

MATERIAL SAFETY DATA SHEET

Glyphosate 4 Plus Herbicide

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Glyphosate 4 Plus

Active Ingredient: Glyphosate (in the form of its isopropylamine salt)

Chemical Name: N-(phosphonomethyl)glycine

Chemical Formula: $C_6H_{17}N_2O_5P$

COMPANY IDENTIFICATION:

Alligare, LLC

13 North 8th Street

Opelika, KS 36801

2. COMPOSITION / INFORMATION ON INGREDIENTS

Glyphosate Isopropylamine Salt	CAS No. 38641-94-0	41.0%
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3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Causes moderate eye irritation. Harmful if swallowed or inhaled. Avoid breathing vapor or spray mist. Avoid contact with eyes, skin or clothing.

POTENTIAL HEALTH HAZARDS:

EYE – Moderate eye irritant. Undiluted product may cause pain, redness and tearing.

SKIN - May be slightly irritating to the skin.

INGESTION - No more than slightly toxic and no significant adverse health effects are expected to develop if a small amount (less than a mouthful) is swallowed.

POTENTIAL PHYSICAL HAZARDS:

May react with metals such as galvanized or mild steel to produce hydrogen gas, potentially forming a highly combustible gas mixture.

4. FIRST AID

IF IN EYES: 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 center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center 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 center or a doctor.

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.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information..

5. FIRE-FIGHTING MEASURES

Flash point: Will not flash

Flammable Limits (LFL-UFL): N/A

Fire and Explosion Hazards: During a fire, product may generating irritating or toxic gasses through thermal decomposition.

Means of Extinction: Use water spray, foam or dry chemical.

Fire Fighting Instructions: Evacuate area and fight fire from a safe distance. Approach from upwind to avoid hazardous vapors and decomposition products. A foam or dry chemical fire extinguishing system is preferred to prevent environmental damage from excessive water run off. If water is used, avoid heavy hose streams. If possible, dike and collect water used to fight fire to prevent/minimize run off.

Firefighting Equipment: Self-contained breathing apparatus with full face piece. Wear full firefighting turn-out gear (Bunker gear).

Hazardous Combustion Products: Carbon monoxide, nitrogen oxides, phosphorous oxides.

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately. Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of area.

SMALL SPILL: Absorb spill with inert material such as dry sand, vermiculite or fuller's earth, then place in a chemical waste container.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal. After removal, scrub the area with detergent and water and neutralize with dilute alkaline solutions of soda ash or lime.

7. HANDLING AND STORAGE

Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. Wash thoroughly after handling this product.

Store above 10°F (-12°C) to keep product from crystallizing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: To keep exposure to airborne contaminants below exposure limits, proper ventilation is required when handling or using this product. Local mechanical exhaust ventilation may be required. Facilities storing or using this material should be equipped with an eyewash facility and a safety shower.

Eyewear: Safety goggles are recommended when mixing, loading or cleaning equipment.

Clothing: All pesticide handlers must wear a long-sleeved shirt and long pants and shoes plus socks.

Gloves: Waterproof gloves are recommended when mixing, loading or cleaning equipment.

NOTE: Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear yellow to amber liquid

Odor: Slight amine odor

pH: 4.4

Flashpoint (PMA-4): N/A

Specific Gravity: 1.17 g/ml

Solubility in Water: Emulsifies

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid temperatures above 115°F (46°C) and below 25°F (-5°C)

CHEMICAL STABILITY: Product is normally stable. However, product may decompose if heated.

HAZARDOUS DECOMPOSITION PRODUCTS: Heat and fire may result in thermal decomposition and the release of nitrogen oxides, phosphorous oxides and carbon monoxide.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers and bases, mild and galvanized steel.

POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY

Oral LD₅₀ (rat): > 5,000 mg/kg

ACUTE DERMAL TOXICITY

Dermal LD₅₀ (rat, male): > 5,000 mg/kg

ACUTE INHALATION TOXICITY

Inhalation LC₅₀ (rat): > 2.5 mg/L

EYE IRRITANT

Rabbit – Moderate

SKIN IRRITATION

Rabbit – Mild

SENSITIZATION

Guinea pig – Non-Sensitizer

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

CARCINOGENICITY:

ACGIH: Not listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

MUTAGENIC DATA: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

ADDITIONAL DATA: None.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: 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 washwaters.

MAMMILIAN TOXICITY

This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

FISH TOXICITY

96 hour LC₅₀, Rainbow trout – 8.2 µg/L (technical)

96 hour LC₅₀, Bluegill – 5.8 µg/L (technical)

AVIAN TOXICITY

Oral LD₅₀, Bobwhite quail – > 3,800 mg/kg (technical)

BEE TOXICITY: Non-toxic.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

CONTAINER DISPOSAL: For plastic containers, triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For refillable containers, do not reuse the container except for refill in accordance with a valid Alligare Repackaging or Toll Repackaging Agreement. If not refilled or returned to the authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For bulk containers, triple rinse (or equivalent) and wash with appropriate cleaners before reusing.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Not regulated by DOT.

DOT HAZARD CLASS OR DIVISION: N/A

DOT UN/NA NUMBER: N/A

DOT PACKING GROUP: N/A

REPORTABLE QUANTITY: None

MARINE POLLUTANT: Not Listed

DOT EMERGENCY RESPONSE GUIDE: N/A

15. REGULATORY INFORMATION

FIFRA –

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Not Regulated

SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

SARA Title III – Section 311/312 Hazard Categories

Immediate

SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients

None

CERCLA –

None

CALIFORNIA PROP 65 STATUS –

Not listed

16. OTHER INFORMATION

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

DISCLAIMER:

Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. No such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or limitation of incidental or consequential damages.