

## ACTARA® INSECTICIDE

Date: 7/22/2015

Replaces: 4/10/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **ACTARA® INSECTICIDE**

Product No.: A9584C

Use: Insecticide

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  
Specific Target Organ Toxicity: Repeated Category 2  
Specific Target Organ Toxicity: Respiratory Irritation Category 3  
Carcinogenicity: Category 1A

Signal Word (OSHA): Danger

Hazard Statements: Harmful if inhaled  
May cause respiratory irritation  
May cause cancer  
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust  
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 exposed or concerned: Get medical advice/attention.  
Call a poison center, doctor or Syngenta if you feel unwell.  
Store locked up.  
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

## ACTARA® INSECTICIDE

Date: 7/22/2015  
Replaces: 4/10/2015

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name  | Common Name                                 | CAS Number   | Concentration |
|--|---|--------------|---------------|
| Crystalline Silica, Quartz and Cristobalite  | Crystalline Silica, Quartz and Cristobalite | 14808-60-7   | Trade Secret  |
| Starch   | Starch                                      | 9005-25-8    | Trade Secret  |
| Diatomaceous Earth   | Diatomaceous Earth                          | 61790-53-2   | Trade Secret  |
| Other ingredients  | Other ingredients                           | Trade Secret | <75.0%        |
| 3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine | Thiamethoxam                                | 153719-23-4  | 25.0%         |

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:

Respiratory 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:

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

See also Sec. 7.

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.

## ACTARA® INSECTICIDE

Date: 7/22/2015  
 Replaces: 4/10/2015

### 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 in Protective Equipment Section. Sweep up material and place in a 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:

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

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         |
|---|---|--|--|----------------|
| Crystalline Silica, Quartz and Cristobalite | 10 mg/m <sup>3</sup> /(%SiO <sub>2</sub> +2)<br>(respirable dust) | 0.025 mg/m <sup>3</sup><br>(respirable silica) | 0.05 mg/m <sup>3</sup><br>(respirable dust)                      | NIOSH          |
| Starch                                      | 15 mg/m <sup>3</sup> (total) TWA; 5 mg/m <sup>3</sup> (resp) TWA  | 10 mg/m <sup>3</sup> TWA                       | 10 mg/m <sup>3</sup> (total) TWA; 5 mg/m <sup>3</sup> (resp) TWA | NIOSH          |
| Diatomaceous Earth                          | 80 mg/m <sup>3</sup> /%SiO <sub>2</sub> (20 mppcf) TWA            | Not Established                                | 6 mg/m <sup>3</sup> TWA  | NIOSH          |
| Other ingredients                           | Not Applicable  | Not Applicable                                 | Not Applicable   | Not Applicable |
| Thiamethoxam                                | Not Established   | Not Established                                | 3 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:

## ACTARA® INSECTICIDE

Date: 7/22/2015  
Replaces: 4/10/2015

### 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 dust-proof chemical goggles.

### Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

### Inhalation:

A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, 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 to brown granules

Odor: Musty

Odor Threshold: Not Available

pH: 9.4 (1% aqueous dispersion)

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): Not Applicable

Flammable Limits (% in Air): Not Available

Flammability: Combustible powder

Vapor Pressure: Thiamethoxam 2 x 10<sup>-11</sup> mmHg @ 68°F (20°C)

Vapor Density: Not Available

Relative Density: 0.471 g/cm<sup>3</sup> @ 68°F (20°C)

Solubility (ies): Thiamethoxam 4.1 g/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

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.

**ACTARA® INSECTICIDE**

Date: 7/22/2015  
 Replaces: 4/10/2015

Incompatible materials: None known.

Hazardous Decomposition Products: None known.

**11. TOXICOLOGICAL INFORMATION**

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Respiratory irritation

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Respiratory irritation

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

Ingestion: Oral (LD50 Rat) : > 5000 mg/kg body weight  
 Dermal: Dermal (LD50 Rabbit) : > 2000 mg/kg body weight  
 Inhalation: Inhalation (LC50 Rat) : > 5.29 mg/l air - 4 hours  
 Eye Contact: Mildly Irritating (Rabbit)  
 Skin Contact: Slightly Irritating (Rabbit)  
 Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

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

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

Carcinogenicity

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

| Chemical Name  | NTP/IARC/OSHA Carcinogen |
|--|--------------------------|
| Crystalline Silica, Quartz and Cristobalite  | IARC 1; ACGIH A2         |
| Starch   | No                       |
| Diatomaceous Earth   | IARC 3                   |
| Other ingredients  | No                       |
| 3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine | No                       |

Other Toxicity Information

None

Toxicity of Other Components

Crystalline Silica, Quartz and Cristobalite  
 Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

**ACTARA® INSECTICIDE**

Date: 7/22/2015

Replaces: 4/10/2015

**Diatomaceous Earth**

The carrier in this product is naturally occurring diatomaceous earth. Natural diatomaceous earth contains a small percentage of naturally occurring crystalline silica, which is considered a human carcinogen. Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. The amount of crystalline silica in this product is minimal and the potential for overexposure in manufacturing operations is low.

**Other ingredients**

Not Applicable

**Starch**

May cause eye and skin irritation. May cause respiratory tract irritation.

Target Organs

Active Ingredients

Thiamethoxam: Liver

Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Diatomaceous Earth: Respiratory tract

Other ingredients: Not Applicable

Starch: Eye, skin, respiratory tract

**12. ECOLOGICAL INFORMATION**

**Eco-Acute Toxicity**

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

**Environmental Fate**

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

## ACTARA® INSECTICIDE

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### 14. TRANSPORT INFORMATION

#### DOT Classification

Ground Transport - NAFTA  
Not regulated

#### Comments

Water Transport - International  
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Thiamethoxam), Marine Pollutant  
Hazard Class: Class 9  
Identification Number: UN 3077  
Packing Group: PG III

#### Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Thiamethoxam)  
Hazard Class: Class 9  
Identification Number: UN 3077  
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 absorbed through skin, swallowed, or inhaled. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash clothing before reuse.

#### EPA Registration Number(s):

100-938

#### EPCRA SARA Title III Classification:

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

Section 313 Toxic Chemicals: None

#### California Proposition 65:

This product contains trace amounts of chemical(s) known to the State of California to cause cancer as unintended impurities resulting from other entities manufacturing or processing operations which Syngenta cannot control.

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

None

#### RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

#### TSCA Status:

Exempt from TSCA, subject to FIFRA

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Date: 7/22/2015  
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### 16. OTHER INFORMATION

#### NFPA Hazard Ratings

Health: 1  
Flammability: 2  
Instability: 0

#### HMIS Hazard Ratings

Health: 2\*  
Flammability: 2  
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

Original Issued Date: 11/25/1998

Revision Date: 7/22/2015

Replaces: 4/10/2015

Section(s) Revised: 2, 4, 11, 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.