

MATERIAL SAFETY DATA SHEET

MAKAZE®

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:

LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-866-944-8565
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: MAKAZE®
CHEMICAL NAME: Glyphosate: N- (phosphonomethyl)glycine, in the form of its Isopropylamine salt
CHEMICAL FAMILY: Herbicide
EPA REG. NO.: 34704-890
MSDS Number: 000890-09-LPI **MSDS Revisions:** Sections 1, 4, 8, 12 and 13 **Date of Issue:** 02/04/09 **Supersedes:** 11/07/06

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

This product is clear, viscous yellow-colored solution with amine odor. Primary routes of entry are Inhalation, eye contact and skin contact.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Isopropylamine salt of Glyphosate	41.00	38641-94-0	none established
Inert Ingredients	59.00		

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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565. 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): None
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes may be emitted in a fire situation.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective clothing. Fight fire from upwind.
UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Keep containers cool with water spray.

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. Sweep up material. Place it and damaged unusable containers in a landfill approved for pesticides. Check local, state and federal regulations for proper disposal.

CAUTION: Prevent spilled material from flowing onto adjacent land, or into municipal sewers and open bodies of water.

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 10°F (-12.2°C) to keep product from crystallizing. Crystals will settle to the bottom of the container. If allowed to crystallize, place in a warm room at 68°F (20°C) for several days to redissolve. Roll or shake container or recirculate in mini-bulk or bulk containers to 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 with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required, if mists/vapors exceed acceptable levels, wear a NIOSH approved pesticide respirator for organic vapor and dust/mist.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

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

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
For product	none established	none established

Personal Protective Equipment (PPE): Applicators and other handlers must wear: long sleeved shirt and long pants, shoes plus socks, and protective eyewear, chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride. Discard clothing and other absorbent material that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no 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, viscous yellow-colored solution with amine odor	SOLUBILITY: Soluble
SPECIFIC GRAVITY (Water = 1): 1.1680 g/ml	BULK DENSITY: 9.75 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: Use of galvanized or unlined steel.

INCOMPATIBILITY: This product and its spray solutions will react with galvanized or unlined steel to produce hydrogen gas that may form a highly combustible gas mixture, which could flash or explode if ignited. Acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Will emit toxic fumes as it burns.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): >5000 mg/kg	Acute Dermal LD₅₀ (rabbit): >5000 mg/kg
Eye Irritation (rabbit): Causes moderate eye irritation	Skin Irritation (rabbit): Essentially non-irritating
Inhalation LC₅₀ (rat): >7.03 mg/L (4 Hr. Aerosol)	Skin sensitization (guinea pig): Not a sensitizer
Carcinogenic Potential: None listed in OSHA, NTP, IARC or ACGIH	

12. ECOLOGICAL INFORMATION

This product is slightly to moderately toxic in aquatic studies. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. This product has been shown to be practically non-toxic to avian species following sub-acute dietary exposure. Do not contaminate water when disposing of equipment wash waters. Do not apply when weather conditions favor drift from target area.

13. DISPOSAL CONSIDERATIONS

CONTAINER DISPOSAL: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip.

Disposal Considerations, continued

Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. **For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED USDOT.

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS 60)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:	NFPA		HMIS
	1 Health	0 Least	1 Health
	1 Flammability	1 Slight	1 Flammability
	1 Instability	2 Moderate	1 Reactivity
		3 High	H PPE
		4 Severe	

SARA Hazard Notification/Reporting

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
RCRA Waste Code: Not listed
CA Proposition 65: Not listed

16. OTHER INFORMATION

MSDS STATUS: Sections 1, 4, 8, 12 and 13 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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