1. PRODUCT IDENTIFICATION

Product Name: QUADRIS XTRA  
Product No.: A12910C

EPA Signal Word: Caution

Active Ingredient(%): Azoxystrobin (18.2%)  
CAS No.: 131860-33-8

Chemical Name: Methyl (E)-2-[2-{6-(2-cyanophenoxy)pyrimidin-4-yloxy}phenyl]-3-methoxyacrylate

Chemical Class: A beta-methoxyacrylate fungicide

Active Ingredient(%): Cyproconazole (7.3%)  
CAS No.: 94361-06-5 & 94361-07-6

Chemical Name: [Alpha-(4-Chlorophenyl)-alpha-(1-cyclopropylethyl)-1H-1,2,4-triazole-1-ethanol

Chemical Class: Triazol Derivative Fungicide

EPA Registration Number(s): 100-1225

Section(s) Revised: 2, 3

2. HAZARDS IDENTIFICATION

Health and Environmental
Harmful if swallowed. Causes mild eye and skin irritation.

Hazardous Decomposition Products
None known.

Physical Properties
Appearance: Yellow liquid
Odor: Sweet

Unusual Fire, Explosion and Reactivity Hazards
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>Propylene Glycol</td>
<td>Not Established</td>
<td>Not Established</td>
<td>10 mg/m³ TWA  ****</td>
<td>No</td>
</tr>
<tr>
<td>Azoxystrobin (18.2%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>2 mg/m³ TWA  ***</td>
<td>No</td>
</tr>
<tr>
<td>Cyproconazole (7.3%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>0.5 mg/m³ TWA  ***</td>
<td>No</td>
</tr>
</tbody>
</table>

**** Syngenta Occupational Exposure Limit (OEL)

Recommended by AIHA (American Industrial Hygiene Association)

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
5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): Does not flash up to 212°F
Flammable Limits (% in Air): Lower: Not Applicable  Upper: Not Applicable
Autoignition Temperature: 851°F
Flammability: Not Applicable

Unusual Fire, Explosion and Reactivity Hazards
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire
Use dry chemical, foam or CO2 extinguishing media. 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 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.

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, PACKAGING AND USE OF THIS PRODUCT.
11. TOXICOLOGICAL INFORMATION

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, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, 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.

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.

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

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Sweet</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>ca 212 °F</td>
</tr>
<tr>
<td>Specific Gravity/Density:</td>
<td>1.10 g/ml @ 68°F (20°C)</td>
</tr>
<tr>
<td>pH</td>
<td>7.7 @ 77°F (25°C)</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td></td>
</tr>
<tr>
<td>Azoxystrobin :</td>
<td>6 mg/l in water @ 68°F (20°C)</td>
</tr>
<tr>
<td>Cyproconazole:</td>
<td>360g/l @ 77°F (25°C)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td></td>
</tr>
<tr>
<td>Azoxystrobin :</td>
<td>8.25 x 10(-13) mmHg @ 68°F (20°C)</td>
</tr>
<tr>
<td>Cyproconazole:</td>
<td>2.25 x 10(-7) mmHg @ 77°F (25°C)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under normal use and storage conditions.</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>None known.</td>
</tr>
<tr>
<td>Materials to Avoid:</td>
<td>None known.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products:</td>
<td>None known.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Oral (LD50 Female Rat) : 500 - 2000 mg/kg body weight

Dermal: Dermal (LD50 Rat) : > 5000 mg/kg body weight

Inhalation: Inhalation (LC50 Rat) : Not Available

Eye Contact: Mildly Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Skin Sensitization: Not a skin sensitizer in animal tests.

Reproductive/Developmental Effects

Azoxystrobin : Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages (> or = 2000 mg/kg).

Product Name: QUADRIS XTRA
In rabbits, no effect was observed up to the highest dose level (500 mg/kg/day). In rats, developmental effects were seen only at maternally toxic doses (100 mg/kg/day).

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

Chronic/Subchronic Toxicity Studies
- **Azoxystrobin**: In a rat 90-day feeding study, liver toxicity was observed at 2000 ppm. This was manifest as gross distension of the bile duct, increased numbers of lining cells and inflammation of the duct. No toxicologically significant effects were seen in repeat dose dog studies.
- Data reviews do not indicate any potential for endocrine disruption.
- There is no evidence of neurotoxicity in any of the studies conducted with azoxystrobin.
- **Cyproconazole**: Liver enlargements and decreased body weight (mice). Liver damage in rats and dogs.

Carcinogenicity
- **Azoxystrobin**: No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.
- Cyproconazole: Liver tumors (mice only).

Other Toxicity Information
- None

Toxicity of Other Components

**Propylene Glycol**
- Test results reported in Section 11 for the final product take into account any acute hazards related to the propylene glycol in the formulation.
- Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea.
- Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs
- **Active Ingredients**
- **Azoxystrobin**: Liver
- **Cyproconazole**: Liver
- **Inert Ingredients**
- **Propylene Glycol**: CNS, kidney, liver

### 12. ECOLOGICAL INFORMATION

Summary of Effects
- **Azoxystrobin**: Very toxic to aquatic life.
- **Cyproconazole**: Very toxic to aquatic life.

Ecotoxicity Effects
- **Azoxystrobin**:
  - Fish (Rainbow Trout) 96-hour LC50 470 ppb
  - Green Algae 5-day EC50 106 ppb
  - Invertebrate (Water Flea) 48-hour EC50 259 ppb
  - Bird (Mallard Duck) 14-day LD50 > 250 mg/kg
- **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
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.

Air Transport - NAFTA
Not regulated.

B/L Freight Classification
Fungicides, NOI, O/T Poison

Comments
Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
IMDG EMS #: F-A, S-F

Air Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin)
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
Packing Auth.: 914
Note: Max. inner packages 5 liters
Max. single packages 450 liters

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification
Section 311/312 Hazard Classes: Acute Health Hazard
Section 313 Toxic Chemicals: Not Applicable

California Proposition 65
Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)
None
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:</td>
<td>Health:</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Flammability:</td>
</tr>
<tr>
<td>Instability:</td>
<td>Reactivity:</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

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: 7/12/2004
Revision Date: 5/18/2009
Replaces: 6/6/2008

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End of MSDS