

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 (50.0%) 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): 100-1093 (formerly 10182-408) **Section(s) Revised: 14**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz	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 (50.0%)	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

3. HAZARDS IDENTIFICATION
Symptoms of Acute Exposure

Causes moderate eye irritation. Dust may be irritating to nose and throat.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

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 (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

Asthma or other respiratory conditions aggravated by chemical irritants.

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 flammable	

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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 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, 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. 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 (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 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 H₂O

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

Vapor Pressure

Azoxystrobin : 8.25 x 10⁽⁻¹³⁾ mmHg @

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:	May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

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

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 = 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 : 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 : 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

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

The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. This is expected to be a low hazard for usual industrial handling. Long term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs. Continued long term overexposure may affect respiratory function in some individuals.

Target Organs

Active Ingredients

Azoxystrobin : Liver

Inert Ingredients

Crystalline Silica, Quartz: Respiratory tract

Kaolin Clay: Eye, skin, lung, digestive tract

12. ECOLOGICAL INFORMATION

Summary of Effects

Azoxystrobin

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

Eco-Acute Toxicity

Azoxystrobin 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 Not Available

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, O/T Poison

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)

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: 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: 1/5/2007

Replaces: 1/24/2006

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