

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: **AMISTAR FUNGICIDE** Product No.: A12814D
 EPA Signal Word: Caution
 Active Ingredient(%): Azoxystrobin (80.0%) CAS No.: 131860-33-8
 Chemical Name: Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate
 Chemical Class: A beta-methoxyacrylate fungicide
 EPA Registration Number(s): 100-1164 **Section(s) Revised: 2, 3, 11, 16**

2. HAZARDS IDENTIFICATION

Health and Environmental

Combustible powder. May form a flammable dust-air mixture.
 Harmful if inhaled. May be harmful if swallowed. Causes mild eye and skin irritation.

Hazardous Decomposition Products

None known.

Physical Properties

Appearance: Beige to brown granules
 Odor: None

Unusual Fire, Explosion and Reactivity Hazards

This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly. Mixtures of powder in air with flammable solvent vapors should be avoided.

This product has a minimum ignition energy between 3 and 10 millijoules. Static electricity, mechanical sparks, open flames and certain hot surfaces can serve as ignition sources for this material.

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
No inerts required to be listed				
Azoxystrobin (80.0%)	Not Established	Not Established	2 mg/m ³ TWA ***	No

*** Syngenta Occupational Exposure Limit (OEL)

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

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 Available	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Combustible powder	

Unusual Fire, Explosion and Reactivity Hazards

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This product has a minimum ignition energy between 3 and 10 millijoules. Static electricity, mechanical sparks, open flames and certain hot surfaces can serve as ignition sources for this material.

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

In Case of Fire

Use appropriate extinguishing media for combustibles in the area. 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

Handle this material only in electrically conductive equipment. Electrically ground and bond this equipment as well as any

worker who could contact a dust cloud formed of this material. Eliminate the presence of mechanical sparks and other ignition sources where dust clouds of this material could form. Bulk bags (FIBC) used to contain this material should be only type C. Type C bags must be electrically grounded before powder is discharged from the bag. The product is considered explosion class (Kst) 3 and consequently an explosion involving this powder cannot be adequately suppressed using standard suppression agents and equipment. This product is not considered electrically conductive at low relative humidity.

This product will burn with flames if ignited. The product can energetically decompose at approximately 500°F (260°C). Do not store or process at temperatures above 302°F (150°F). Do not store near sources of heat.

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 AND PACKAGING 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 dust-proof chemical 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 particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH certified respirator with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige to brown granules
Odor:	None
Melting Point:	Not Available
Boiling Point:	Not Applicable
Specific Gravity/Density:	1.00 g/cm ³
pH:	8 - 11
Solubility in H ₂ O	
Azoxystrobin :	6 mg/l in water @ 68°F (20°C)
Vapor Pressure	
Azoxystrobin :	8.25 x 10(-13) 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: See "Unusual Fire, Explosion and Reactivity Hazards" statement, Section 5.
- Materials to Avoid: Oxidizing agents.
- Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Female Rat) :	1230 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Female Rat) :	1.08 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Azoxystrobin : Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages (> or = 2000 mg/kg).

In rabbits, no effect was observed up to the highest dose level (500 mg/kg/day). In rats, developmental effects were seen only at maternally toxic doses (100 mg/kg/day).

Chronic/Subchronic Toxicity Studies

Azoxystrobin : In a rat 90-day feeding study, liver toxicity was observed at 2000 ppm. This was manifest as gross distension of the bile duct, increased numbers of lining cells and inflammation of the duct. No toxicologically significant effects were seen in repeat dose dog studies.

Data reviews do not indicate any potential for endocrine disruption.

There is no evidence of neurotoxicity in any of the studies conducted with azoxystrobin.

Carcinogenicity

Azoxystrobin : No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

Other Toxicity Information

None

Toxicity of Other Components

No inerts required to be listed

Not Applicable

Target Organs

Active Ingredients

Azoxystrobin : Liver

Inert Ingredients

No inerts required to be listed:

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Azoxystrobin :

Fish (Rainbow Trout) 96-hour LC50 470 ppb

Green Algae 5-day EC50 106 ppb

Invertebrate (Water Flea) 48-hour EC50 259 ppb

Bird (Mallard Duck) 14-day LD50 > 250 mg/kg

Environmental Fate

Azoxystrobin :

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

Low bioaccumulation potential. Not persistent in soil. Stable in water. Moderate mobility in soil. 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

Fungicides, NOI, Not Regulated

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin), Marine Pollutant

Hazard Class or Division: Class 9

Identification Number: UN 3082

Packing Group: PG III

IMDG EMS #: F-A, S-F

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin)

Hazard Class or Division: Class 9

Identification Number: UN 3082

Packing Group: PG III

Packing Auth.: 914

Note: Max. inner container 5 liters; Max. single container 450 liters

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: 3
Flammability: 3
Instability: 0

HMIS Hazard Ratings

Health: 2
Flammability: 3
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: 5/6/2003

Revision Date: 11/5/2009

Replaces: 3/21/2005

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