1. PRODUCT IDENTIFICATION

Product Name: WARDEN RTA  
Product No.: A12780C  
EPA Signal Word: Caution  
Active Ingredient (%): Fludioxonil (0.72%)  
CAS No.: 131341-86-1  
Chemical Name: 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile  
Chemical Class: Substituted Benzodioxalcarbonitrile Fungicide  
Active Ingredient (%): Mefenoxam (2.15%)  
CAS No.: 70630-17-0  
Chemical Name: (R)-2-[(2,6-dimethylphenyl)-methoxyacetylaminol]-propionic acid methyl ester  
Chemical Class: Phenylamide Fungicide  
EPA Registration Number(s): 100-1146-1381  
Section(s) Revised: New

2. 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 dust); 5mg/ m³ TWA (respirable)</td>
<td>10 mg/m³ TWA (total dust)</td>
<td>Not Established</td>
<td>No</td>
</tr>
<tr>
<td>Mefenoxam (2.15%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>No</td>
</tr>
<tr>
<td>Fludioxonil (0.72%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>No</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure  
Harmful if inhaled or swallowed. Dust, mist or vapor irritating to eyes and respiratory tract. May cause skin irritation.

Hazardous Decomposition Products  
Can decompose at high temperatures forming toxic gases.

Physical Properties  
Appearance: Red Liquid  
Odor: Faint musty smell

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

Have the product container, label or Material Safety Data Sheet with you when calling (877-424-7452), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call (877-424-7452), 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 (877-424-7452) 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 (877-424-7452), 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 (877-424-7452), 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 (877-424-7452), a poison control center or doctor for further treatment advice.

Notes to Physician:
- There is no specific antidote if this product is ingested.
- Treat symptomatically.

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

5. FIRE FIGHTING MEASURES

Fire and Explosion
- Flash Point (Test Method): > 210°F
- Flammable Limits (% in Air): Lower: % Not Applicable, Upper: % Not Applicable
- Autoignition Temperature: Not Available
- Flammability: Not Flammable

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 it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. If a solid, 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
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 THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND 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 (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Red Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint musty smell</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>8.84 lbs./gas @ 68°F (20°C)</td>
</tr>
<tr>
<td>pH</td>
<td>6-8 (1% solution in H2O @ 77°F (25°C)</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td></td>
</tr>
<tr>
<td>Fludioxonil</td>
<td>1.8mg/L @ 77°F (25°C)</td>
</tr>
<tr>
<td>Mefenoxam</td>
<td>26g/L @ 77°F (25°C)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td></td>
</tr>
<tr>
<td>Fludioxonil</td>
<td>2.9 x 10(-3) mmHg @ 77°F (25°C)</td>
</tr>
<tr>
<td>Mefenoxam</td>
<td>2.48 x 10(-5) mmHg @ 77°F (25°C)</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: Can decompose at high temperatures forming toxic gases.

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

Ingestion: Practically Non-Toxic
Oral (LD50 Rat): > 5,000 mg/kg body weight (data based on a similar formulation)

Dermal: Slightly Toxic:
Dermal (LD50 Rabbit): > 2,00 mg/kg body weight (data based on a similar formulation)

Inhalation: Practically Non-Toxic
Inhalation (LC50 Rat): > 2.54 mg/l air – 4 hours (data based on a similar formulation)

Eye Contact: Practically Non-Irritating (Rabbit)
Skin Contact: Non-Irritating (Rabbit)
Skin Sensitization Not a Sensitizer (Guinea Pig) (data based on a similar formulation)

Neurotoxicity
Fludioxonil: In the process of being identified and acquired.
Mefenoxam: In the process of being identified and acquired.

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

Chronic/Subchronic Toxicity Studies
Fludioxonil: Liver and kidneys toxicity high dose levels.
Mefenoxam: Liver effects at high dose levels.

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

Other Toxicity Information
None.

Toxicity of Other Components
Glycerin Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

Target Organs
Active Ingredients
Fludioxonil: Liver, kidney
Mefenoxam: Liver
Inert Ingredients
Glycerin: Skin
12. ECOLOGICAL INFORMATION

Summary of Effects

Fludioxonil: Practically nontoxic to birds, but highly toxic to aquatic invertebrates and fish.
Mefenoxam: Not available at this time.

Eco-Acute Toxicity

Mefenoxam: Not available
Fludioxonil: Rainbow Trout 96-hour LC50 0.47 mg/l
Bluegill Sunfish 96-hour LC50 0.74 mg/l
Daphnia magna 48-hour LC50 0.90 mg/l
Bobwhite Oral LD50 >2,000 mg/kg
Mallard Oral LD50 >2,000 mg/kg
Bobwhite 8-day Dietary LC50 >5,200 ppm
Mallard 8-day Dietary LC50 >5,200 ppm

Eco-Chronic Toxicity

Mefenoxam: Not available
Fludioxonil: Fish (Fathead minnow) Early Life Stage MATC 0.028 mg/l
Invertebrate (Daphnia Magna) Life Cycle MATC 0.025 mg/l
Mallard Reproduction NOEC 700 ppm
Bobwhite Reproduction NOEC 125 ppm

Environmental Fate

Fludioxonil: No data available for the formulation. The information presented here is for the active ingredient, fludioxonil. A thorough review of environmental information is not possible in this document. For additional information call the toll free number listed in Section 16.
Environmental Persistence/Mobility: Stable in sterile water, in the dark at pH 5, 7 and 9. Degrades rapidly in the light at pH 7 (t1/2 < 10 d). Degrades in aerobic soil more rapidly in the light (t1/2 = 1d), than in the dark (t1/2 ~ 6 mo). Stable in soil under anaerobic conditions. Low to slight mobility with various soils (Koc 991-2440). Some bioaccumulation (BCF = 366X, whole fish).

Mefenoxam: No data available for the formulation. The information presented here is for the active ingredient, mefenoxam. A thorough review of environmental information is not possible in this document. For additional information call the toll free number listed in Section 16.
Environmental Persistence/Mobility: Based on the metalaxyl database, mefenoxam would not be expected to degrade in water. Degrades moderately in soil under aerobic conditions (t1/2 ~ 70d). Mobility classified as very high to low in various soils (Koc 20 to 1299).
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 Not regulated by DOT.
B/L Freight Classification Fungicides, NOIBN, o/t poison
Comments None

15. REGULATORY INFORMATION

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

For Non-emergency questions about this product call: 1-800-535-4635

Original Issued Date: April 3, 2002 (Syngenta)
Revision Date: 04/04/02 (Agriliance) Replaces:

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.

RSVP#: SCP-955-00345A

End of MSDS