



MATERIAL SAFETY DATA SHEET

Universal Crop Protection Alliance LLC
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Eagan, MN 55121

In Case of Emergency, Call:
24 Hour Emergency Number
CHEMTREC: 800-424-9300

Medical Emergency Contact:
800-228-5635 Ext. 138

1. CHEMICAL IDENTIFICATION

Product Name: GLY - 4 PLUS Product No.: 000121

EPA Signal Word Caution

EPA Reg. Number: 42750-61-72693

Active Ingredient (%) Glyphosate, isopropylamine salt (41.0 %)

Chemical Name: Glyphosate: Glycine, N-(phosphonomethyl)-compd. with 2-porpanamine (1:1)

Chemical Class: Herbicide

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Glyphosate Isopropylamine Salt (38641-94-0)	ND	ND		No
Ethoxylated Tallowamines (61791-26-2)	ND	ND		No

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Hazardous chemical. Clear amber liquid. Odorless to slight amine-like odor. Do not mix store or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tanks. May cause severe but temporary eye irritation. Emergency personnel should wear a self contained breathing apparatus because noxious fumes are produced under fire conditions.

Potential Health Effects: This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

Eye: May cause severe irritation with redness and tearing.

Skin: A single dose exposure to the material is slightly toxic and irritating.

Ingestion: Single dose oral toxicity is low. Amounts ingested incidental to normal handling conditions are not likely to cause injury. Ingestion may cause gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea. Oral ingestion of large amounts may result in hypotension and lung edema.

Inhalation: Single exposure to vapors is not likely to be hazardous. Avoid breathing vapors or mist.

Systemic (other Target Organs) Effects: Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Birth defects are unlikely to occur.

Physical Properties

Appearance: Clear amber liquid.

Odor: Odorless to slight amine-like odor.

4. FIRST AID MEASURES

- Ingestion: May cause gastrointestinal tract irritation. Give a large glass of milk or water and contact a physician or poison control center immediately.
- Eye Contact: Flush eyes with water immediately and continuously for 15 minutes. Consult a physician.
- Skin Contact: Wash skin with plenty of soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Consult a physician if irritation develops.
- Inhalation: Remove to fresh air. Consult a physician if irritation develops or breathing is difficult.

5. FIRE FIGHTING MEASURES

Fire and Explosion

- Flash Point (Test Method): > 113°C (Pensky Martens closed tester)
- Flammable Limits (% in Air):
- Autoignition Temperature: ND
- Flammability: ND

Hazardous Combustion Products: Noxious fumes produced under fire conditions may include carbon monoxide, carbon dioxide, phosphorus pentoxide, and nitrogen oxide.

Extinguishing Media: Water spray, foam, fog, or carbon dioxide. Do not allow runoff to enter sewers or waterways.

Fire Fighting Instructions: Prevent human exposure to fire, fumes, and smoke. Avoid heavy hose streams and dike area to prevent runoff.

Protective Equipment for Fire Fighters: Emergency personnel should wear full face, self-contained breathing apparatus and impervious protective clothing.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak Contain spill. Absorb spill with sand, floor clay or dirt. Shovel or sweep up and mop affected area with soap and water. Prevent liquid from entering sewers and waterways. Large spills that soak into the ground should be dug up, placed in drums and disposed of properly.

7. HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: Good housekeeping is necessary. No smoking, open flames or sources of ignition in handling and storage area. Wash thoroughly with soap and water after handling. Do not contaminate water, food or feed by storage or disposal. Do not store near seeds, fertilizers, insecticides or fungicides. Spray solutions of the product should be mixed, stored, and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

These precautions are suggested for conditions with a high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

Engineering Controls: Normal room ventilator should be satisfactory. Eyewash stations and safety showers should be easily accessible.
Eye Contact: Use chemical goggles. Eye wash station should be located in the immediate work area.
Skin Contact: Use protective clothing impervious to this material.
Inhalation: Use a NIOSH approved respirator when protection is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, amber liquid
Odor: Odorless to slight amine-like odor.
Flash Point: $>113^{\circ}\text{C}$, $>235^{\circ}\text{F}$ (Pensky Martens closed tester)
Specific Gravity/Density: 1.16 / 9.75
pH: 4.5 (1% solution in water)

10. STABILITY AND REACTIVITY

Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur
Conditions to Avoid: Do not mix, store, or apply this product or stray solutions of this product in galvanized or unlined steel containers or spray tanks. This product could react with these containers to produce hydrogen gas which may form a highly combustible gas mixture. Caustic (basic) materials; galvanized or unlined steel containers.

Hazardous Decomposition Products Phosphorus pentoxide and nitrogen oxides under fire conditions.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Ingestion: LD50 (rats) > 5000 mg/kg
Dermal: LLD50 (rabbit) > 2000 mg/kg
Inhalation: LC50 (rat 4 hr.) > 4.86 mg/l
Eye irritation (rabbit 24 hr) = slight to moderate irritation.
Mutagenicity: Mutagenic effects are unlikely

Teratology (Birth Defects): Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals. Other effects were seen in the fetus only at doses which caused toxic effects to the mother.

Carcinogenic Potential: EPA has classified glyphosate in category E (evidence of non-carcinogenicity for humans).

12. ECOLOGICAL INFORMATION

Glyphosate has been shown to be slightly to moderately toxic in aquatic studies and has been shown to be practically non-toxic to avian species following subacute dietary exposure.

Mallard duck	LC50	>2000 mg/kg
Bobwhite quail	LC50	>2000 mg/kg
Rainbow trout	96-hrLC50	18.6 mg/l (static)
Bluegill Sunfish	96-hrLC50	11.9 mg/l (static)
Algae	72-hrEC50	17.4 mg/l

13. DISPOSAL CONSIDERATION

Disposal Method:

14. TRANSPORT INFORMATION

B/L Freight Classification: Weed killing compound, N.O.I.B.N

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the issue or revision date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another, it is users responsibility to ensure that its activities comply with federal, state and local laws and regulations.

SARA Title III Classification

Section 311/312: Hazard Classes: Immediate.

Section 313 chemical(s): NA

TSCA Status: All components are on the US EPA's TSCA inventory list.

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 0
Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Issued Date: December 18, 2000

Supersedes: December 18, 2000

Reference MSDS : Cheminova, Glyphos X-TRA, dated April 2000.

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