

**TM 4.5**  
**SELECT™**

## 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**

Albaugh, LLC  
1525 NE 36th Street  
Ankeny, IA 50021

**Emergency Telephone Number**

**Emergency Telephone (24 hr)** For fire, spill and/or leak contact CHEMTREC:  
1-800-424-9300

### 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

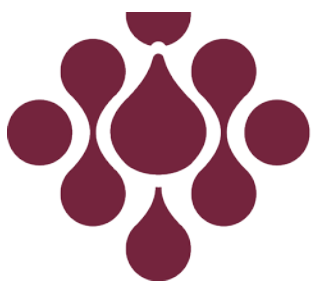
**Odor** No odor

**Classification**

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2

**Signal Word**

Warning



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### 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

Chemical Name	CAS No	Weight-%
Thiophanate-methyl	23564-05-8	45.27-48-07

\*\*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.\*\*



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## 4. FIRST-AID MEASURES

### First Aid Measures

<b>General Advice</b>	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.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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

<b>Symptoms</b>	May cause an allergic skin reaction. Harmful if inhaled.
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### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO<sub>2</sub>). Foam. Water spray (fog). Sand/earth.

**Unsuitable Extinguishing Media** Not determined.

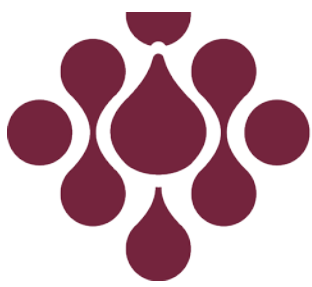
### Specific Hazards Arising from the Chemical

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.



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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

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

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	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.

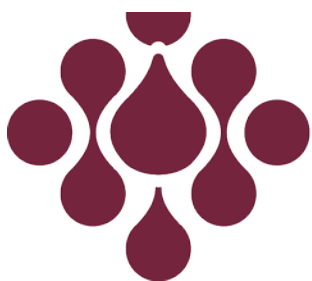
## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on Safe Handling</b>	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.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	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.
<b>Packaging Materials</b>	Do not reuse container.
<b>Incompatible Materials</b>	None known based on information supplied.



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## 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

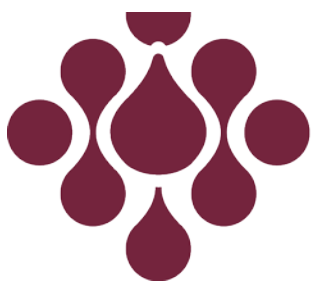
Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.

#### 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.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Odor</b>	No odor
<b>Appearance</b>	Off-white, opaque viscous liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Off-white/opaque		

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

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

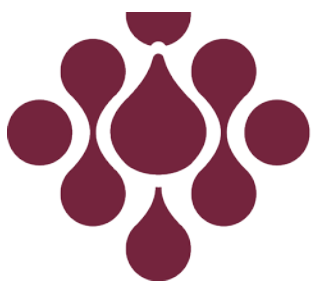
None under normal processing.

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

### Conditions to Avoid

Keep out of reach of children. Contamination.



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## Incompatible Materials

None known based on information supplied.

## Hazardous Decomposition Products

None known.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Inhalation</b>	Harmful if inhaled.
<b>Ingestion</b>	Do not taste or swallow.

### Component Information

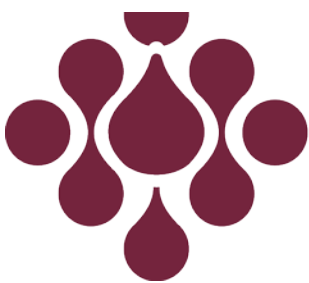
Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Thiophanate-methyl 23564-05-8	= 6640 mg/kg ( Rat )	> 10 g/kg ( Rat ) > 10 g/kg ( Rabbit )	= 1700 mg/m <sup>3</sup> ( Rat ) 4 h

### Information on physical, chemical and toxicological effects

<b>Symptoms</b>	Please see section 4 of this SDS for symptoms.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.



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### 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

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Thiophanate-methyl 23564-05-8		7.8: 48 h Oncorhynchus mykiss mg/L LC50		

### 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.

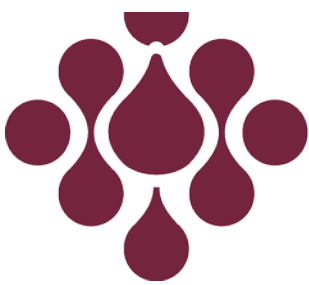
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

#### **Contaminated Packaging**

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

### US EPA Waste Number





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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

<b>Note</b>	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
<b>DOT</b>	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
<b>IATA</b>	Not regulated
<b>IMDG</b>	
Marine Pollutant	This material may meet the definition of a marine pollutant

## 15. REGULATORY INFORMATION

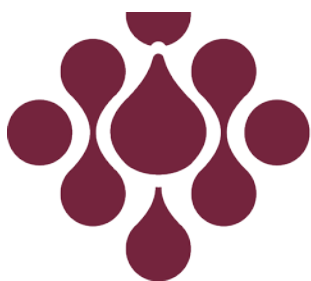
### International Inventories

<b>TSCA</b>	All ingredients are listed or exempt from listing on Chemical Substance Inventory
<b>Legend:</b>	
<i>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</i>	
<i>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</i>	
<i>EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances</i>	
<i>ENCS - Japan Existing and New Chemical Substances</i>	
<i>IECSC - China Inventory of Existing Chemical Substances</i>	
<i>KECL - Korean Existing and Evaluated Chemical Substances</i>	
<i>PICCS - Philippines Inventory of Chemicals and Chemical Substances</i>	
<i>AICS - Australian Inventory of Chemical Substances</i>	

### US Federal Regulations

#### **CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Thiophanate-methyl 23564-05-8	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ



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## 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

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Thiophanate-methyl - 23564-05-8	23564-05-8	45.27-48-07	1.0

## US State Regulations

### California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Thiophanate-methyl - 23564-05-8	Female Reproductive Male Reproductive

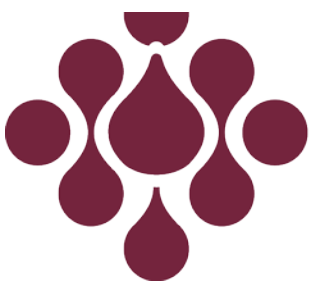
## U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Thiophanate-methyl 23564-05-8	X		

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:



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### EPA Pesticide Label

Signal Word: Caution

### Difference between SDS and EPA pesticide label

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

## 16. OTHER INFORMATION

### NFPA

#### Health Hazards

1

#### Flammability

0

#### Instability

0

#### Special Hazards

Not determined

### HMIS

#### Health Hazards

1

#### Flammability

0

#### Physical Hazards

0

#### Personal Protection

Not determined

Revision Date:

10/17/2016

Revision Note:

CHEMTREC update

### 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**