1. PRODUCT IDENTIFICATION

Product identifier on label: **HURRICANE® Fungicide**

Product No.: A12042A

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:

Eye Damage/Irritation: Category 2B

Carcinogenicity: Category 1A

Specific Target Organ Toxicity: Repeated Category 1

Signal Word (OSHA): Danger

Hazard Statements:

Causes eye irritation

May cause cancer

Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

Wash hands and face thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves, protective clothing, eye protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice.

If exposed or concerned: Call a poison center, doctor or Syngenta.

Get medical advice if you feel unwell.

Store locked up.

Dispose of contents and container in accordance with local regulations.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica, Quartz and Cristobalite</td>
<td>Crystalline Silica, Quartz and Cristobalite</td>
<td>14808-60-7</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Diatomaceous Earth</td>
<td>Diatomaceous Earth</td>
<td>61790-53-2</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>Other ingredients</td>
<td>Trade Secret</td>
<td></td>
</tr>
<tr>
<td>(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetylamino]-propionic acid methyl ester</td>
<td>Mefenoxam</td>
<td>70630-17-0 &amp; 69516-34-3</td>
<td>16.0%</td>
</tr>
<tr>
<td>4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile</td>
<td>Fludioxonil</td>
<td>131341-86-1</td>
<td>32.0%</td>
</tr>
</tbody>
</table>

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. 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 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:**
- Eye irritation
- 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.
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 outlined in Section 8. 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:
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:
Not Applicable

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:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica, Quartz and Cristobalite</td>
<td>10 mg/m³/(%SiO2+2) (respirable dust)</td>
<td>0.025 mg/m³ (respirable silica)</td>
<td>0.05 mg/m³ (respirable dust)</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Diatomaceous Earth</td>
<td>80 mg/m³/%SiO2 (20 mppcf) TWA</td>
<td>Not Established</td>
<td>6 mg/m³ TWA</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Mefenoxam</td>
<td>Not Established</td>
<td>Not Established</td>
<td>10 mg/m³ TWA</td>
<td>Syngenta</td>
</tr>
<tr>
<td>Fludioxonil</td>
<td>Not Established</td>
<td>Not Established</td>
<td>10 mg/m³ TWA</td>
<td>Syngenta</td>
</tr>
</tbody>
</table>

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 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, polyethylene, 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: Cream-colored solid
Odor: Clay-like
Odor Threshold: Not Available
pH: 9.31 (1% Aqueous Solution)
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: Not Applicable
Vapor Pressure:
- Fludioxonil: $2.9 \times 10^{-9}$ mmHg @ 77°F (25°C)
- Mefenoxam: $2.5 \times 10^{-5}$ mmHg @ 77°F (25°C)
Vapor Density: Not Available
Relative Density: 19.4 lbs/ft³ typical @ 68°F (20°C)
Solubility (ies):
- Fludioxonil: 1.8 mg/l @ 77°F (25°C)
- Mefenoxam: 26 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: Not Available

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.
Incompatible materials: None known.
11. TOXICOLOGICAL INFORMATION

Health effects information
Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Respiratory irritation

Delayed, immediate and chronic effects of exposure: Eye irritation, Respiratory irritation, Respiratory system effects

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

- Ingestion: Oral (LD50 Rabbit): 2604 mg/kg body weight
- Dermal: Dermal (LD50 Rat): > 2000 mg/kg body weight
- Inhalation: Inhalation (LC50 Rat): > 2.61 mg/l
- Eye Contact: Mildly Irritating (Rabbit)
- Skin Contact: Non-Irritating (Rabbit)
- Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects
- Fludioxonil: Delayed development at doses causing maternal toxicity.
- Mefenoxam: None observed.

Chronic/Subchronic Toxicity Studies
- Fludioxonil: Liver and kidney toxicity at high dose levels.
- Mefenoxam: Liver effects at high dose animal tests.

Carcinogenicity
- Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).
- Mefenoxam: None observed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica, Quartz and Cristobalite</td>
<td>IARC 1; ACGIH A2</td>
</tr>
<tr>
<td>Diatomaceous Earth</td>
<td>IARC 3</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>No</td>
</tr>
<tr>
<td>(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetylamino]-propionic acid methyl ester</td>
<td>No</td>
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<tr>
<td>4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile</td>
<td>No</td>
</tr>
</tbody>
</table>

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.
Safety Data Sheet

HURRICANE® Fungicide

Date: 8/19/2014
Replaces: 7/12/2014

Experimental animals exposed to crystalline silica developed respiratory tract cancers.

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

Target Organs

Active Ingredients
- Fludioxonil: Liver, kidney
- Mefenoxam: Liver

Inert Ingredients
- Crystalline Silica, Quartz and Cristobalite: Respiratory tract
- Diatomaceous Earth: Respiratory tract
- Other ingredients: Not Applicable

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Fludioxonil:
- Fish (Rainbow Trout) 96-hour LC50 0.47 ppm
- Green Algae 5-day EC50 0.087 ppm
- Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 0.9 ppm
- Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Mefenoxam:
- Fish (Rainbow Trout) 96-hour LC50 > 121 ppm
- Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 113 ppm
- Bird (Bobwhite Quail) 14-day LD50 981 mg/kg

Environmental Fate

Fludioxonil:
The information presented here is for the active ingredient, fludioxonil.

Mefenoxam:
The information presented here is for the active ingredient, mefenoxam.
- Does not bioaccumulate. Not persistent in soil or water. Moderate mobility in soil. Mixes/sinks (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
14. TRANSPORT INFORMATION

DOT Classification
  Ground Transport - NAFTA
  Not regulated

Comments
  Water Transport - International
  Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Fludioxonil), 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. (Fludioxonil)
  Hazard Class: Class 9
  Identification Number: UN 3077
  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: Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing. Avoid breathing dust.

EPA Registration Number(s):
  100-951

EPCRA SARA Title III Classification:
  Section 311/312 Hazard Classes: Acute Health Hazard
  Section 313 Toxic Chemicals: None

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

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

Syngenta Hazard Category: B

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

Original Issued Date: 2/21/2000
Revision Date: 8/19/2014
Replaces: 7/12/2014
Section(s) Revised: 2

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.