

## INSTRATA®

Date: 6/12/2018

Replaces: 6/24/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **INSTRATA®**

Product No.: A14036B

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  
Skin Sensitizer: Category 1B  
Carcinogenicity: Category 2  
Reproductive Toxicity: Category 2  
Eye Damage/Irritation: Category 2A

Signal Word (OSHA): Warning

Hazard Statements: May cause an allergic skin reaction  
Causes serious eye irritation  
Harmful if inhaled  
Suspected of causing cancer  
Suspected of damaging fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Use only outdoors or in a well-ventilated area.  
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.  
Avoid breathing mist, vapors, spray.  
Wash hands and face thoroughly after handling.

## INSTRATA®

Date: 6/12/2018  
Replaces: 6/24/2015

Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves, protective clothing, eye protection.  
If on skin: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice.  
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-Benzisothiazolin-3-One	1,2-Benzisothiazolin-3-One	2634-33-5	<1%
Tetrachloroisophthalonitrile	Chlorothalonil	1897-45-6	29.9%
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	Propiconazole	60207-90-1	4.7%
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	1.2%

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

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.  
Treat symptomatically.

## INSTRATA®

Date: 6/12/2018  
 Replaces: 6/24/2015

Persons suffering with temporary allergic skin reactions may respond to treatment with oral antihistamines and topical or oral steroids.

### 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:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

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
1,2-Benzisothiazolin-3-One	Not Established	Not Established	0.1 mg/m <sup>3</sup> TWA	Manufacturer
Chlorothalonil	Not Established	Not Established	0.1 mg/m <sup>3</sup> TWA	Syngenta
Propiconazole	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta
Fludioxonil	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta

## INSTRATA®

Date: 6/12/2018  
 Replaces: 6/24/2015

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 chemical splash 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, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

**Inhalation:**

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Gray liquid

Odor: Aromatic

Odor Threshold: Not Available

pH: 5.5 @ 77°F (25°C)

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): > 212°F

Flammable Limits (% in Air): Not Available

Flammability: Not Applicable

Vapor Pressure:	Chlorothalonil	0.00000057mmHg @ 77°F (25°C)
	Fludioxonil	2.9 x 10(-9) mmHg @ 77°F (25°C)
	Propiconazole	4.2 x 10(-7) mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 1.21 g/ml

Solubility (ies):	Chlorothalonil	0.81 mg/l @ 77°F (25°C)
	Fludioxonil	1.8 mg/l @ 77°F (25°C)
	Propiconazole	0.1 g/l @ 68°F (20°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: > 1202°F

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

## INSTRATA®

Date: 6/12/2018  
 Replaces: 6/24/2015

### 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

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

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

Ingestion:	Oral (LD50 Female Rat) :	5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	0.52 - 2.01 mg/l air - 4 hours
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	Sensitizing (Guinea Pig)	

#### Reproductive/Developmental Effects

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

Fludioxonil: Delayed development at doses causing maternal toxicity.

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

#### 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.

Fludioxonil: Liver and kidney toxicity at high dose levels.

Propiconazole: None observed.

#### Carcinogenicity

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.

## INSTRATA®

Date: 6/12/2018  
 Replaces: 6/24/2015

IARC identifies chlorothalonil as a 2B carcinogen (possibly carcinogenic to humans).  
 Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).  
 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.

Chemical Name	NTP/IARC/OSHA Carcinogen
1,2-Benzisothiazolin-3-One	No
Tetrachloroisophthalonitrile	IARC Group 2B
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	No
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No

### Other Toxicity Information

Studies on rats and mice have suggested that technical chlorothalonil (97%), when fed at high levels in the diet, may have oncogenic potential to these laboratory animals. However, neither chlorothalonil nor its metabolites interact with DNA and thus are not mutagenic. Tumor formation has been related to a non-genotoxic mechanism of action for which threshold levels have been established in rats and mice. Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels. In addition, surveillance of chlorothalonil plant workers for over twenty years has not demonstrated any increase in oncogenic potential to humans.

### Toxicity of Other Components

1,2-Benzisothiazolin-3-One  
 Respiratory irritant. Eye corrosive. Gastrointestinal irritant. Skin sensitizer.

### Target Organs

#### Active Ingredients

Chlorothalonil: Lung, kidney  
 Fludioxonil: Liver, kidney  
 Propiconazole: Liver

#### Inert Ingredients

1,2-Benzisothiazolin-3-One: Eye, skin, respiratory tract, gastrointestinal tract

## 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

#### 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

## INSTRATA®

Date: 6/12/2018  
Replaces: 6/24/2015

### 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

### 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).

#### 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).

#### 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).

## 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

Tank Truck:

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

### Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil/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. (Chlorothalonil/Fludioxonil)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

## INSTRATA®

Date: 6/12/2018  
 Replaces: 6/24/2015

### 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 inhaled. Harmful if swallowed. Avoid contact with skin. Causes moderate eye irritation. Avoid contact with eyes or clothing. Avoid breathing spray mist. Wear long-sleeved shirt and long pants, socks, shoes, protective eyewear and gloves. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

EPA Registration Number(s):  
 100-1231

**EPCRA SARA Title III Classification:**

Section 311/312 Hazard Classes: Acute Health Hazard  
 Chronic Health Hazard

Section 313 Toxic Chemicals: Chlorothalonil 29.9% (CAS No. 1897-45-6)  
 Propiconazole 4.7% (CAS No. 60207-90-1)

**California Proposition 65:**

ATTENTION: This product can expose you to chemicals including chlorothalonil, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**CERCLA/SARA 304 Reportable Quantity (RQ):**

None

**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,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 11/10/2004  
 Revision Date: 6/12/2018 Replaces: 6/24/2015  
 Section(s) Revised: 15



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