

ORONDIS® OPTI

Date: 9/14/2016
 Replaces: 6/1/2016

1. PRODUCT IDENTIFICATION

Product identifier on label: **ORONDIS® OPTI**
 Product No.: A20942D
 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: Skin Sensitizer: Category 1B
 Carcinogenicity: Category 2
 Specific Target Organ Toxicity: Respiratory Irritation Category 3
 Eye Damage/Irritation: Category 1
 Inhalation: Category 2

Signal Word (OSHA): **Danger**

Hazard Statements: May cause an allergic skin reaction
 Causes serious eye damage
 Fatal if inhaled
 May cause respiratory irritation
 Suspected of causing cancer

Hazard Symbols:



Precautionary Statements: Contaminated work clothing must not be allowed out of the workplace.
 If on skin: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice.
 Wash contaminated clothing before reuse.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist, vapors, spray.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing, eye protection.
 In case of inadequate ventilation wear respiratory protection. See Section 8 Exposure

ORONDIS® OPTI

Date: 9/14/2016
Replaces: 6/1/2016

Control/Personal 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.

Immediately call a poison center, doctor or Syngenta.

Call a poison center, doctor or Syngenta if you feel unwell.

Specific treatment is urgent (see Section 4 First Aid Measures).

Store locked up.

Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
1,2-Propanediol	Propylene Glycol	57-55-6	<10%
Bentonite	Bentonite	1302-78-9	<5%
Other ingredients	Other ingredients	Trade Secret	>51.3%
Tetrachloroisophthalonitrile	Chlorothalonil	1897-45-6	33.2%
Oxathiapiprolin	Oxathiapiprolin	1003318-67-9	0.5%

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

Allergic skin reaction

Respiratory irritation

ORONDIS® OPTI

Date: 9/14/2016
 Replaces: 6/1/2016

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.

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
Propylene Glycol	Not Established	Not Established	10 mg/m ³ TWA	AIHA
Bentonite	15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)	10 mg/m ³ TWA (inhalable); 3 mg/m ³ TWA (respirable)	Not Established	Not Applicable

ORONDIS® OPTI

Date: 9/14/2016
 Replaces: 6/1/2016

Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Chlorothalonil	Not Established	Not Established	0.1 mg/m ³ TWA	Syngenta
Oxathiapiprolin	Not Established	Not Established	Not Established	Not Applicable

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid

Odor: Not determined

Odor Threshold: Not Applicable

pH: Not Available

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Chlorothalonil 0.00000057mmHg @ 77°F (25°C)
 Oxathiapiprolin Not Available

Vapor Density: Not Available

Relative Density: 1.214 g/ml

Solubility (ies): Chlorothalonil 0.81 mg/l @ 77°F (25°C)
 Oxathiapiprolin Not Available

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

ORONDIS® OPTI

Date: 9/14/2016
Replaces: 6/1/2016

Decomposition Temperature: Not Available
Viscosity: Not Available
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: None known.

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Rash, redness or itching, Respiratory irritation

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Eye irritation, Allergic skin reaction, Respiratory system effects

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

Ingestion:	Oral (LD50 Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 0.24 mg/l
Eye Contact:	Severe Irritant	
Skin Contact:	Non-Irritating	
Skin Sensitization:	A skin sensitizer.	

Reproductive/Developmental Effects

Chlorothalonil: Did not show reproductive toxicity effects in animal experiments. Did not show teratogenic effects in animal experiments.

Oxathiapiprolin: Animal testing showed no reproductive toxicity. Slight delays in maturation observed in rats.

Chronic/Subchronic Toxicity Studies

Chlorothalonil: In dogs, 1 year administration caused a significant decrease in body weight gain and increases in absolute liver and kidney weights.

Neurotoxicity: No evidence in regulatory studies.

Oxathiapiprolin: No toxicologically significant effects were found in rat, dog or mouse.

Carcinogenicity

ORONDIS® OPTI

Date: 9/14/2016
 Replaces: 6/1/2016

Chlorothalonil: Chlorothalonil causes kidney tumors in rats and mice via a nongentoxic mode of action secondary to target organ toxicity.
 Did not show mutagenic effects in animal experiments.
 IARC identifies chlorothalonil as a 2B carcinogen (possibly carcinogenic to humans).
 Oxathiapiprolin: Animal testing did not show any carcinogenic effects.

Chemical Name	NTP/IARC/OSHA Carcinogen
1,2-Propanediol	No
Bentonite	No
Other ingredients	No
Tetrachloroisophthalonitrile	IARC Group 2B
Oxathiapiprolin	No

Other Toxicity Information
 Not Available

Toxicity of Other Components

Bentonite
 Prolonged inhalation of excessive concentrations of dust may lead to lung injury.

Other ingredients
 Not Established

Propylene Glycol
 Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea. Also, eye irritation may occur with lacrimation but no residual discomfort or injury. Prolonged contact to skin may cause mild to moderate irritation and possible allergic reactions. Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs

Active Ingredients

Chlorothalonil: Lung, kidney
 Oxathiapiprolin: Not Applicable

Inert Ingredients

Bentonite: Respiratory tract
 Other ingredients: Not Established
 Propylene Glycol: CNS, kidney, liver

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Chlorothalonil:
 Green Algae 5-day EC50 190 ppb
 Bird (Mallard Duck) LD50 Oral > 4640 mg/kg
 Invertebrate (Water Flea) 48-hour EC50 70 ppb
 Fish (Rainbow Trout) 96-hour LC50 47 ppb

Oxathiapiprolin:
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.67 mg/l
 Green Algae 96-hour ErC50 >0.142 mg/l
 Fish (Rainbow Trout) 96-hour LC50 >0.69 mg/l

ORONDIS® OPTI

Date: 9/14/2016

Replaces: 6/1/2016

Environmental Fate

Chlorothalonil:

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

Oxathiapiprolin:

Not Available

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. (Chlorothalonil), 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. (Chlorothalonil)
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:

Danger: Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear, such as goggles, face shield, or safety glasses. May be fatal if inhaled. Do not breathe spray mist. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

EPA Registration Number(s):

100-1591

EPCRA SARA Title III Classification:

ORONDIS® OPTI

Date: 9/14/2016
 Replaces: 6/1/2016

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Chlorothalonil 33.2% (CAS No. 1897-45-6)

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
 Physical Hazard: 0

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

Syngenta Hazard Category: D,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 10/16/2015

Revision Date: 9/14/2016

Replaces: 6/1/2016

Section(s) Revised: 3, 15, 16

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