

Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro, NC 27419

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

1. PRODUCT IDENTIFICATION

Product Name:	HERITAGE FUNGICIDE	Product No.: A12704A
EPA Signal Word:	Caution	
Active Ingredient(%):	Azoxystrobin (50%)	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):	100-1093	Section(s) Revised: 2, 9, 15

2. HAZARDS IDENTIFICATION

Health and Environmental

Harmful if inhaled. Irritating to eyes and skin. Dust may be irritating to nose and throat.

Combustible powder.

Hazardous Decomposition Products

Not Available

Physical Properties

Appearance: Light beige to brown granules

Odor: No characteristic odor

Unusual Fire, Explosion and Reactivity Hazards

Fire will spread by burning with flame.

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

See also Sec. 7.

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz and Cristobalite	10 mg/m ³ /(%SiO ₂ +2) (respirable dust)	0.025 mg/m ³ (respirable silica)	0.05 mg/m ³ (respirable dust) **	IARC 1; ACGIH A2
Kaolin Clay	15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)	2 mg/m ³ TWA (respirable)	10 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable) **	No
Azoxystrobin (50%)	Not Established	Not Established	2 mg/m ³ TWA ***	No

** 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, 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

Not Available

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: Combustible powder

Unusual Fire, Explosion and Reactivity Hazards

Fire will spread by burning with flame.

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

See also Sec. 7.

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

Avoid dust formation.

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

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

In general personnel handling this material and all conducting equipment should be electrically earthed or grounded. Bulk bags (FIBC) used to contain this material should be Type B, Type C or Type D. Type C bags must be electrically grounded or earthed before powder is charged to or discharged from the bag. If metal or fiber drums are used to contain this material, make certain the metal parts are bonded to the filling equipment and grounded.

This material could become charged under certain conditions such as pneumatic conveying.

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. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- 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 certified respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Light beige to brown granules
- Odor: No characteristic odor
- Melting Point: 237.2 - 240.8 °F
- Boiling Point: Not Available
- Specific Gravity/Density: 0.58 - 0.65 g/ml; 31.2 - 43.7 lbs./cu.ft.
- pH: 5 - 8 (w/w%)

Solubility in H₂O

- 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", Sec. 5. and "Handling and Storage", Sec. 7.
- Materials to Avoid: Oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 4.67 mg/l air - 4 hours
Eye Contact:	Moderately 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

Crystalline Silica, Quartz and Cristobalite

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.

Kaolin Clay

May cause eye and respiratory tract irritation. Long-term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs. Continued long-term exposure may affect respiratory function in some individuals.

Target Organs

Active Ingredients

Azoxystrobin : Liver

Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Kaolin Clay: Eye, respiratory tract, lung

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.

Comments

Water Transport (IMDG) - International
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3077
Packing Group: PG III

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

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

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

This Product contains trace amounts of chemicals, known to the State of California to cause cancer, as unintended impurities resulting from other entities manufacturing or processing operations which Syngenta cannot control.

CERCLA/SARA 304 Reportable Quantity (RQ)

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
Flammability: 3
Instability: 0

HMIS Hazard Ratings

Health: 1
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: 1/30/1997

Revision Date: 9/19/2012

Replaces: 8/15/2011

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