

CRUISERMAXX® VIBRANCE® PULSES

Date: 7/3/2018
Replaces: 4/20/2016

1. PRODUCT IDENTIFICATION

Product identifier on label: **CRUISERMAXX® VIBRANCE® PULSES**

Product No.: A21174B
Use: Insecticide with Fungicides
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
Signal Word (OSHA): Warning
Hazard Statements: Harmful if inhaled

Hazard Symbols:



Precautionary Statements: Use only outdoors or in a well-ventilated area.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center, doctor or Syngenta if you feel unwell.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetylamino]-propionic acid methyl ester	Mefenoxam	70630-17-0 & 69516-34-3	1.06%
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	0.7%
1H-Benzimidazole, 2-(4-thiazolyl)-	Thiabendazole	148-79-8	4.24%
3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine	Thiamethoxam	153719-23-4	8.48%

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1H-Pyrazole-4-carboxamide, N-(2-[1,1'-bicyclopropyl]-2-ylphenyl)-3-(difluoromethyl)-1-methyl-	Sedaxane	874967-67-6	1.41%
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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:

Not Applicable

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
Mefenoxam	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Fludioxonil	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Thiabendazole	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Thiamethoxam	Not Established	Not Established	3 mg/m ³ TWA	Syngenta
Sedaxane	Not Established	Not Established	2 mg/m ³ 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: Blue liquid
Odor: Not determined
Odor Threshold: Not Applicable
pH: 6.7
Melting point/freezing point: Not Available
Initial boiling point and boiling range: Not Applicable
Flash Point (Test Method): >102°C
Flammable Limits (% in Air): Not Available
Flammability: Not Available
Vapor Pressure: Fludioxonil 2.9 x 10⁻⁹ mmHg @ 77°F (25°C)
Mefenoxam 2.5 x 10⁻⁵ mmHg @ 77°F (25°C)
Sedaxane 4.9 x 10⁻¹⁰ mmHg @ 68°F (20°C)
Thiabendazole 4.0 x 10⁻⁹ mmHg @ 77°F (25°C)
Thiamethoxam 2 x 10⁻¹¹ mmHg @ 68°F (20°C)
Vapor Density: Not Available
Relative Density: 1.09 g/ml
Solubility (ies): Fludioxonil 1.8 mg/l @ 77°F (25°C)
Mefenoxam 26 g/l @ 77°F (25°C)
Sedaxane 14 mg/l @ 77°F (25°C)
Thiabendazole 30 mg/l (pH 7, pH 10) @ 68°F in water
Thiamethoxam 4.1 g/l @ 77°F (25°C)
Partition coefficient: n-octanol/water: Not Available
Autoignition Temperature: 455°C
Decomposition Temperature: Not Available
Viscosity: 473mPa @ 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: Not Available
Incompatible materials: None known.
Hazardous Decomposition Products: Not Available

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11. TOXICOLOGICAL INFORMATIONHealth effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Not Applicable

Delayed, immediate and chronic effects of exposure: Not Applicable

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

Ingestion:	Oral (LD50 Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.71 mg/l
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.

Mefenoxam: None observed.

Sedaxane: Did not show teratogenic effects in animal experiments.

Did not show reproductive toxicity effects in animal experiments.

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

Thiamethoxam: Developmental: Not teratogenic in rats or rabbits.

Reproductive: No effects on reproduction. Minor increase in a common testis effect in rats at high doses, which did not affect reproduction.

Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

Mefenoxam: Liver effects at high dose animal tests.

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

Thiabendazole: Increased incidence of anemia and changes in the gall bladder, kidney, liver, spleen and thyroid gland in rat and dog tests.

No adverse health effects are expected in humans at airborne levels below the occupational exposure limit.

Thiamethoxam: Subchronic: Liver effects occurred in rodents only at high dose levels. Not neurotoxic after high acute and subchronic exposure in rats.

Carcinogenicity

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

Mefenoxam: 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.

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Thiabendazole: Following dietary administration to Sprague-Dawley rats for 2 years, a high dose (90 mg/kg/day) of thiabendazole resulted in a minimally increased incidence of thyroid follicular cell adenomas in male rats only. The mode of action (MOA) is not relevant to humans, supporting the conclusion that thiabendazole does not pose a carcinogenic hazard to humans.

Thiamethoxam: Classified as "not likely to be carcinogenic in humans" based on lifetime studies in mice and rats.

Chemical Name	NTP/IARC/OSHA Carcinogen
(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester	No
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No
1H-Benzimidazole, 2-(4-thiazolyl)-	No
3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine	No
1H-Pyrazole-4-carboxamide, N-(2-[1,1'-bicyclopropyl]-2-ylphenyl)-3-(difluoromethyl)-1-methyl-	No

Other Toxicity Information

Not Available

Toxicity of Other Components

Target Organs

Active Ingredients

Fludioxonil:	Liver, kidney
Mefenoxam:	Liver
Sedaxane:	Not Applicable
Thiabendazole:	Thyroid, liver, spleen, kidney, gall bladder, blood
Thiamethoxam:	Liver

Inert Ingredients

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Mefenoxam:

- 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

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

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Thiabendazole:

Bird (Bobwhite Quail) LD50 Oral > 2250 mg/kg
Fish (Trout) 96-hour LC50 0.56 ppm
Invertebrate (Water Flea) 48-hour EC50 0.81 mg/l

Thiamethoxam:

Fish (Rainbow Trout) 96-hour LC50 > 100 ppm
Bird (Mallard Duck) LD50 Oral 576 mg/kg
Invertebrate (Daphnia Magna) 48-hour EC50 > 106 ppm
Green Algae 4-day EC50 > 97 ppm

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).

Mefenoxam:

The information presented here is for the active ingredient, mefenoxam.
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.

Thiabendazole:

The information presented here is for the active ingredient, thiabendazole.
Low bioaccumulation potential. Stable in soil and water. Sinks in water (after 24 h).

Thiamethoxam:

The information presented here is for the active ingredient, thiamethoxam.
Not persistent in soil. Stable in water. Moderate mobility in soil. Floats 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

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Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Thiamethoxam, 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. (Thiamethoxam, Fludioxonil)
 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: 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):
 100-1563

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard
 Section 313 Toxic Chemicals: Thiabendazole 4.24% (CAS No. 148-79-8)

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: B

For non-emergency questions about this product call:

1-800-334-9481

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Original Issued Date: 4/4/2016
Revision Date: 7/3/2018 Replaces: 4/20/2016
Section(s) Revised: 1-16

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.