

MATERIAL SAFETY DATA SHEET

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General Information No. 229-245-8845
In Case of Emergency, Call
PROSAR: 888-875-1724
CHEMTREC: 800-424-9300

I. PRODUCT IDENTIFICATION

Product name: Vireo MEC
Active Ingredient: Metalaxyl (23.0%)
Chemical Name: N-(2, 6-dimethylphenyl)-N-(methoxyacetyl)-aniline methyl ester

II. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS number	% by Wt.	OSHA PEL	ACGIH TLV
Metalaxyl	57837-19-1	23.0	Not listed	Not listed

III. HAZARDS IDENTIFICATION

As defined by OSHA Hazard Communication Standard (29 CFR 1910.1200).

EMERGENCY OVERVIEW

Keep out of reach of children.

Warning. Causes substantial but temporary eye injury. Harmful if swallowed, absorbed through the skin or if inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

IV. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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 a poison control center or doctor for further treatment advice.

Note to Physician: Consideration should be given to gastric lavage with an endotracheal tube in place. A slurry of activated charcoal in water may be left in stomach. Give saline laxative followed by symptomatic and supportive care.

V. FIRE FIGHTING MEASURES

Flash point (method): > 200 °F (93.5 °C)
Flammable limits (LFL-UFL): LFL : 1.5%
UFL: 11.8%
Fire and Explosion Hazards: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.
Extinguishing Media: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.
Fire Fighting Instructions: Isolate area and fight fire upwind from a safe distance to avoid possible hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.
Fire Fighting Equipment: Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).
Hazardous Combustion Products: Carbon monoxide and carbon dioxide can be formed.

VI. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Section VIII of this document. Isolate hazard area. Keep unnecessary personnel from entering.

Small Spill: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

Large Spill: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, clean the area with detergent and water and neutralize with dilute alkaline solutions of caustic or soda ash. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

VII. HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

- Handling: Use only in a well-ventilated area.
- Storage: Do not contaminate water, food, or feed. Store at temperatures above 40 °F in a dry place away from heat and other sources of ignition.. Crystals may form at lower storage temperatures. If this occurs, place the product in a warm room (68 °F or above) and roll or shake the container at frequent intervals until all crystals are dissolved. Store in original containers only.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to Section III of this MSDS.

Engineering Controls: Proper ventilation is required when handling or using this product. Localized exhaust should be used in areas where vapors or mists may be emitted. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (such as Barrier laminate, Nitrile Rubber, Neoprene Rubber, Viton, Selection Category E)
- Shoes plus socks
- Protective eyewear such as goggles, face shield or safety glasses.

Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

IX. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Amber, clear liquid
- Odor: Mild petroleum
- Viscosity: Centistokes: 51.347 (20° C); 24.295 (40° C)
- pH: 5.77
- Specific Gravity: 1.058 g/mL

X. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended storage conditions; however may decompose if heated.
Conditions to Avoid:	Avoid heating above 200 °F and fire.
Incompatibility:	Oxidizers, strong acids, and strong bases.
Hazardous Decomposition Products:	Under fire conditions, carbon dioxide and carbon monoxide can be formed.
Hazardous Polymerization:	Product will not undergo polymerization.

XI. TOXICOLOGICAL INFORMATION

Acute Toxicity:	
Oral LD ₅₀ (rat):	> 669 mg/Kg
Dermal LD ₅₀ (rabbit):	> 3100 mg/Kg
Eye Irritation (rabbit):	Slight
Skin Irritation (rabbit):	Slight
Sensitization (guinea pig):	Non-sensitizer

Medical Conditions Aggravated by Exposure: None.

Carcinogen Status:	
OSHA	Not listed.
NTP	Not listed.
IARC	Not listed.

Mutagenic Data: No evidence of genotoxicity effects during studies.

Additional Data: Not known to exhibit reproductive or teratogenic (birth defect) effects.

XII. ECOLOGICAL INFORMATION

Environmental Summary

This product has a very low order of toxicity to aquatic organisms, birds, bees, and other wildlife. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

Fish Toxicity:	96 hour LC ₅₀ , Rainbow trout, carp, bluegill - >100 mg/L
Avian Toxicity: (Technical)	Oral LD ₅₀ , Bobwhite quail and mallard ducks - >10,000 mg/Kg
Bee Toxicity:	Non-toxic.

XIII. DISPOSAL CONSIDERATIONS

Disposal: Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide spray mixture, or rinsate is a violation, of Federal law. Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office.

Container Disposal: Do not reuse empty container. Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and sipose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers should be returned intact to point of purchase. Do not rinse container or empty remaining formulated product.

XIV. TRANSPORT INFORMATION

DOT: When shipped in bulk use IMDG shipping description.

IMDG/IMO

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S. (Metalaxyl)

Hazard Class: 9

UN Number: 3082

Packing Group: III

Primary/Secondary label: Class 9

Primary/Secondary Placard: Class 9

Emergency Response Guide No.: 171

XV. REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA Hazard Communication

Standard Status: Yes

CERCLA Reportable Quantity: No

SARA TITLE III STATUS:

302 Extremely Hazardous Substance Metalaxyl CAS No. 578737-19-1, 23.0%

311/312 Hazard Categories An immediate health hazard. A delayed health hazard. A fire hazard

313 Toxic Chemicals Metalaxyl CAS No. 578737-19-1, 23.0%

CALIFORNIA PROP 65 STATUS: Not listed

XVI. OTHER INFORMATION

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