

MATERIAL SAFETY DATA SHEET

Z-GLYPHOSATE 41 MAX

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
FUZION TECHNOLOGIES, LLC
8397 Stay Sail Drive
Fort Collins, CO 80528

PRODUCT NAME: Z-GLYPHOSATE 41 MAX

EPA REG. NO.: 84930-10-86363

CHEMICAL NAME: Isopropylamine salt of glyphosate

CHEMICAL FAMILY: Herbicide

Hotline Numbers: National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm

Pacific Time; Outside of these times call your poison control center at 1-800-222-1222.

U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION: Causes moderate eye irritation. Harmful if swallowed. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. In case of contact, wash skin with soap and water; for eyes, flush with water for 15 minutes and get medical attention.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Glyphosate	41.0	38641-94-0	Not listed
Other ingredients	59.0	-----	-----

4. FIRST AID MEASURES

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 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.

If Swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

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 center or doctor for treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT have the product container or label with you when calling a poison control center or doctor.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): >200°F

FLAMMABLE LIMITS (LFL & UFL): Not established

EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes may be emitted in a fire situation.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

FIRE FIGHTING EQUIPMENT: Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of carbon, nitrogen and phosphorous.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: In case of leak or spill, contain material and dispose as waste. Do not contaminate any body of water. Pick up spilled liquid with absorbent material and sweep up for disposal. Place it and damaged unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state and federal regulations for proper disposal. NOTE: Prevent spilled material from flowing onto adjacent land, or into municipal sewers and open bodies of water. Always wear proper protective equipment when working with the product.

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7. HANDLING AND STORAGE

HANDLING: Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Store above 25°F, in a dry place away from children and animals. Mix well before using. Keep tightly closed. Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

EYE PROTECTION: Wear chemical goggles or shielded safety glasses when handling and mixing product.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes plus socks and chemical-resistant gloves.

Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

Personal Protective Equipment (PPE): Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear yellow to amber liquid, mild aromatic

SOLUBILITY: Emulsifies pH: 4.4 (1%)

SPECIFIC GRAVITY (Water=1): 1.15 – 1.21 g/ml

BULK DENSITY: 9.59 – 10.09 lbs/gal.

VAPOR PRESSURE: Not established

BOILING POINT: Not established

PERCENT VOLATILE (by volume): Not established

EVAPORATION RATE: Not established

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

STABILITY: Stable

CONDITIONS TO AVOID: None Known

IMCOMPATIBILITY: Avoid strong oxidizers or bases; mild and galvanized steel.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May emit toxic fumes if excessively heated.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀: >5,000 mg/kg (female)

Acute Dermal LD₅₀: >5,000 mg/kg

Eye Irritation: Causes moderate irritation

Skin Irritation: Causes mild irritation

Inhalation LC₅₀: >2.50 mg/L

Skin sensitization: Not a contact sensitizer

Carcinogenic Potential: None listed in OSHA, NTP, IARC, or ACGIH

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is harmful to fish, aquatic invertebrates, and aquatic life stages to amphibians. Do not apply directly to water, or to areas where surface water is present. Do not contaminate water when disposing of equipment washwaters. This product is not toxic to bees exposed to direct treatment.

FISH TOXICITY: (Technical)

96 hour LC₅₀, Rainbow trout – 8.2 mg/L

96 hour LC₅₀, Bluegill Sunfish – 5.8 mg/L

AVIAN TOXICITY: (Technical)

Oral LD₅₀, Bobwhite quail - 3,800 mg/Kg

Oral LC₅₀, Mallard duck - > Unknown

BEE TOXICITY: Not toxic

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state and federal regulations.

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14. TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Not regulated by DOT

DOT HAZARD CLASS: Not Applicable

UN NUMBER: Not Applicable

DOT PACKING GROUP: Not Applicable

DOT PRIMARY/SECONDARY LABEL: None

DOT PRIMARY/SECONDARY PLACARD: None

15. REGULATORY INFORMATION

NFPA RATINGS: Least = 0

Slight = 1

Moderate = 2

High = 3

Severe = 4

Ratings for this product: Health – 2 Flammability – 0 Instability – 1 Special Hazards – None Specified

SARA Title III Hazard Category:

Immediate Y

Fire N

Sudden Release of Pressure N

Delayed N

Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed

SARA, Title III, Section 313: Not listed

CA Proposition 65: Not listed

16. OTHER

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