

## ALTO® 100 SL FUNGICIDE

Date: 8/5/2015  
Replaces: 3/27/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **ALTO® 100 SL FUNGICIDE**

Product No.: A9898A

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: Reproductive Toxicity: Category 1B

Signal Word (OSHA): Danger

Hazard Statements: May damage fertility or the unborn child

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves, protective clothing, eye protection.  
If exposed or concerned: Get medical advice/attention.  
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
n-Methylpyrrolidone	n-Methylpyrrolidone	872-50-4	<10%
Other ingredients	Other ingredients	Trade Secret	>81.1%
[Alpha-(4-Chlorophenyl)-alpha-(1-cyclopropylethyl)-1H-1,2,4-triazole-1-ethanol	Cyproconazole	94361-06-5 & 94361-07-6	8.9%

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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:

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 in Protective Equipment Section. 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:

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
n-Methylpyrrolidone	Not Established	Not Established	10 ppm TWA, Skin	AIHA
Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Cyproconazole	Not Established	Not Established	0.5 mg/m <sup>3</sup> TWA	Manufacturer

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.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate or butyl rubber), coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

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: Yellowish to brown liquid

Odor: Weak

Odor Threshold: Not Available

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pH: 2.5 - 4.5 (1% in 500 ppm H<sub>2</sub>O @ 72 - 77°F (22 - 25°C))  
Melting point/freezing point: Not Available  
Initial boiling point and boiling range: Not Available  
Flash Point (Test Method): 212°F (Pensky-Martens CC)  
Flammable Limits (% in Air): Not Available  
Flammability: Not Applicable  
Vapor Pressure: Cyproconazole 2.25 x 10<sup>-7</sup> mmHg @ 77°F (25°C)  
Vapor Density: Not Available  
Relative Density: 1.11 - 1.14 g/cm<sup>3</sup> @ 68°F (20°C)  
Solubility (ies): Cyproconazole 360 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: Not Available  
Incompatible materials: None known.  
Hazardous Decomposition Products: Not Available

### 11. TOXICOLOGICAL INFORMATION

#### Health 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 (LD <sub>50</sub> Rat) :	> 2000 mg/kg body weight
Dermal:	Dermal (LD <sub>50</sub> Rat) :	> 4000 mg/kg body weight
Inhalation:	Inhalation (LC <sub>50</sub> Rat) :	> 5.0 mg/l air - 4 hours
Eye Contact:	Non-Irritating (Rabbit)	

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Skin Contact: Non-Irritating (Rabbit)  
Skin Sensitization: Not a Sensitizer (Guinea Pig)

### Reproductive/Developmental Effects

Cyproconazole: Maternal and fetal toxicity were observed at high dose levels (rats).

### Chronic/Subchronic Toxicity Studies

Cyproconazole: Liver enlargements and decreased body weight (mice). Liver damage in rats and dogs.

### Carcinogenicity

Cyproconazole: Liver tumors (mice only).

Chemical Name	NTP/IARC/OSHA Carcinogen
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n-Methylpyrrolidone	No
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Other ingredients	No
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[Alpha-(4-Chlorophenyl)-alpha-(1-cyclopropylethyl)-1H-1,2,4-triazole-1-ethanol]	No
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### Other Toxicity Information

There are indications of developmental toxic effects from reproduction studies with cyproconazole.

### Toxicity of Other Components

Other ingredients

Not Established

n-Methylpyrrolidone

Harmful if absorbed through the skin. May cause respiratory tract irritation. Repeated or prolonged exposure may cause drying and cracking of the skin.  
Possible developmental hazard.

### Target Organs

#### Active Ingredients

Cyproconazole: Liver

#### Inert Ingredients

Other ingredients: Not Established

n-Methylpyrrolidone: Eye, skin

## 12. ECOLOGICAL INFORMATION

### Eco-Acute Toxicity

Cyproconazole:

Fish (Rainbow Trout) 96-hour LC50 19 ppm

Green Algae 5-day EC50 0.026 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 26 ppm

Bird (Bobwhite Quail) 14-day LD50 150 mg/kg

### Environmental Fate

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**Cyproconazole:**

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

Low bioaccumulation potential. Stable in soil and water. Low to 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

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Cyproconazole), 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. (Cyproconazole)

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: Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**EPA Registration Number(s):**

100-1226

**EPCRA SARA Title III Classification:**

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: n-Methylpyrrolidone &lt;10% (CAS No. 872-50-4)

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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

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 4/7/2006

Revision Date: 8/5/2015

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Section(s) Revised: 2, 4, 11

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.