

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : REVIZE FMT
 Product code : 55146-154-89391

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.
Germ cell mutagenicity, Category 2	H341 Suspected of causing genetic defects.
Hazardous to the aquatic environment — Acute Hazard, Category 2	H401 Toxic to aquatic life
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411 Toxic to aquatic life with long lasting effects.

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.
 H341 - Suspected of causing genetic defects.
 H401 - Toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 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.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell
 P308+P313 - If exposed or concerned: Get medical attention
 P330 - Rinse mouth.
 P391 - Collect spillage.
 P405 - Store locked up.
 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

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
metalaxyl	(CAS-No.) 57837-19-1	13.5 – 15	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
thiophanate-methyl	(CAS-No.) 23564-05-8	8.9 – 9.8	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Sens. 1, H317 Muta. 2, H341
Fludioxonil	(CAS-No.) 131341-86-1	2.2 – 2.4	Not classified
Other Ingredients			Not classified

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 : IF exposed or concerned: Get medical advice/attention. 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.

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. Notify authorities if product enters sewers or public waters.
- 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.

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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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- 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 locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

REVIZE FMT
No additional information available
Fludioxonil (131341-86-1)
No additional information available
metalaxyl (57837-19-1)
No additional information available
Other Ingredients
No additional information available
thiophanate-methyl (23564-05-8)
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 inadequate ventilation] wear respiratory protection.

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
- Odour threshold : No data available

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pH	: 6.12
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	: 1.0102 g/mL
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: Dermal, inhalation

Symptoms of Exposure:

Eye Contact: Mildly irritating based on toxicity studies.

Skin Contact: Minimally toxic and slightly irritating based on toxicity studies.

Ingestion: Harmful if ingested based on toxicity studies.

Inhalation: Low inhalation toxicity based on toxicity studies.

Delayed, immediate and chronic effects of exposure: None expected.

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: >2.15 mg/L

Eye Irritation: Rabbit: Minimally irritating (MMTS = 2.7)

Skin Irritation: Rabbit: Non-irritating (PDII = 0)

Skin Sensitization: Not a contact sensitizer in mice following repeated skin exposure.

Subchronic (Target Organ) Effects: None known.

Carcinogenicity / Chronic Health Effects: None known.

Reproductive Toxicity: None of the ingredients are classified as reproductive toxins.

Developmental Toxicity: None of the ingredients are classified as developmental toxins.

Genotoxicity: Contains Thiophanate-methyl which is suspected of causing genetic defects.

Assessment Carcinogenicity: None of the ingredients are classified as carcinogens by IARC, NTP, or OSHA.

REVIZE FMT	
LD50 oral rat	1750 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 2.05
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)

thiophanate-methyl (23564-05-8)	
LD50 oral rat	7500 mg/kg (Rat, Oral)
LD50 dermal rat	> 10000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Dermal)

Skin corrosion/irritation	: Not classified pH: 6.12
Serious eye damage/irritation	: Not classified pH: 6.12
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

: 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.

Thiophanate methyl degrades primarily to MBC whether on foliage, in soil or in water in a matter of days. Both photolysis and hydrolysis are important routes of degradation. MBC is microbially degraded, but stable to aqueous photodegradation, stable to hydrolysis at pH values ranging from 5 to 7 and stable to soil photolysis. Metabolism under aerobic and anaerobic conditions in both soil and water proceeds at a slow rate. Under application conditions, average half-lives are about 20 to 50 days, but may be as short as a few days with repeated use.

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).

Environmental Fate:

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

Data on Thiophanate Methyl Technical:

96-hour LC50 Bluegill: >41 ppm Bobwhite Quail 8-day Dietary LC50: >10,000 ppm

96-hour LC50 Rainbow Trout: 8.3 ppm Mallard Duck Oral LD50: 4,640 mg/kg

48-hour EC50 Daphnia: 5.4 ppm 48-hour Honey Bee Contact LD50: >100 mg/bee

96-hour LC50 Mysid: 1.1 ppm

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

metalaxyl (57837-19-1)

LC50 fish 1	130 – 132 mg/l (96 h, <i>Salmo gairdneri</i>)
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

metalaxyl (57837-19-1)

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

metalaxyl (57837-19-1)

Ecology - soil	Not toxic to bees.
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thiophanate-methyl (23564-05-8)

Ecology - soil	Not toxic to plants. Not toxic to bees.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods

: 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. 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.

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.

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SECTION 14: Transport information

Department of Transportation (DOT)

DOT

< 12 Gallons per completed package

Non Regulated

≥ 12 Gallons but < 119 Gallons per completed package

UN 3082, Environmentally hazardous substances, liquid, n.o.s., 9, III, (thiophanate-methyl), RQ

≥ 119 Gallons per completed package

UN 3082, Environmentally hazardous substances, liquid, n.o.s., 9, III, (thiophanate-methyl), Marine Pollutant, RQ

IMDG

UN 3082, Environmentally hazardous substances, liquid, n.o.s., 9, III, (thiophanate-methyl), Marine Pollutant,

IATA

Non Regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

REVIZE FMT

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	2.2 – 2.4%
metalaxyl	CAS-No. 57837-19-1	13.5 – 15%
Other Ingredients	CAS-No.	%
thiophanate-methyl	CAS-No. 23564-05-8	8.9 – 9.8%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

thiophanate-methyl	CAS-No. 23564-05-8	8.9 – 9.8%
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thiophanate-methyl (23564-05-8)

CERCLA RQ	10 lb
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15.2. International regulations

CANADA

Fludioxonil (131341-86-1)

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

Other Ingredients

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

thiophanate-methyl (23564-05-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

⚠ WARNING: This product can expose you to thiophanate-methyl, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
thiophanate-methyl(23564-05-8)	U.S. - New Jersey - Right to Know Hazardous Substance List

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SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects.

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.