

## VIBRANCE® TRIO

Date: 6/27/2018  
 Replaces: N/A

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **VIBRANCE® TRIO**  
 Product No.: A22363C  
 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: Eye Damage/Irritation: Category 1  
 Signal Word (OSHA): Danger  
 Hazard Statements: Causes serious eye damage

Hazard Symbols:



Precautionary Statements: Wear eye protection.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Immediately call a poison center, doctor or Syngenta.

Other Hazard Statements: None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	2.32%
(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetylamino]-propionic acid methyl ester	Metalaxyl-M	70630-17-0 & 69516-34-3	13.95%
1H-Pyrazole-4-carboxamide, N-(2-[1,1'-bicyclopropyl]-2-ylphenyl)-3-(difluoromethyl)-1-methyl-	Sedaxane	874967-67-6	2.32%

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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.

### 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.

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### 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:

Not Applicable

### 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
Fludioxonil	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta
Metalaxyl-M	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta
Sedaxane	Not Established	Not Established	2 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.

**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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Red opaque liquid

Odor: Faint aromatic

Odor Threshold: Not Applicable

pH: 7.7 (1% aqueous dispersion)

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): &gt;100°C

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure:	Fludioxonil	2.9 x 10 <sup>(-9)</sup> mmHg @ 77°F (25°C)
	Metalaxyl-M	2.5 x 10 <sup>(-5)</sup> mmHg @ 77°F (25°C)
	Sedaxane	4.9 x 10 <sup>(-10)</sup> mmHg @ 68°F (20°C)

Vapor Density: Not Available

Relative Density: 1.06 g/ml

Solubility (ies):	Fludioxonil	1.8 mg/l @ 77°F (25°C)
	Metalaxyl-M	26 g/l @ 77°F (25°C)
	Sedaxane	14 mg/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: 485°C

Decomposition Temperature: Not Available

Viscosity: 657mPa @ 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

**11. TOXICOLOGICAL INFORMATION**Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation

Delayed, immediate and chronic effects of exposure: Eye irritation

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

Ingestion:	Oral (LD50 Rat) :	> 2000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	. 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	5.08 mg/l - 4 hours (calculated)
Eye Contact:	Minimally Irritating	
Skin Contact:	Slightly Irritating	
Skin Sensitization:	Not a skin sensitizer.	

### Reproductive/Developmental Effects

Fludioxonil: Delayed development at doses causing maternal toxicity.

Metalaxyl-M: None observed.

Sedaxane: Did not show teratogenic effects in animal experiments.

Did not show reproductive toxicity effects in animal experiments.

### Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

Metalaxyl-M: Liver effects at high dose animal tests.

Sedaxane: STOT - Repeated Exposure : No adverse effect has been observed in chronic toxicity tests.

### Carcinogenicity

Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).

Metalaxyl-M: None observed.

Sedaxane: Did not show mutagenic effects in animal experiments.

At extremely high doses, numerically higher incidences of uterine, thyroid and liver tumors (male and/or female rats) and liver tumors (male mice) were within the range of normal background variation and thus considered unrelated to treatment. Some Regulatory Authorities have taken a more conservative position that these high-dose findings are treatment-related in rats and mice. The dose levels where these findings occur are not relevant to human exposure levels.

Chemical Name	NTP/IARC/OSHA Carcinogen
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4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No
-----------------------------------------------------------------	----

(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester	No
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1H-Pyrazole-4-carboxamide, N-(2-[1,1'-bicyclopropyl]-2-ylphenyl)-3-(difluoromethyl)-1-methyl-	No
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### Other Toxicity Information

Not Available

### Toxicity of Other Components

### Target Organs

#### Active Ingredients

Fludioxonil:	Liver, kidney
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Metalaxyl-M:	Liver
Sedaxane:	Not Applicable
<u>Inert Ingredients</u>	

### 12. ECOLOGICAL INFORMATION

#### Eco-Acute Toxicity

##### Fludioxonil:

Fish (Rainbow Trout) 96-hour LC50 0.47 ppm  
 Green Algae 5-day EC50 0.087 ppm  
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.9 ppm  
 Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

##### Metalaxyl-M:

Fish (Rainbow Trout) 96-hour LC50 > 121 ppm  
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 113 ppm  
 Bird (Bobwhite Quail) 14-day LD50 981 mg/kg

##### Sedaxane:

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 6.10 mg/l  
 Green Algae 96-hour EbC50 1.9 mg/l  
 Fish (Carp) 96-hour LC50 0.62 mg/l

#### Environmental Fate

##### Fludioxonil:

The information presented here is for the active ingredient, fludioxonil.  
 Does not bioaccumulate. Persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

##### Metalaxyl-M:

The information presented here is for the active ingredient, metalaxyl-m.  
 Does not bioaccumulate. Not persistent in soil or water. Moderate mobility in soil. Mixes/sinks (after 24 h).

##### Sedaxane:

The information presented here is for the active ingredient, sedaxane.  
 Material is not readily biodegradable. Material is not persistent in soil.

### 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

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### 14. TRANSPORT INFORMATION

#### DOT Classification

Ground Transport - NAFTA  
Not regulated

#### Comments

Water Transport - International  
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Sedaxane, Fludioxonil), Marine Pollutant  
Hazard Class: Class 9  
Identification Number: UN 3082  
Packing Group: PG III

#### Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Sedaxane, Fludioxonil)  
Hazard Class: Class 9  
Identification Number: UN 3082  
Packing Group: PG III

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### 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 or absorbed through skin. Avoid contact with skin, eyes or clothing. 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):

100-1637

#### EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

#### 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

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### 16. OTHER INFORMATION

#### NFPA Hazard Ratings

Health: 2  
Flammability: 1  
Instability: 0

#### HMIS Hazard Ratings

Health: 2  
Flammability: 1  
Reactivity: 0

Syngenta Hazard Category: C,S

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

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 6/27/2018

Revision Date: Replaces:

Section(s) Revised:

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.