Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro, NC 27419

1. PRODUCT IDENTIFICATION

Product Name: OPTIGARD FLEX LIQUID
EPA Signal Word: Caution

2. HAZARDS IDENTIFICATION

Health and Environmental
Harmful if inhaled. May be harmful in contact with skin. Causes mild eye and skin irritation.

Hazardous Decomposition Products
None known.

Physical Properties
Appearance: Beige to brown liquid
Odor: Aromatic

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>Glycerin</td>
<td>15 mg/m³ TWA (total); 5 mg/m³ TWA (respirable)</td>
<td>10 mg/m³ TWA (total)</td>
<td>Not Established</td>
<td>No</td>
</tr>
<tr>
<td>Thiamethoxam (21.6%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>3 mg/m³ TWA ***</td>
<td>No</td>
</tr>
</tbody>
</table>

*** Syngenta Occupational Exposure Limit (OEL)

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

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. Have the person sip a glass of water if able to swallow. 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
5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): 208°F
Flammable Limits (% in Air): Lower: Not Applicable  Upper: Not Applicable
Autoignition Temperature: Not Available
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 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

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.

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 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Beige to brown liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>1.127 g/cm³</td>
</tr>
<tr>
<td>pH</td>
<td>5 - 7 (1% suspension in water)</td>
</tr>
<tr>
<td>Solubility in H₂O</td>
<td>Thiamethoxam: 4.1 g/l @ 77°F (25°C)</td>
</tr>
<tr>
<td></td>
<td>Vapor Pressure Thiamethoxam: 2 x 10⁻¹¹ mmHg @ 68°F (20°C)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Route</th>
<th>Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion: Oral (LD50 Rat)</td>
<td>&gt; 5000 mg/kg body weight</td>
</tr>
<tr>
<td>Dermal: Dermal (LD50 Rabbit)</td>
<td>&gt; 2000 mg/kg body weight</td>
</tr>
<tr>
<td>Inhalation: Inhalation (LC50 Rat)</td>
<td>&gt; 2.67 mg/l air - 4 hours</td>
</tr>
<tr>
<td>Eye Contact: Minimally Irritating (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>Skin Contact: Slightly Irritating (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>Skin Sensitization: Not a Sensitizer (Guinea Pig)</td>
<td></td>
</tr>
</tbody>
</table>

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. When used in accordance with label directions and recommendations in this MSDS, no effects would be expected in humans.

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.
12. ECOLOGICAL INFORMATION

Ecotoxicity Effects
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.

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. (Thiamethoxam), 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. (Thiamethoxam)
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

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: 1</td>
<td>Health: 1</td>
</tr>
<tr>
<td>Flammability: 1</td>
<td>Flammability: 1</td>
</tr>
<tr>
<td>Instability: 0</td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

HMIS Hazard Ratings

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

Original Issued Date: 2/26/2008
Revision Date: 3/2/2011
Replaces: 7/12/2010

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