

**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: **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, 3, 5, 8, 14**

**2. HAZARDS IDENTIFICATION**

## Health and Environmental

Combustible powder.

Harmful if inhaled. May be harmful in contact with skin. Causes eye and skin irritation. Dust may be irritating to nose and throat.

## Hazardous Decomposition Products

None known.

## Physical Properties

Appearance: Light brown granules

Odor: No characteristic odor

## 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
Kaolin Clay	15 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable)	2 mg/m <sup>3</sup> TWA (respirable)	10 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable) **	No
Crystalline Silica, Quartz and Cristobalite	10 mg/m <sup>3</sup> /(%SiO <sub>2</sub> +2) (respirable dust)	0.025 mg/m <sup>3</sup> (respirable silica)	0.05 mg/m <sup>3</sup> (respirable dust) **	IARC 1; ACGIH 1
Azoxystrobin (50%)	Not Established	Not Established	2 mg/m <sup>3</sup> TWA ***	No

\*\* recommended by NIOSH

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

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

#### 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: Not Available
- Flammability: Combustible powder

##### 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.

##### 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. 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 brown granules
Odor:	No characteristic odor
Melting Point:	237.2 - 240.8 °F
Boiling Point:	Not Available
Specific Gravity/Density:	31.2 - 43.7 lbs./cu.ft.
pH:	5 - 8
Solubility in H <sub>2</sub> O	
Azoxystrobin :	6 mg/l in water @ 68°F (20°C)
Vapor Pressure	
Azoxystrobin :	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", Sec. 5. and "Handling and Storage", Sec. 7.
- Materials to Avoid: Oxidizing agents.
- Hazardous Decomposition Products: None known.

## 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

#### 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

Kaolin Clay: Eye, respiratory tract, lung

## 12. ECOLOGICAL INFORMATION

### Summary of Effects

#### Azoxystrobin :

Very toxic to aquatic life.

### 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

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 by US DOT.

Note: Packages prepared for export by water are classified by IMDG standards (see below) Special Provision 146

Air Transport

Not regulated by US DOT or IATA.

Note: Packages prepared for export to Europe are classified by ADR/RID standards (see below) Special Provision A 97

B/L Freight Classification

Fungicides, NOI, 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

IMDG EMS #: F-A, S-F

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

### 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

Not Applicable

CERCLA/SARA 302 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		HMIS Hazard Ratings		
Health:	2	Health:	1	0 Minimal
Flammability:	3	Flammability:	3	1 Slight
Instability:	0	Reactivity:	0	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: 8/27/2009

Replaces: 1/5/2007

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