1. PRODUCT IDENTIFICATION

Product Name: INSPIRE XT
EPA Signal Word: Danger
Product No.: A8122B

Active Ingredient(%): Difenoconazole (22.8%)
CAS No.: 119446-68-3
Chemical Name: 1H-1,2,4-Triazole, 1-[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-
Chemical Class: Triazole Fungicide

Active Ingredient(%): Propiconazole (22.8%)
CAS No.: 60207-90-1
Chemical Name: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole
Chemical Class: Triazole Derivative Fungicide

EPA Registration Number(s): 100-1312
Section(s) Revised: 13, 14

2. HAZARDS IDENTIFICATION

Health and Environmental
Harmful if inhaled. May be harmful if swallowed or in contact with skin. Causes eye and skin irritation. May cause an allergic skin reaction. May cause drowsiness and dizziness. May be harmful if swallowed and enters airway.

Hazardous Decomposition Products
None known.

Physical Properties
Appearance: Orange to red liquid
Odor: Not determined

Unusual Fire, Explosion and Reactivity Hazards
Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Solvent</td>
<td>Not Established</td>
<td>Not Established</td>
<td>100 mg/m³ (15 ppm)</td>
<td>No</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene (&lt; 1%)</td>
<td>Not Established</td>
<td>25 ppm TWA</td>
<td>25 ppm TWA **</td>
<td>No</td>
</tr>
<tr>
<td>Naphthalene (&lt; 4%)</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA (skin)</td>
<td>10 ppm TWA **</td>
<td>See &quot;Toxicity&quot;, Sec. 11</td>
</tr>
<tr>
<td>Isobutanol</td>
<td>100 ppm TWA</td>
<td>50 ppm TWA</td>
<td>50 ppm TWA **</td>
<td>No</td>
</tr>
<tr>
<td>Difenoconazole (22.8%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>8 mg/m³ TWA ***</td>
<td>No</td>
</tr>
<tr>
<td>Propiconazole (22.8%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>8 mg/m³ TWA ***</td>
<td>No</td>
</tr>
</tbody>
</table>

* recommended by manufacturer
** recommended by NIOSH
*** Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: C, S

### 4. FIRST AID MEASURES

Have the product container, label or Material 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.

**Notes to Physician**

- **Medical Condition Likely to be Aggravated by Exposure**
  - None known.

### 5. FIRE FIGHTING MEASURES

**Fire and Explosion**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (Test Method):</td>
<td>149°F (Pensky-Martens CC)</td>
</tr>
<tr>
<td>Flammable Limits (% in Air):</td>
<td>Lower: Not Applicable Upper: Not Applicable</td>
</tr>
<tr>
<td>Autoignition Temperature:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Combustible liquid</td>
</tr>
</tbody>
</table>

**Unusual Fire, Explosion and Reactivity Hazards**

- Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

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

**In Case of Fire**

Use appropriate extinguishing media for combustibles in the area. 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. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

### 6. ACCIDENTAL RELEASE MEASURES

**In Case of Spill or Leak**

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and
7. HANDLING AND STORAGE

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.

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.

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 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 R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Orange to red liquid
Odor: Not determined
Melting Point: Not Applicable
Boiling Point: > 338 °F
Specific Gravity/Density: 1.07 - 1.11 g/cm³ @ 68°F (20°C)
pH: 6 - 10 @ 1% w/v

Solubility in H₂O
Difenoconazole: 15 mg/l @ 77°F (25°C)
Propiconazole: 0.1 g/l @ 68°F (20°C)

Vapor Pressure
Difenoconazole: 2.5 x 10(-10) mmHg @ 77°F (25°C)
Propiconazole: 4.2 x 10(-7) mmHg @ 77°F (25°C)

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None known.
Materials to Avoid: None known.
Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION
Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:
- Oral (LD50 Rabbit): >2000 - < 3000 mg/kg body weight

Dermal:
- Dermal (LD50 Rabbit): > 4000 mg/kg body weight

Inhalation:
- Inhalation (LC50 Rat): > 2.94 mg/l air - 4 hours

Eye Contact: Highly Irritating (Rabbit)
Skin Contact: Highly Irritating (Rabbit)
Skin Sensitization: Sensitizing (Guinea Pig)

Reproductive/Developmental Effects
- Difenoconazole: None observed.
- Propiconazole: None observed.

Chronic/Subchronic Toxicity Studies
- Difenoconazole: Kidney and liver effects at high doses (>5000 ppm; rats); Eye effects in dogs at high dose levels.
- Propiconazole: None observed.

Carcinogenicity
- Difenoconazole: 2/70 male rats in the highest dose group (20000 ppm) were found to have squamous cell carcinoma in the non-glandular stomach. Effect did not occur in female rats or in mice and not considered relevant to humans. Increase in brain tumors (mice) at doses exceeding the Maximum Tolerated Dose (MTD) (>2500 ppm).
- Propiconazole: Increased incidence of liver tumors at extremely high doses (male mice).

Other Toxicity Information
- None

Toxicity of Other Components

1,2,4-Trimethylbenzene (< 1%)
- Test results reported in Section 11 for the final product take into account any acute hazards related to the 1,2,4-trimethylbenzene in the formulation.

Isobutanol
- Test results reported in Section 11 for the final product take into account any acute hazards related to the isobutanol in the formulation.
- High concentrations may result in dizziness, confusion and signs of intoxication. May cause irritation to eye, skin or mucous membranes.

Naphthalene (< 4%)
- Test results reported in Section 11 for the final product take into account any acute hazards related to the naphthalene in the formulation.
- Chronic overexposure to naphthalene can affect the liver, kidney, respiratory tract and blood.
- Carcinogen Status:
  - NTP: Anticipated Carcinogen
  - IARC: Group 2B Possible Human Carcinogen

Petroleum Solvent
- Slight eye irritant. Frequent or prolonged contact may cause skin irritation or dermatitis. High vapor/aerosol concentrations may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other CNS effects.

Target Organs

Active Ingredients
- Difenoconazole: Brain, liver, kidney, gastrointestinal tract
- Propiconazole: Liver

Inert Ingredients
- 1,2,4-Trimethylbenzene: Not Applicable
12. ECOLOGICAL INFORMATION

Ecotoxicity Effects
Difenoconazole:
  Fish (Rainbow Trout) 96-hour LC50 1.06 ppm
  Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.77 ppm
  Bird (Mallard Duck) 21-day LD50 > 2150 mg/kg

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

Environmental Fate
Difenoconazole:
  The information presented here is for the active ingredient, difenoconazole.
  Stable in soil and water. Low to moderate mobility in soil. Sinks in water (after 24 h).

Propiconazole:
  The information presented here is for the active ingredient, propiconazole.

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
  Packages smaller than 119 gallons: Not regulated.
  Packages larger than 119 gallons:
    Proper Shipping Name: Combustible Liquid, N.O.S. (Petroleum Naphtha)
    Hazard Class: Combustible Liquid
    Identification Number: NA 1993
    Packing Group: PG III

Comments
  Water Transport - International
  Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Difenoconazole/Propiconazole), Marine Pollutant
  Hazard Class: Class 9
15. REGULATORY INFORMATION

EPCRA SARA Title III Classification
Section 311/312 Hazard Classes:  
  Acute Health Hazard
  Chronic Health Hazard
  Fire Hazard

Section 313 Toxic Chemicals:  
  Propiconazole  (22.8%)  (CAS No. 60207-90-1)
  1,2,4-Trimethylbenzene  (< 1%)  (CAS No. 95-63-6)
  Naphthalene  (< 4%)  (CAS No. 91-20-3)

California Proposition 65  
Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)  
Report product spills > 2500 gal. (based on naphthalene [RQ = 100 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)  
Not Applicable

TSCA Status  
Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Hazard Ratings</th>
<th>HMIS Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 2</td>
<td>Health: 2</td>
</tr>
<tr>
<td>Flammability: 2</td>
<td>Flammability: 2</td>
</tr>
<tr>
<td>Instability: 0</td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

HMIS Hazard Ratings:  
0  Minimal
1  Slight
2  Moderate
3  Serious
4  Extreme

For non-emergency questions about this product call:  
1-800-334-9481

Original Issued Date:  5/23/2007  
Revision Date:  11/11/2010  
Replaces:  11/17/2008

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.

End of MSDS

Product Name:  INSPIRE XT