

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : REVIZE FM  
Product code : 55146-118-89391

#### 1.2. Recommended use and restrictions on use

#### 1.3. Supplier

INNICTIS® CROP CARE, LLC  
1880 Fall River Drive, Suite 100  
Loveland, CO 80538  
T 855-466-8428

#### 1.4. Emergency telephone number

Emergency number : ChemTrec 1-800-424-9300

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.  
Specific target organ toxicity — Repeated exposure, Category 2 H373 May cause damage to organs through prolonged or repeated exposure.  
Hazardous to the aquatic environment — Acute Hazard, Category 2 H401 Toxic to aquatic life

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H302 - Harmful if swallowed.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H401 - Toxic to aquatic life

Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.  
P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell  
P314 - Get medical advice/attention if you feel unwell.  
P330 - Rinse mouth.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

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Name	Product identifier	%	GHS-US classification
metalaxyl	(CAS-No.) 57837-19-1	14.25 – 15.75	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
1,2,3-Propanetriol	(CAS-No.) 56-81-5	3.8 – 4.2	Eye Irrit. 2B, H320
Fludioxonil	(CAS-No.) 131341-86-1	2.24 – 2.28	Not classified
silicon dioxide, amorphous	(CAS-No.) 7631-86-9	0.09 – 0.11	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Other Ingredients			Trade Secret

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Call a poison center or a doctor if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.

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Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>REVIZE FM</b>	
No additional information available	
<b>Fludioxonil (131341-86-1)</b>	
No additional information available	
<b>metalaxyl (57837-19-1)</b>	
No additional information available	
<b>silicon dioxide, amorphous (7631-86-9)</b>	
No additional information available	
<b>1,2,3-Propanetriol (56-81-5)</b>	
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Glycerin (mist)
OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (Total dust) 5 mg/m <sup>3</sup> (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Other Ingredients</b>	
No additional information available	

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

**Personal protective equipment symbol(s):**



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Colour : Red  
Odour : Mild odour

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Odour threshold	: No data available
pH	: 6.49
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.068 g/cm <sup>3</sup>
Solubility	: Dispersible.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Toxicity	: Likely Routes of Exposure: Skin contact, eye contact, inhalation Symptoms of Exposure: Eye Contact: Mildly irritating based on toxicity studies. Skin Contact: Minimally toxic and slightly irritating based on toxicity studies. Ingestion: Slightly toxic if ingested based on toxicity studies. Inhalation: Low inhalation toxicity based on toxicity studies. Delayed, immediate and chronic effects of exposure: Dermal irritation, respiratory irritation.
Toxicological Data:	
Data from laboratory studies conducted are summarized below:	
Oral: Rat LD50: 1,750 mg/kg (females) Dermal: Rat LD50: >5,000 mg/kg Inhalation: Rat 4-hr LC50: >5.04 mg/L Eye Irritation: Rabbit: Mildly irritating Skin Irritation: Rabbit: Slightly irritating	
Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.	
Subchronic (Target Organ) Effects: Repeated overexposure to metalaxyl may affect the liver. Repeated overexposure to fludioxonil may cause effects in the kidney and liver.	
Carcinogenicity / Chronic Health Effects: Prolonged overexposure to metalaxyl may affect liver and blood. Metalaxyl did not cause cancer in laboratory animals. The U.S. EPA has given metalaxyl a Class E classification (evidence of non-carcinogenicity for humans). Fludioxonil did not cause cancer in laboratory	
Reproductive Toxicity: In animal studies, metalaxyl did not interfere with reproduction. In animal studies, Fludioxonil has been shown not to interfere with reproduction.	
Developmental Toxicity: For metalaxyl, a study using rats resulted in maternal toxicity and fetotoxicity at the higher dose levels. However, no treatment-related developmental effects were noted in a study using rabbits. Fludioxonil did not cause birth defects in animals.	
Genotoxicity: No mutagenic effect was found in various tests with microorganisms and mammals with metalaxyl. In vitro bacterial assays and animal tests with fludioxonil did not demonstrate mutagenic effects.	
Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.	

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LD50 oral rat	1750 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 5.04
ATE US (oral)	500 mg/kg bodyweight
metalaxyl (57837-19-1)	
LD50 oral rat	669 mg/kg (Rat, Oral)
LD50 dermal rat	> 3100 mg/kg (Rat, Dermal)
silicon dioxide, amorphous (7631-86-9)	
LD50 oral rat	> 10000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
1,2,3-Propanetriol (56-81-5)	
LD50 oral rat	27200 mg/kg (Rat; Experimental value)
LC50 inhalation rat (mg/l)	> 2.75 mg/l/4h (Rat; Experimental value)
Skin corrosion/irritation	: Not classified pH: 6.49
Serious eye damage/irritation	: Not classified pH: 6.49
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
silicon dioxide, amorphous (7631-86-9)	
IARC group	3 - Not classifiable

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Reproductive toxicity : Not classified

STOT-single exposure : Not classified

silicon dioxide, amorphous (7631-86-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Ecotoxicity:

Data on Fludioxonil Technical:

Bluegill 96-hour LC50: 0.74 ppm Bobwhite Quail Oral LD50: >5,200 ppm Rainbow Trout 96-hour LC50: 0.47 ppm Mallard Duck 8-day Dietary LC50: >5,200 ppm Daphnia 48-hour EC50: 0.90 ppm Honey Bee Oral LD50: > 25 mg/bee

Data on Metalaxyl Technical:

96-hour LC50 Bluegill: >139 mg/l Bobwhite Quail 8-day Dietary LC50: >10,000 ppm 96-hour LC50 Rainbow Trout: >130 mg/l Mallard Duck Oral LD50: >10,000 ppm 48-hour EC50 Daphnia Magna: 121 mg/l

Environmental Fate:

Fludioxonil: Fludioxonil, does not bioaccumulate, however it is persistent in soil and is stable in water. It has low mobility in soil. The material sinks in water (after 24 hours).

Metalaxyl: In soils, metalaxyl is moderately stable under normal environmental conditions. The primary routes of dissipation in surface soil are aerobic soil metabolism from microbial degradation and uptake by plants. Hydrolysis, photolysis and volatilization are not significant routes of breakdown. Metalaxyl is very water soluble and variably binds to organic materials in the soils. In the aquatic environment, metalaxyl degrades moderately under both aerobic and anaerobic conditions by microbial degradation.

metalaxyl (57837-19-1)	
LC50 fish 1	130 – 132 mg/l (96 h, Salmo gairdneri)
silicon dioxide, amorphous (7631-86-9)	
LC50 fish 1	> 10000 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 1	> 10000 mg/l (24 h; Daphnia magna)
Threshold limit algae 2	60 mg/l (72 h; Selenastrum capricornutum; Growth rate)
1,2,3-Propanetriol (56-81-5)	
LC50 fish 1	54000 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	> 10000 mg/l (24 h; Daphnia magna; Locomotor effect)
LC50 fish 2	> 1000 mg/l (96 h; Pisces)
TLM fish 1	> 1000 ppm (96 h; Pisces)
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	> 10000 mg/l (8 days; Scenedesmus quadricauda; Turbid water)
Threshold limit algae 2	2900 mg/l (192 h; Microcystis aeruginosa; Toxicity test)

### 12.2. Persistence and degradability

silicon dioxide, amorphous (7631-86-9)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable

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### **silicon dioxide, amorphous (7631-86-9)**

Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### **1,2,3-Propanetriol (56-81-5)**

Persistence and degradability	Readily biodegradable in water. Not established.
Biochemical oxygen demand (BOD)	0.87 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.16 g O <sub>2</sub> /g substance
ThOD	1.217 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.71 % ThOD

## **12.3. Bioaccumulative potential**

### **metalaxyl (57837-19-1)**

Partition coefficient n-octanol/water (Log Pow)	1.65
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### **silicon dioxide, amorphous (7631-86-9)**

Bioaccumulative potential	Not bioaccumulative. Not established.
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### **1,2,3-Propanetriol (56-81-5)**

Partition coefficient n-octanol/water (Log Pow)	-1.75 (Experimental value; Equivalent or similar to OECD 107)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

## **12.4. Mobility in soil**

### **metalaxyl (57837-19-1)**

Ecology - soil	Not toxic to bees.
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### **1,2,3-Propanetriol (56-81-5)**

Surface tension	0.0634 N/m (20 °C; 1000 g/l)
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## **12.5. Other adverse effects**

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods

: Waste Disposal Method:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide is a violation of Federal law.

Container Handling and Disposal: Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

##### DOT

Not regulated.

##### IMO / IMDG

UN3082, Environmentally hazardous substance, liquid, n.o.s., (Fludioxonil), 9, III, Marine Pollutant (Fludioxonil), 9, III, Marine Pollutant

##### IATA

UN3082, Environmentally hazardous substance, liquid, n.o.s., (Fludioxonil), 9, III, Marine Pollutant (Fludioxonil), 9, III, Marine Pollutant



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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Fludioxonil	CAS-No. 131341-86-1	2.24 – 2.28%
metalaxyl	CAS-No. 57837-19-1	14.25 – 15.75%
Other Ingredients	CAS-No.	%

#### 15.2. International regulations

##### CANADA

##### Fludioxonil (131341-86-1)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

##### silicon dioxide, amorphous (7631-86-9)

Listed on the Canadian DSL (Domestic Substances List)

##### 1,2,3-Propanetriol (56-81-5)

Listed on the Canadian DSL (Domestic Substances List)

##### Other Ingredients

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
1,2,3-Propanetriol(56-81-5)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
silicon dioxide, amorphous(7631-86-9)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H320	Causes eye irritation
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*