

MATERIAL SAFETY DATA SHEET

GROWMARK, INC.
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For 24 Hour Medical Emergency Assistance (Human or Animal) call 1-800-308-1241. For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) call CHEMTREC at 1-800-424-9300.

1. PRODUCT IDENTIFICATION

Product Name: INFANTRY 4L HERBICIDE Product No.: A8566A
EPA Signal Word: Caution
Active Ingredient(%): Atrazine (42.6%) CAS No.: 1912-24-9
Chemical Name: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine
Chemical Class: Triazine Herbicide
EPA Registration Number(s): 100-497-534

2. HAZARDS IDENTIFICATION

Health and Environmental

Causes mild eye irritation. Harmful if inhaled.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: White liquid

Odor: None

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Ethylene Glycol (<= 6%)	Not Established	100 mg/m ³ (ceiling) [aerosol]	Not Established	No
Atrazine (42.6%)	Not Established	5 mg/m ³ TWA	5 mg/m ³ TWA **	IARC Group 3

** recommended by NIOSH

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: B

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

INGESTION: 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 doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: 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.

Skin Contact: 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.

Inhalation: 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.

NOTE TO PHYSICIAN: There is no specific antidote if this product is ingested. Treat symptomatically.

MEDICAL CONDITION LIKELY TO BE AGGRAVATED BY EXPOSURES: None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	> 212°F (Pensky-Martens CC)	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	> 1202°F	
Flammability:	Not Applicable	

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub 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 compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White liquid
Odor: None
Melting Point: Not Applicable
Boiling Point: 212 - 223 °F
Specific Gravity/Density: 9.21 lbs/gal @ 77°F (25°C)
pH: 5.04 @ 77°F (25°C)

Solubility in H₂O

Atrazine : 33mg/l @ 68°F (20°C)

Vapor Pressure

Atrazine : 2.9×10^{-7} mmHg @ 68°F (20°C)

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None known.
Materials to Avoid: None known.
Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:
Oral (LD50 Rat) : > 5000 mg/kg body weight

Dermal:
Dermal (LD50 Rat) : > 5050 mg/kg body weight

Inhalation:
Inhalation (LC50 Rat) : > 2.72 mg/l air - 4 hours

Eye Contact: Minimally Irritating (Rabbit)
Skin Contact: Non-Irritating (Rabbit)
Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Atrazine : None observed.

Chronic/Subchronic Toxicity Studies

Atrazine : Cardiotoxicity in long term study with high doses (dogs).

Carcinogenicity

Atrazine : Mammary tumors (female Sprague-Dawley rats), sex and strain specific.
None observed (male Sprague-Dawley rats, F-344 rats or mice).

Other Toxicity Information

None

Toxicity of Other Components

Ethylene Glycol ($\leq 6\%$)

Test results reported in Section 11 for the final product take into account any acute hazards related to the ethylene glycol in the formulation.

Target Organs

Active Ingredients

Atrazine : Heart

Inert Ingredients

Ethylene Glycol: Not Applicable

12. ECOLOGICAL INFORMATION

Summary of Effects

Atrazine :

Very toxic to aquatic life.

Ecotoxicity Effects

Atrazine :

Green Algae 5-day EC50 49 ppb

Bird (Mallard Duck) LD50 Oral > 2000 mg/kg

Invertebrate (Water Flea) 48-hour EC50 6.9 ppm

Fish (Rainbow Trout) 96-hour LC50 4.5 ppm

Fish (Bluegill Sunfish) 96-hour LC50 6.7 ppm

Bird (Bobwhite Quail) 8-day dietary LC50 > 5000 ppm

Bird (Mallard Duck) 8-day dietary LC50 > 5000 ppm

Bee 48-hour LD50 > 97 ug/bee

Environmental Fate

Atrazine :

The information presented here is for the active ingredient, atrazine.

Low bioaccumulation potential. Not persistent in soil. Stable in water. Highly mobile in soil. Will leach. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated.

Rail

Proper Shipping Name: RQ Other Regulated Substances, Liquid, N.O.S. (Ethylene Glycol)

Hazard Class or Division: Class 9

Identification Number: NA 3082

Packing Group: PG III

B/L Freight Classification

Herbicides, NOI (NMC Class 60)

Comments

None

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Atrazine (42.6%) (CAS No. 1912-24-9)
Ethylene Glycol (<= 6%) (CAS No. 107-21-1)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 9,600 gal. (based on ethylene glycol [RQ = 5,000 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 11/25/1985

Revision Date: 2/19/2008

Replaces: 12/18/2007

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS