizing agent in guinea pigs.

Acute Test of Product:

Acute Oral LD50: >5000 mg/kg (Rat)

Acute Dermal LD50: >5000 mg/kg (Rat)

Acute Inhalation LC50: >2.07 mg/l (Rat 4-hr, nose only exposure)

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
glyphosate-isopropylammonium	Not listed.	Not listed.
glyphosate-potassium	Not listed.	Not listed.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Not Available.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
glyphosate-isopropylammonium	2.3 mg/L LC50 (Pimephales promelas) 96 h static 5.6 mg/L LC50 (Lepomis macrochirus) 96 h static 8.3 mg/L LC50 (Oncorhynchus mykiss) 96 h static	Not Available.	Not Available.
glyphosate-potassium	Not Available.	Not Available.	Not Available.

Other Information: This product has been shown to be slightly to moderately toxic in aquatic studies:

96 HOUR LC50 (mg/L):86 (Rainbow Trout)

96 HOUR LC50 (mg/L):120 (Bluegill Sunfish)

48 HOUR LC50 (mg/L):780 (Daphnia magna)

This product has been shown to be practically non-toxic to avian species following subacute dietary exposure.

DIETARY LC50 (ppm):> 4500 (Bobwhite Quail)

DIETARY LC50 (ppm):> 4500 (Mallard Duck)

CHEMICAL FATE INFORMATION: Glyphosate is rapidly and strongly adsorbed to soil. It has a soil half-life of approximately 47 days (1 – 130), but the adsorptive characteristic negates herbicidal activity almost immediately.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. DO NOT CUT OR WELD ON OR NEAR THIS CONTAINER.

Do not reuse this container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact 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 adding rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Not Regulated.

DOT Hazardous Class Not Applicable.

DOT UN Number: Not Applicable.

DOT Packing Group: Not Applicable.

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

TDG (Canada):

TDG Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
glyphosate-isopropylammonium	Not Listed.	Not Listed.	Not Listed.
glyphosate-potassium	Not Listed.	Not Listed.	Not Listed.

California Proposition 65: Not Listed.

MA Right to Know List: Not Listed.

New Jersey Right-to-Know List: Not Listed.

Pennsylvania Right to Know List: Not Listed.

Additional Notes: Registration No. 32228 Pest Control Products Act.

WHMIS Hazardous Class:

WHMIS EXEMPT.

16. OTHER INFORMATION

Additional Information:

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

Disclaimer:

NOTICE TO READER:

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Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

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