Winfield Solutions, LLC
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In Case of Emergency Call:
1-877-424-7452

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)-methoxyacetylamino]-propionic acid methyl ester		
Chemical Class:	Phenylamide Fungicide		
EPA Registration Number(s):	100-1146-1381	**Section(s) Revised:**	**New**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Glycerin	15 mg/m^3 TWA (total dust); 5mg/ m^3 TWA (respirable)	10 mg/m^3 TWA (total dust)	Not Established	No
Mefenoxam (2.15%)	Not Established	Not Established	Not Established	No
Fludioxonil (0.72%)	Not Established	Not Established	Not Established	No

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

Appearance:	Red Liquid
Odor:	Faint musty smell
Melting Point:	Not applicable
Boiling Point:	Not applicable
Specific Gravity/Density	8.84 lbs./gals @ 68°F (20°C)
pH:	6-8 (1% solution in H20 @ 77ºF (25°C)
<u>Solubility in H2O</u>	
Fludioxonil:	1.8mg/L @ 77°F (25°C)
Mefenoxam:	26g/L @ 77°F (25°C)
<u>Vapor Pressure</u>	
Fludioxonil:	2.9 x 10(-3) mmHg @ 77°F (25°C)
Mefenoxam:	2.48 x 10(-5) 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:	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 ($t_{1/2}$ ~ <10 d). Degrades in aerobic soil more rapidly in the light ($t_{1/2}$ = 1d), than in the dark ($t_{1/2}$ ~ 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 ($t_{1/2}$ ~ 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

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	1	Health:	1
Flammability:	1	Flammability:	1
Instability:	0	Reactivity:	0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

Original Issued Date: April 3, 2002 (Syngenta)

Revision Date: 09/19/07 (Winfield Solutions, LLC) 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.

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End of MSDS