

**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 Technical (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: New**

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Surfactant	Not Established	Not Established	15 mg/m <sup>3</sup> TWA (total dust)*	No
Sodium Sulfite	Not Established	Not Established	Not Established	IARC Group 3
Azoxystrobin Technical (80.0%)	Not Established	Not Established	2 mg/m <sup>3</sup> TWA ***	No

\* recommended by manufacturer

\*\*\* Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

**3. HAZARDS IDENTIFICATION**
Symptoms of Acute Exposure

Causes mild eye and skin irritation.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Beige to brown granules

Odor: Not determined

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 (greater than 707°F [375°C]) can serve as ignition sources for this material.

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. 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 liquid	

### Unusual Fire, Explosion and Reactivity Hazards

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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 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. If a solid, sweep up material and place in a compatible disposal container. If a liquid, 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.

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.

## 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: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Beige to brown granules
- Odor: Not determined
- Melting Point: Not Available
- Boiling Point: Not Applicable
- Specific Gravity/Density: 1.00 g/cm<sup>3</sup>
- pH: 8 - 11

### Solubility in H<sub>2</sub>O

Azoxystrobin Technical: 6 mg/l in water @ 68°F (20°C)

### Vapor Pressure

Azoxystrobin Technical: 8.25 x 10<sup>-13</sup> 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: Can decompose at high temperatures forming toxic gases.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

- Ingestion: Slightly Toxic  
Oral (LD50 Rat) : > 2,000 mg/kg body weight
- Dermal: Practically Non-Toxic  
Dermal (LD50 Rat) : > 5,000 mg/kg body weight
- Inhalation:

Slightly Toxic

Inhalation (LC50 Rat) : 1.58 mg/kg body weight

Eye Contact: Mildly Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

#### Reproductive/Developmental Effects

Azoxystrobin Technical: Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages (> or = 2,000 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 Technical: In a rat 90-day feeding study, liver toxicity was observed at 2,000 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 Technical: No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

#### Other Toxicity Information

None

#### Toxicity of Other Components

Surfactant

Exposure can result in eye, skin and respiratory tract irritation.

#### Target Organs

##### Active Ingredients

Azoxystrobin Technical: Liver

##### Inert Ingredients

Surfactant: Eye, skin, respiratory tract

## **12. ECOLOGICAL INFORMATION**

#### Summary of Effects

Azoxystrobin Technical:

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

#### Eco-Acute Toxicity

Azoxystrobin Technical: Bees LC50/EC50 >200 ug/bee  
Invertebrates (Water Flea) LC50/EC50 0.259 ppm  
Fish (Trout) LC50/EC50 0.47 ppm  
Fish (Bluegill) LC50/EC50 1.1 ppm  
Birds (8-day dietary - Bobwhite Quail) LC50/EC50 > 5,200 ppm  
Birds (8-day dietary - Mallard Duck) LC50/EC50 > 5,200 ppm

#### Eco-Chronic Toxicity

Azoxystrobin Technical: Not Available

#### Environmental Fate

Azoxystrobin Technical:

No data available for the formulation. The information presented here is for the active ingredient, azoxystrobin. A thorough review of environmental information is not possible in this document.

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

Not regulated by DOT.

#### B/L Freight Classification

Fungicides, NOIBN, o/t poison

#### Comments

International Transportation:

Environmentally Hazardous Substance, Solid, N.O.S. (azoxystrobin), Class 9, UN3077, PGIII, Marine Pollutant

### 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

None

#### 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: 2  
Instability: 0

#### HMIS Hazard Ratings

Health: 1  
Flammability: 2  
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: 05/06/2003

Revision Date:

Replaces:

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# : Not Applicable

End of MSDS