Safety Data Sheet

1. IDENTIFICATION

Product Identifier
Product Name Thiophanate Methyl 4.5F Select  ABN: TM 4.5F Select

Registration Number(s)  EPA Reg. No. 89442-14
UN/ID No  UN3082

Recommended use of the chemical and restrictions on use
Recommended Use  EPA registered pesticide.

Details of the supplier of the safety data sheet
Manufacturer Address  Prime Source, LLC
4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725

Emergency Telephone Number
Emergency Telephone (24 hr)  For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information. The product contains no substances which, at their given concentration, are considered to be hazardous to health.

Appearance  Off-white, opaque viscous liquid  Physical State  Liquid  Odor  No odor

Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Signal Word  Warning
Hazard Statements
Harmful if inhaled
May cause an allergic skin reaction
Suspected of causing genetic defects

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl</td>
<td>23564-05-8</td>
<td>45.27-48-07</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is “proprietary” and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**
4. FIRST-AID MEASURES

First Aid Measures

General Advice
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a physician if you feel unwell.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Immediately call a poison center or doctor/physician.

Most important symptoms and effects

Symptoms
May cause an allergic skin reaction. Harmful if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Product is not flammable.

Hazardous Combustion Products
None known.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

**Personal Precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**Environmental Precautions**
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

**Methods for Containment**
Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up**
Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

**Advice on Safe Handling**
Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

**Storage Conditions**
Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not contaminate water, food, or feed by storage or disposal. Keep/store only in original container. Protect container from physical damage. Store at ambient conditions. Store locked up.

**Packaging Materials**
Do not reuse container.

**Incompatible Materials**
None known based on information supplied.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

**Engineering Controls**
THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS OF END USE PRODUCTS CONTAINING THIS MATERIAL, CONSULT THE SDS OR PRODUCT LABEL FOR THE END USE PRODUCT.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**
Wear safety glasses with side shields (or goggles).

**Skin and Body Protection**
Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.

**Respiratory Protection**
NIOSH-approved respirator or mask in the absence of adequate ventilation.

**General Hygiene Considerations**
Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them. Follow manufacturer’s instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Off-white, opaque viscous liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Off-white/opaque</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>No odor</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>5.0-6.0</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>~ 100 °C / ~212 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1652</td>
<td>(1=Water)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Dispersible</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Bulk Density</td>
<td>1.62 g/ml (9.69 lb/gal)</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Contamination.
Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.

Skin Contact
Avoid contact with skin.

Inhalation
Harmful if inhaled.

Ingestion
Do not taste or swallow.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23664-05-8</td>
<td>= 6640 mg/kg (Rat)</td>
<td>&gt; 10 g/kg (Rat) &gt; 10 g/kg (Rabbit)</td>
<td>= 1700 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on physical, chemical and toxicological effects

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
Suspected of causing genetic defects.

Carcinogenicity
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl</td>
<td></td>
<td>7.8: 48 h</td>
<td>Oncorhynchus mykiss mg/L LC50</td>
<td></td>
</tr>
<tr>
<td>23564-05-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined.

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number
Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes
---|---|---|---|---
Thiophanate-methyl 23564-05-8 | U409 | | | U409

14. TRANSPORT INFORMATION

**Note**
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**
Packaging < 2.13 gal: Not regulated

**UN/ID No**
UN3082

**Proper Shipping Name**
Environmentally hazardous substance, liquid, n.o.s. (Thiophanate-methyl)

**Hazard Class**
9

**Packing Group**
III

**Reportable Quantity (RQ)**
RQ = 10 lb

**IATA**
Not regulated

**IMDG**
Marine Pollutant
This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

**International Inventories**

**TSCA**
All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IESCC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- **AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**CERCLA**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8</td>
<td>10 lb</td>
<td>RQ 10 lb final RQ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RQ 4.54 kg final RQ</td>
<td></td>
</tr>
</tbody>
</table>
SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl - 23564-05-8</td>
<td>23564-05-8</td>
<td>45.27-48-07</td>
<td>1.0</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl - 23564-05-8</td>
<td>Female Reproductive Male Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8</td>
<td>X</td>
<td></td>
<td></td>
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</tbody>
</table>

EPA Pesticide Registration Number EPA Reg. No. 89442-14

EPA Statement
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
EPA Pesticide Label
Signal Word: Caution

Difference between SDS and EPA pesticide label

<table>
<thead>
<tr>
<th></th>
<th>EPA</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word</td>
<td>Caution</td>
<td>Warning</td>
</tr>
<tr>
<td>Acute toxicity - Oral</td>
<td>Harmful if swallowed</td>
<td>N/A</td>
</tr>
<tr>
<td>Acute toxicity - Dermal</td>
<td>Harmful if absorbed through the skin</td>
<td>N/A</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Gases)</td>
<td>Harmful if inhaled</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>N/A</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>N/A</td>
<td>Suspected of causing genetic defects</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Not determined</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Revision Date: 5/27/2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet