

## HERITAGE® ACTION

Date: 7/6/2015

Replaces: 5/21/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **HERITAGE® ACTION**  
Product No.: A20964A  
Use: Fungicide  
Manufacturer: Syngenta Crop Protection, LLC  
Post Office Box 18300  
Greensboro NC 27419  
Manufacturer Phone: 1-800-334-9481  
**Emergency Phone: 1-800-888-8372**

### 2. HAZARDS IDENTIFICATION

Classifications: Specific Target Organ Toxicity: Repeated Category 2  
Specific Target Organ Toxicity: Respiratory Irritation Category 3  
Carcinogenicity: Category 1A  
Signal Word (OSHA): Danger  
Hazard Statements: May cause respiratory irritation  
May cause cancer  
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves, protective clothing, eye protection.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
If exposed or concerned: Get medical advice/attention.  
Call a poison center, doctor or Syngenta if you feel unwell.  
Store locked up.  
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common Name	CAS Number	Concentration
Crystalline Silica, Quartz and Cristobalite	Crystalline Silica, Quartz and Cristobalite	14808-60-7	< 1%
Kaolin Clay	Kaolin Clay	1332-58-7	Trade Secret
Other ingredients	Other ingredients	Trade Secret	>47.82%
Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate	Azoxystrobin	131860-33-8	50%
1,2,3-Benzothiadiazole-7-carbothioic acid S-methyl ester	Acibenzolar-S-Methyl	135158-54-2	1.18%

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

**4. FIRST AID MEASURES**

Have the product container, label or 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. Do not give any liquid to the person. 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.

Most important symptoms/effects:

Respiratory irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

**5. FIRE FIGHTING MEASURES**

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO<sub>2</sub> extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific 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.

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Special protective equipment and precautions for firefighters:

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.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

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**

Precautions for safe handling:

This material can become readily charged in most operations.

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.

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.

Conditions for safe storage, including any incompatibilities:

Store locked up.

**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.**

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
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)	NIOSH
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)	NIOSH
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Azoxystrobin	Not Established	Not Established	4 mg/m <sup>3</sup> TWA	Syngenta
Acibenzolar-S-Methyl	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta

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Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

## 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 particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, 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: Off-white solid

Odor: Musty

Odor Threshold: Not Available

pH: 7.5 (1% Aqueous Solution)

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Acibenzolar-S-Methyl 0.00000165mmHg @ 68°F (20°C)  
Azoxystrobin 8.25 x 10<sup>(-13)</sup> mmHg @ 68°F (20°C)

Vapor Density: Not Available

Relative Density: 0.5645 g/ml

Solubility (ies): Acibenzolar-S-Methyl 7.7 mg/l @ 68°F (20°C)  
Azoxystrobin 6 mg/l in water @ 68°F (20°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

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### 10. STABILITY AND REACTIVITY

Reactivity: Not reactive.  
 Chemical stability: Stable under normal use and storage conditions.  
 Possibility of hazardous reactions: Will not occur.  
 Conditions to Avoid: None known.  
 Incompatible materials: None known.  
 Hazardous Decomposition Products: Not Available

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Respiratory irritation

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Respiratory system effects

#### Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Female Rat) :	> 5,000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5,000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.60 mg/l
Eye Contact:	Mild Irritant	
Skin Contact:	Non-Irritating	
Skin Sensitization:	Not a Sensitizer (LLNA Assay)	

#### Reproductive/Developmental Effects

Acibenzolar-S-Methyl: Developmental toxicity and fetal malformations observed at high maternal doses (rats). Additional testing showed that these effects are not relevant to humans.

Azoxystrobin : Did not show reproductive toxicity effects in animal experiments.

#### Chronic/Subchronic Toxicity Studies

Acibenzolar-S-Methyl: Slight hemolytic anemia at highest dose level (rats, mice and dogs). Liver and spleen effects observed in highest dose level (rats and dogs).

Azoxystrobin : No adverse effect has been observed in chronic toxicity tests.

#### Carcinogenicity

Acibenzolar-S-Methyl: Not carcinogenic at dietary levels up to 7500 ppm (rat) and 6000 ppm (mouse).

Azoxystrobin : Did not show carcinogenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz and Cristobalite	IARC 1; ACGIH A2
Kaolin Clay	No
Other ingredients	No

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Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate No  
1,2,3-Benzothiadiazole-7-carbothioic acid S-methyl ester No

### Other Toxicity Information

Not Available

### 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.

Other ingredients

Not Applicable

### Target Organs

#### Active Ingredients

Acibenzolar-S-Methyl: Blood, liver, spleen

Azoxystrobin : Liver

#### Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Kaolin Clay: Eye, respiratory tract, lung

Other ingredients: Not Applicable

## 12. ECOLOGICAL INFORMATION

### Eco-Acute Toxicity

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

Acibenzolar-S-Methyl:

Fish (Rainbow Trout) 96-hour LC50 0.88 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 2.9 ppm

Green Algae 72-hour EC50 80.1 ppm

Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

### Environmental Fate

Acibenzolar-S-Methyl:

The information presented here is for the active ingredient, acibenzolar-s-methyl.  
Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil. Sinks in water (after 24 h).

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### 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 - International

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

Hazard Class: 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: Class 9

Identification Number: UN 3077

Packing Group: PG III

## 15. REGULATORY INFORMATION

### Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Causes moderate eye irritation. Do not get in eyes or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective eyewear, long sleeved shirt and long pants, socks and shoes. Remove and wash contaminated clothing before reuse.

### EPA Registration Number(s):

100-1550

### EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

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CERCLA/SARA 304 Reportable Quantity (RQ):

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

TSCA R & D Exempt

### 16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2  
Flammability: 1  
Instability: 0

HMIS Hazard Ratings

Health: 2\*  
Flammability: 1  
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: D

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 1/13/2015

Revision Date: 7/6/2015

Replaces: 5/21/2015

Section(s) Revised: 2, 4, 11, 16

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