1. Identification of the Substance/Preparation and of the Company/Undertaking

Identification of the product
Product Description: TOPSIN® M WSB

Other means of identification
Product code: 12-377
UN/ID no.: UN3077
Registration number(s): 8033-125-70506

Recommended use of the chemical and restrictions on use
Recommended use: Fungicides.
Uses advised against: Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet
Supplier Address:
UPL NA Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Emergency telephone number
Company Phone Number: 1-800-438-6071
Emergency telephone number: Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Acute toxicity - Dermal</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label elements

WARNING

Hazard Statements
Harmful in contact with skin
May cause an allergic skin reaction
Suspected of causing genetic defects
Harmful if inhaled

EMERGENCY OVERVIEW
Appearance  light brown  Physical state  powder  Odor  Slight Rotten egg-like

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear cold insulating gloves/face shield/eye protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
In case of inadequate ventilation wear respiratory protection
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
Call a POISON CENTER or doctor if you feel unwell
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

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

Hazards Not Otherwise Classified (HNOC)
OTHER INFORMATION
• MAY BE HARMFUL IF SWALLOWED
• Very toxic to aquatic life
• 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>72</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>112926-00-8</td>
<td>1-20</td>
</tr>
<tr>
<td>Diatomaceous earth</td>
<td>7631-86-9</td>
<td>5-40</td>
</tr>
</tbody>
</table>

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye contact
Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact
Wash off immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.

Inhalation
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 physician or poison control center immediately.

Ingestion
Never give anything by mouth to an unconscious person. Do not induce vomiting without
medical advice. Clean mouth with water and drink afterwards plenty of water afterwards. Call a physician.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects**
no data available.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician**
Treat symptomatically.

### 5. Fire-fighting measures

**Suitable extinguishing media**

Use: Dry chemical. Carbon dioxide (CO2). Water spray. alcohol-resistant foam.

**Unsuitable extinguishing media**

no data available.

**Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products**

No information available.

**Explosion data**

**Protective equipment and precautions for firefighters**
Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**

Avoid contact with skin and eyes. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

**Environmental Precautions**

**Environmental precautions**

Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and material for containment and cleaning up**

**Methods for Clean-Up**

Sweep up and shovel into suitable containers for disposal.

### 7. Handling and Storage

**Precautions for safe handling**

**Handling**

Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Keep out of reach of children.

**Conditions for safe storage, including any incompatibilities**

**Storage**

Keep containers tightly closed in a cool, well-ventilated place.

**incompatible materials**

Strong oxidizing agents.

### 8. Exposure Controls/Personal Protection
Exposure guidelines

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide</td>
<td></td>
<td>(vacated) TWA: 6 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 20 mppcf : (80)/(% SiO₂) mg/m³ TWA</td>
</tr>
<tr>
<td>Diatomaceous earth</td>
<td>(vacated) TWA: 6 mg/m³</td>
<td>&lt;1% Crystalline silica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 20 mppcf : (80)/(% SiO₂) mg/m³ TWA</td>
</tr>
</tbody>
</table>

Engineering controls
Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Personal protective equipment

Eye/Face Protection
Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

Skin protection
Wear protective gloves/clothing. Socks and footwear.

Respiratory protection
Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General hygiene considerations
Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

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>powder</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>light brown</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Slight Rotten egg-like</td>
<td></td>
</tr>
<tr>
<td>color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>172 °C / 342 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability limit in air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>vapor pressure</td>
<td>7.12 X 10-8 mmHg(tech)</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

OTHER INFORMATION
10. Stability and Reactivity

**Reactivity**

no data available

**Chemical stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

No information available.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

no data available.

11. Toxicological Information

**Information on Likely Routes of Exposure**

**Product information**

Single exposure studies indicate:

- Oral: Practically non-toxic to rats (LD50 >5,000 mg/kg)
- Dermal: No more than slightly toxic to rabbits (LD50 >2,000 mg/kg)
- Inhalation: SLightly toxic to rats (4 hr LC50 1.8 mg/l)
- Skin Irritation: Non-irritating to rabbits
- Eye Irritation: Non-irritating to rabbits

Skin allergy was observed in guinea pigs following repeated exposure. Repeated or long-term oral administration produced effects on the thyroid, liver or kidneys in rats, mice and dogs. An increased incidence of liver tumors was observed in mice and thyroid tumors were observed in male rats following long-term oral exposure. No effects were seen on the ability of male or female rats to reproduce when exposed orally for 2 successive generations. No birth defects were observed in the offspring of rats exposed orally during pregnancy. In rabbits, developmental effects were noted only at maternally toxic doses. No genetic changes were observed in tests using animal cells.

- **Inhalation** MAY BE FATAL IF INHALED.
- **Eye contact** Moderately irritating to the eyes.
- **Skin contact** May be harmful if absorbed through the skin.
- **Ingestion** MAY BE HARMFUL IF SWALLOWED.

**Information on Toxicological Effects**

**Symptoms**

No information available.

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

**Sensitization**

No information available.
Mutagenic effects
no data available.

Carcinogenicity
The information below indicates whether any agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>112926-00-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diatomaceous earth</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7631-86-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive effects
Not Available.

STOT - Single Exposure
no data available.

STOT - Repeated Exposure
no data available.

Chronic toxicity
Avoid repeated exposure.

Target organ effects
Respiratory System, EYES.

Aspiration hazard
No information available.

Numerical Measures of Toxicity - Product information

LD50 Oral: > 5000 mg/kg (rat)
LD50 Dermal: > 2000 mg/kg (rat)
LC50 Inhalation: 7.2 mg/l (1 hr)

12. Ecological Information

ecotoxicity

Thiophanate methyl
Carp 96 hr LC50 = >100 mg/L
Fiddler crab 96 hr LC50 = >560 mg/L
Bluegill 96 hr LC50 = 15.8 mg/L
Daphnid 48 hr EC50 = 15.6 mg/L
Shrimp 96 hr LC50 = 25.1 mg/L
Trout 96 hr LC50 - 2.2 mg/L
Oyster 96 hr LC50 = 4.6 ppm
Highly toxic to catfish

Persistence/Degradability
no data available.

Bioaccumulation/ Accumulation
No information available.

Other Adverse Effects
no data available

13. Disposal Considerations

Waste Treatment Methods

Waste Disposal Method
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or 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.

Contaminated packaging
Refer to product label.

14. Transport Information
15. Regulatory Information

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:

**signal word**
- CAUTION

**Ventilation Control**
- PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals.

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>USINV</td>
<td>Present</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Present</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Not Present</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not Present</td>
</tr>
<tr>
<td>China</td>
<td>Present</td>
</tr>
<tr>
<td>KECL</td>
<td>Present</td>
</tr>
<tr>
<td>PICCS</td>
<td>Present</td>
</tr>
<tr>
<td>AICS</td>
<td>Present</td>
</tr>
<tr>
<td>TSCA</td>
<td>Not Present</td>
</tr>
</tbody>
</table>

*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 Commercial Chemical Substances/EU List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances
Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>RQ</th>
<th>CERCLA EHS RQs</th>
<th>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>4.54 kg final RQ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8 ( 72 )</td>
<td>10 lb</td>
</tr>
</tbody>
</table>

SARA Product RQ 0

RCRA

<table>
<thead>
<tr>
<th>Component</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - P Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8 ( 72 )</td>
<td></td>
<td></td>
<td>U409</td>
</tr>
</tbody>
</table>

Pesticide Information

State Regulations

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

Prop 65 Pictogram

![WARNING!]

Prop 65 Warning Statement

<table>
<thead>
<tr>
<th>Component</th>
<th>Non-additive, corrosive chemical type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8 ( 72 )</td>
<td>Female Reproductive</td>
</tr>
</tbody>
</table>

| Male Reproductive |

State Right-to-Know

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiophanate-methyl 23564-05-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon dioxide - 112926-00-8</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diatomaceous earth - 7631-86-9</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International regulations

U.S. EPA Label information

EPA Pesticide registration number 8033-125-70506

16. Other Information

<table>
<thead>
<tr>
<th>NFPA HEALTH</th>
<th>flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Preparation Date 10-May-2015
Revision date 28-Mar-2019
Revision Summary
Update section 2 Update section 11

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End of SDS