

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **ENVOKE** Product No.: A9842A
 EPA Signal Word: Caution
 Active Ingredient(%): Trifloxysulfuron-Sodium (75.0%) CAS No.: 199119-58-9
 Chemical Name: N-[(4,6-Dimethoxy-2-pyrimidinyl)amino]carbonyl-3-(2,2,2-trifluoro-ethoxy)-pyridin-2-sulfonamide sodium salt
 Chemical Class: Sulfonylurea Herbicide
 EPA Registration Number(s): 100-1132 **Section(s) Revised: 14**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Diatomaceous Earth	80 mg/m ³ /%SiO ₂ (20 mppcf) TWA	10 (inhalable);3 mg/m ³ (respirable) TWA	6 mg/m ³ TWA**	No
Crystalline Silica, Quartz	10 mg/m ³ /%SiO ₂ +2) (respirable dust)	0.05 mg/m ³ (respirable silica)	0.05 mg/m ³ (respirable dust)**	IARC Group 2A
Surfactant	Not Established	Not Established	15 mg/m ³ TWA (total dust)*	No
Sodium Sulfite	Not Established	Not Established	Not Established	IARC Group 3
Trifloxysulfuron-Sodium (75.0%)	Not Established	Not Established	10 mg/m ³ TWA***	No

* recommended by manufacturer

** recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

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

3. HAZARDS IDENTIFICATION
Symptoms of Acute Exposure

Presents slight hazard during normal handling.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Light beige to brown granules

Odor: Not determined

Unusual Fire, Explosion and Reactivity Hazards

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

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. Do not give any liquid to the person. 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: Not Available
- 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 in Protective Equipment Section. 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 (such as nitrile or butyl) gloves, 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, or P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light beige to brown granules

Odor: Not determined

Melting Point: Not Available

Boiling Point: Not Applicable

Specific Gravity/Density: 0.60 - 0.80 g/cm³

pH: 8 - 12 (1% w/w dilution in deionized water)

Solubility in H₂O

Trifloxysulfuron-Sodium : 102.5mg/l @ 77°F (25°C) (pH 5.4)

Vapor Pressure

Trifloxysulfuron-Sodium : 7.5 x 10⁽⁻⁸⁾ mmHg @ 77°F (25°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: Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Practically Non-Toxic
Oral (LD50 Rat) : > 5,000 mg/kg body weight

Dermal: Slightly Toxic
Dermal (LD50 Rat) : > 2,000 mg/kg body weight

Inhalation: Practically Non-Toxic
Inhalation (LC50 Rat) : > 2.55 mg/l air - 4 hours

Eye Contact: Non-Irritating (Rabbit)

Skin Contact: Non-Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Trifloxysulfuron-Sodium : Mutagenic Potential in Vitro: Negative cytogenetic test CHO cells. Negative Ames test.
Mutagenic Potential in Vivo: Negative mouse micronucleus test.

Chronic/Subchronic Toxicity Studies

Trifloxysulfuron-Sodium : Not Available

Carcinogenicity

Trifloxysulfuron-
Sodium : Not Available

Other Toxicity Information

None

Toxicity of Other Components

Diatomaceous Earth

The carrier in this product is naturally occurring diatomaceous earth. Natural diatomaceous earth contains a small percentage of naturally occurring crystalline silica, which is considered a probable human carcinogen. Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Surfactant

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

Target Organs

Active Ingredients

Trifloxysulfuron-Sodium : Not Available

Inert Ingredients

Diatomaceous Earth: Respiratory tract

Surfactant: Not Applicable

12. ECOLOGICAL INFORMATION

Summary of Effects

Trifloxysulfuron-Sodium :

Practically non-toxic to fish, invertebrates, birds and bees.

Eco-Acute Toxicity

Trifloxysulfuron-
Sodium : Bees LC50/EC50 > 25 ug/bee
Invertebrates (Water Flea) LC50/EC50 > 108 ppm
Fish (Trout) LC50/EC50 103 ppm
Fish (Bluegill) LC50/EC50 103 ppm
Birds (8-day dietary - Bobwhite Quail) LC50/EC50 5,620 ppm
Birds (8-day dietary - Mallard Duck) LC50/EC50 5,620 ppm

Eco-Chronic Toxicity

Trifloxysulfuron-
Sodium : Not Available

Environmental Fate

Trifloxysulfuron-Sodium :

The information presented here is for the active ingredient, trifloxysulfuron-sodium.
Not persistent in soil or 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.

Note: Product packages imported into the U.S. are marked, labeled and distributed with the Class 9 international shipping classification.

Air Transport - NAFTA

Not regulated.

Note: Product packages imported into the U.S. are marked, labeled and distributed with the Class 9 international shipping classification.

B/L Freight Classification

Herbicides, NOI (NMC Class 60)

Comments

Water Transport - International

Proper Shipping Name - Environmentally Hazardous Substance, Solid, N.O.S. (Trifloxysulfuron Sodium)

Hazard Class or Division: Class 9

Identification Number: UN 3077

Packing Group: PG III

IMDG EMS #: F-A, S-F

Air Transport - International

Proper Shipping Name - Environmentally Hazardous Substance, Solid, N.O.S. (Trifloxysulfuron Sodium)

Hazard Class or Division: Class 9

Identification Number: UN 3077

Packing Group: PG III

Packing Auth: 911

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

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:

1-800-334-9481

Original Issued Date: 08/18/2003

Revision Date: 11/29/2004

Replaces: 10/12/2004

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.

RSVP# : SCP-955-00399D

End of MSDS