

MATERIAL SAFETY DATA SHEET

ATRAZINE 4L HERBICIDE

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: ATRAZINE 4L HERBICIDE
CHEMICAL NAME: Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine
CHEMICAL FAMILY: Triazine Herbicide
EPA REG. NO.: 34704-69
MSDS Number: 000069-09-LPI

MSDS Revisions: Sections 1 and 4

Date of Issue: 12/02/09

Supersedes: 12/03/08

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Keep away from food and feedstuffs.

This product is white liquid with no odor.

Warning Statements:

NOTE TO PHYSICIAN: There is no specific antidote for Atrazine. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

3. COMPOSITION, INFORMATION ON INGREDIENTS

| <u>Chemical Ingredients:</u> | <u>Percentage by Weight:</u> | <u>CAS No.</u> | <u>TLV (Units)</u> |
|------------------------------|------------------------------|----------------|---------------------------|
| Atrazine | 42.20 | 1912-24-9 | 5 mg/m ³ |
| Related Compounds | 0.80 | | |
| Ethylene Glycol | 5.00 | 107-21-1 | 100 mg/m ³ (C) |
| Inert Ingredients | 52.00 | | |

4. FIRST AID MEASURES

If Swallowed: Call a poison control center or doctor 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 doctor. 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 further 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 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): > 212°F / > 100°C (PMCC)

FLAMMABLE LIMITS (LFL & UFL): None established

EXTINGUISHING MEDIA: Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of nitrogen, acetonitrile, chlorine-containing compounds, hydrogen cyanide, and fluorine-containing compounds may form in a fire situation. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire and cool the containers, contain run-off by diking to prevent contamination of water supplies. Containers in fire may burst or explode from excessive heat.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbent material and place into compatible disposal container. Scrub the spill area with hard water detergent (e.g. commercial products such as Tide®, Joy®, Spic and Span®). Pick up wash liquid with additional absorbent and place into disposal container. Once all material is cleaned up and placed in a disposal container, seal the container(s) and handle in an approved manner. Check local, state and federal regulations for proper disposal.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

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

STORAGE: Do not store under conditions which might adversely affect the container or its ability to function properly. Do not store below temperature of 0°F. If frozen, warm to 40°F. and reconstitute before using by rolling or shaking the container. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.. Do not contaminate water, food or feed by storage or disposal.

Personal Protective Equipment: Applicators and other handlers must wear: long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, or Viton®, and chemical-resistant footwear plus socks. **Mixers and loaders must wear:** long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, or Viton®, and chemical-resistant footwear plus socks, and protective eyewear. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 vapors or mists exceed acceptable levels, wear a NIOSH approved respirator with an N, P or R 95 class filter and an organic vapor cartridge or air-supplied respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

| | OSHA PEL 8 hr TWA | ACGIH TLV-TWA |
|-----------------|--------------------------|---|
| Atrazine | not established | 5 mg/m ³ |
| Ethylene Glycol | not established | 100 mg/m ³ (Ceiling – Aerosol) |

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White liquid with no odor

SPECIFIC GRAVITY (Water = 1): 1.103 g/ml

VAPOR PRESSURE: 2.9 x 10⁻⁷ mm Hg @ 68°F (20°C)

PERCENT VOLATILE (by volume): Not established

BULK DENSITY: 9.21 lbs/gal.

BOILING POINT: 212°F – 223°F (100° – 106°C)

EVAPORATION RATE: Not established

SOLUBILITY: Disperses

pH: 5.04 @ 77°F (25°C)

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

INCOMPATIBILITY: Strong bases and oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen, acetonitrile, chlorine-containing compounds, hydrogen cyanide, and fluorine-containing compounds may form in a fire situation. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Excessive heat and extreme cold.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): >5000 mg/kg

Eye Irritation (rabbit): Minimal irritant

Inhalation LC₅₀ (rat): > 2.72 mg/L (4 hr).

Carcinogenic Potential: None listed in OSHA, NTP or ACGIH; IARC Group 3

Target Organs: Atrazine: Heart; Ethylene Glycol: Blood, kidney, CNS

Acute Dermal LD₅₀ (rabbit): >5,050 mg/kg

Skin Irritation (rabbit): Not an irritant

Skin Sensitization (guinea pig): Not a sensitizer.

12. ECOLOGICAL INFORMATION

Summary of Effects

Atrazine is slightly toxic to fish and invertebrates. Practically non-toxic to birds and bees.

Eco-Acute Toxicity

| | <u>LC₅₀/EC₅₀</u> | | <u>LC₅₀/EC₅₀</u> |
|------------------|--|----------------------------|--|
| Rainbow Trout | 9.9 ppm | Invertebrates (Water Flea) | > 31 ppm |
| Bluegill Sunfish | 54.5 ppm | | |

Bobwhite Oral LD₅₀: no data available

Mallard Oral LD₅₀: no data available

Bobwhite 8-day Dietary LC₅₀: >5000 ppm

Mallard 8-day Dietary LC₅₀: >5000 ppm

Eco-Chronic Toxicity

Atrazine: Fish (Fathead minnow) Early Life Stage MATC >0.25 and <0.46 mg/L

Invertebrate (Ceriodaphnia dubia) Life Cycle NOEL 2.5 ppm

Mallard Reproduction NOEC 225 ppm a.i.

Bobwhite Reproduction NOEC 225 ppm a.i.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: 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. If not recycled, then 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. 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 or 50 lbs.)) 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. 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 square bottom caged totes greater than 55 gals.)) Triple rinse or 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. Fill the container about ¼ full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this 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. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY 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 | |
| 0 Instability | 2 Moderate | 0 Reactivity | |
| | 3 High | H PPE | |
| | 4 Severe | | |

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:

| | | | | | |
|-----------|----------|----------|----------|----------------------------|----------|
| Immediate | <u>Y</u> | Fire | <u>N</u> | Sudden Release of Pressure | <u>N</u> |
| Delayed | <u>Y</u> | Reactive | <u>N</u> | | |

Reportable Quantity (RQ) under U.S. CERCLA: Ethylene Glycol (CAS: 107-21-1) 5000 pounds.
SARA, Title III, Section 313: Atrazine (CAS: 1912-24-9) 42.2%; Ethylene Glycol (CAS: 107-21-1) 5.0%
RCRA Waste Code: Not listed
CA Proposition 65: Not listed.

16. OTHER INFORMATION

MSDS STATUS: Sections 1 and 4 revised
PREPARED BY: Registrations and Regulatory Affairs
REVIEWED BY: Environmental/ Regulatory Services

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This product is a Restricted Use Pesticide (Ground and Surface Water Concerns)

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