

## MIRAVIS ACE

Date: 2/25/2019  
 Replaces: 2/15/2019

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **MIRAVIS ACE**  
 Product No.: A21573C  
 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: Inhalation: Category 4  
 Reproductive Toxicity: Category 2  
 Eye Damage/Irritation: Category 2B

Signal Word (OSHA): Danger

Hazard Statements: Causes eye irritation  
 Harmful if inhaled  
 Suspected of damaging fertility or the unborn child

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Avoid breathing mist, vapors, spray.  
 Wash hands and face thoroughly after handling.  
 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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If exposed or concerned: Get medical advice/attention.  
 Call a poison center, doctor or Syngenta if you feel unwell.  
 If eye irritation persists: Get medical advice.  
 Store locked up.  
 Dispose of contents and container in accordance with local regulations.

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Other Hazard Statements: None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common Name	CAS Number	Concentration
Solvent	Solvent	104-76-7	<10.0%
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	Propiconazole	60207-90-1	11.38%
1H-Pyrazole-4-carboxamide, 3-(difluoromethyl)-N-methoxy-1-methyl-N-[1-methyl-2-(2,4,6-trichlorophenyl)ethyl]-	Pydiflumetofen	1228284-64-7	13.66%

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:

Eye irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

None known.

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.

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### 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:

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. 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

Precautions for safe handling:

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.

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
Solvent	Not Established	Not Established	Not Established	Not Applicable
Propiconazole	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta
Pydiflumetofen	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta

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 splash-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 (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear.

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**Inhalation:**

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any 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: Beige liquid

Odor: Aromatic

Odor Threshold: Not Applicable

pH: 7-9 % in water

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): &gt;106°C (Pensky-Martens CC)

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Propiconazole 4.2 x 10<sup>-7</sup> mmHg @ 77°F (25°C)

Pydiflumetofen 0.0053mPA @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 1.1 g/ml

Solubility (ies): Propiconazole 0.1 g/l @ 68°F (20°C)

Pydiflumetofen 1.5 mg/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: 425°C

Decomposition Temperature: Not Available

Viscosity: 490mPa @ 68°F (20°C)

Other: None

**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

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### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation

Delayed, immediate and chronic effects of exposure: Developmental toxicity, Eye irritation

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

Ingestion:	Oral (LD50 Rat) :	> 2000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.13 mg/l
Eye Contact:	Moderate Irritant	
Skin Contact:	Non-Irritating	
Skin Sensitization:	Not a skin sensitizer.	

#### Reproductive/Developmental Effects

Propiconazole: Some evidence of adverse effects on development, based on animal experiments.

Pydiflumetofen: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

#### Chronic/Subchronic Toxicity Studies

Propiconazole: None observed.

Pydiflumetofen: Not Applicable

#### Carcinogenicity

Propiconazole: Increased hepatocellular adenomas, combined adenomas/carcinomas, and hepatocellular carcinomas observed in male mice in a chronic oral feeding study. However, animals in the high dose group for this study showed excessive toxicity; furthermore, the high dose exceeded the Maximum Tolerated Dose determined in the 90-day range finding study. No treatment-related tumors were seen in female mice in this mouse chronic feeding study. No tumors were noted in a chronic rat study.

Pydiflumetofen: Liver tumors noted in mice that are not relevant to humans.

Chemical Name	NTP/IARC/OSHA Carcinogen
Solvent	No
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	No
1H-Pyrazole-4-carboxamide, 3-(difluoromethyl)-N-methoxy-1-methyl-N-[1-methyl-2-(2,4,6-trichlorophenyl)ethyl]-	No

#### Other Toxicity Information

Not Available

#### Toxicity of Other Components

Solvent

May be harmful if absorbed through the skin. Causes severe eye irritation. May cause respiratory and digestive

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tract irritation. Causes mild skin irritation.

### Target Organs

#### Active Ingredients

Propiconazole: Liver  
 Pydiflumetofen: Not Available

#### Inert Ingredients

Solvent: Eye, skin, respiratory tract, digestive tract

## 12. ECOLOGICAL INFORMATION

### Eco-Acute Toxicity

#### Propiconazole:

Fish (Rainbow Trout) 96-hour LC50 0.83 ppm  
 Invertebrate (Water Flea) 48-hour EC50 3.2 ppm  
 Green Algae 9-day EC50 0.72 ppm  
 Bird (Mallard Duck) 14-day LD50 2510 mg/kg

#### Pydiflumetofen:

Green Algae 96-hour ErC50 >5.9 mg/l  
 Fish (Rainbow Trout) 96-hour LC50 .18 mg/l

### Environmental Fate

#### Propiconazole:

The information presented here is for the active ingredient, propiconazole.  
 Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

#### Pydiflumetofen:

Not readily biodegradable, does not bioaccumulate.

## 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, Liquid, N.O.S. (Propiconazole, Pydiflumetofen), Marine Pollutant  
 Hazard Class: Class 9  
 Identification Number: UN 3082  
 Packing Group: PG III

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Air Transport  
 Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Propiconazole, Pydiflumetofen), Marine Pollutant  
 Hazard Class: Class 9  
 Identification Number: UN 3082  
 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: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear appropriate protective eyewear such as goggles, face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

EPA Registration Number(s):  
 100-1645

**EPCRA SARA Title III Classification:**

Section 311/312 Hazard Classes: See Section 2 Hazards  
 Section 313 Toxic Chemicals: Propiconazole 11.38% (CAS No. 60207-90-1)

**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: 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

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Original Issued Date: 2/23/2018

Revision Date: 2/25/2019

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Section(s) Revised: 2,3,4,11,15

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