

MATERIAL SAFETY DATA SHEET

GROWMARK, INC.
1701 Towanda Avenue
Bloomington, IL 61701

For Chemical Emergency Assistance
(Spill, Leak, Fire or Accident) call
CHEMTREC at 1-800-424-9300.

1. PRODUCT IDENTIFICATION

Product Name: INFANTRY 90 DF
EPA Signal Word: Caution
Active Ingredient(%): Atrazine (88.2%) CAS No.: 1912-24-9
Chemical Name: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine
Chemical Class: Triazine Herbicide
EPA Registration Number(s): 100-585-534

2. HAZARDS IDENTIFICATION

Health and Environmental

May be harmful if swallowed. Causes mild eye irritation.

Hazardous Decomposition Products

None known.

Physical Properties

Appearance: Light beige to brown granules

Odor: Weak earthy, loamy

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
Surfactant	Not Established	Not Established	15 mg/m ³ TWA (total dust) *	No
Dispersing Agent	15 mg/m ³ TWA (total)	10 mg/m ³ TWA (total)	Not Established	No
Atrazine (88.2%)	Not Established	5 mg/m ³ TWA	5 mg/m ³ TWA **	IARC Group 3

* recommended by manufacturer

** 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, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment

advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	Not Applicable	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	896°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. Sweep up material and place in a 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, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.
- 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, or P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light beige to brown granules
Odor:	Weak earthy, loamy
Melting Point:	Not Available
Boiling Point:	Not Applicable
Specific Gravity/Density:	0.48 g/cm ³
pH:	8.5 (1% w/w dilution in deionized water)

Solubility in H₂O

Atrazine : 33mg/l @ 68°F (20°C)

Vapor Pressure

Atrazine : 2.9 x 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:	None known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Female Rat) :	3129 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5050 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.5 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

Dispersing Agent

Dust may produce a respiratory allergenic response and/or irritation in some individuals.

Surfactant

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

Target Organs

Active Ingredients

Atrazine : Heart

Inert Ingredients

Dispersing Agent: Respiratory tract

Surfactant: Not Applicable

12. ECOLOGICAL INFORMATION

Summary of Effects

Atrazine :

Very toxic to aquatic life.

Ecotoxicity Effects

Atrazine :

Fish (Rainbow Trout) 96-hour LC50 4.5 ppm

Green Algae 5-day EC50 49 ppb

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 6.9 ppm

Bird (Bobwhite Quail) 12-day LD50 940 mg/kg

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.

Air Transport - NAFTA

Not regulated.

B/L Freight Classification

Herbicides, NOI

Comments

Water Transport - International
Not regulated.

Note: Shipments to/from foreign countries; IMDG Spec. Prov. 909 moving under destination country classification.

Air Transport - International
Not regulated.

Note: Shipments to/from foreign countries; IATA Spec. Prov. 97; moving under destination country classification.

Road/Rail Transport - Europe (ADR/RID)
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Atrazine)
Hazard Class or Division: Class 9
Identification Number: UN 3077
Packing Group: PG III

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Atrazine (88.2%) (CAS No. 1912-24-9)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

None

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:
1-309-557-6000

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.

Manufactured for GROWMARK, INC. by Syngenta Crop Protection, Inc.