SAFETY DATA SHEET
DOW AGROSCIENCES CANADA INC.

Product name: CEREFIT™ B Fungicide

DOW AGROSCIENCES CANADA INC. encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: CEREFIT™ B Fungicide

Recommended use of the chemical and restrictions on use

Identified uses: End use fungicide product

COMPANY IDENTIFICATION
DOW AGROSCIENCES CANADA INC.
#2400, 215 - 2ND STREET S.W.
CALGARY AB T2P 1M4
CANADA

Customer Information Number:  800-667-3852 solutions@corteva.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1-888-226-8832
Local Emergency Contact: 1-888-226-8832

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Physical state: Liquid
Color: Yellow to brown
Odor: Aromatic

Hazard Summary

WARNING!!
Combustible liquid and vapor.
May cause allergic skin reaction.
May cause eye irritation.
May cause skin irritation.
May be harmful if inhaled.
May cause central nervous system effects.
May cause respiratory tract irritation.
Aspiration hazard. Can enter lungs and cause damage.
Isolate area.
Keep upwind of spill.
Highly toxic to fish and/or other aquatic organisms.
Possible cancer hazard. May cause cancer based on animal data.
Potential Health Effects

**Skin:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Skin:** Repeated contact may cause flaking and softening of skin. Prolonged contact may cause skin irritation with local redness.

**Inhalation:** Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause central nervous system effects.

**Eyes:** May cause slight eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

**Ingestion:** Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

**Chronic Exposure:** May cause respiratory irritation and central nervous system depression. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust. For the solvent(s): Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propiconazole</td>
<td>60207-90-1</td>
<td>41.8%</td>
</tr>
<tr>
<td>Heavy aromatic naphtha</td>
<td>64742-94-5</td>
<td>&gt;= 40.0 - &lt; 50.0 %</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>&gt;= 3.0 - &lt; 10.0 %</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
<td>&gt;= 1.0 - &lt; 3.0 %</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>&gt;= 1.0 - &lt; 3.0 %</td>
</tr>
<tr>
<td>Balance</td>
<td>Not available</td>
<td>&gt; 3.0 %</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice:**

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.
Skin contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Suitable emergency safety shower facility should be available in work area.

Eye contact: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrollable water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact the company for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep out of reach of children. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

**Conditions for safe storage:** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Consult local authorities for recommended exposure limits.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value/Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy aromatic naphtha</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 mg/m³, total hydrocarbon vapor</td>
</tr>
<tr>
<td></td>
<td>Dow IHG</td>
<td>TWA</td>
<td>100 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Dow IHG</td>
<td>STEL</td>
<td>300 mg/m³</td>
</tr>
<tr>
<td></td>
<td>CA AB OEL</td>
<td>TWA</td>
<td>200 mg/m³, total hydrocarbon vapor</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>CA AB OEL</td>
<td>TWA</td>
<td>52 mg/m³, 10 ppm</td>
</tr>
<tr>
<td></td>
<td>CA AB OEL</td>
<td>STEL</td>
<td>79 mg/m³, 15 ppm</td>
</tr>
<tr>
<td></td>
<td>CA BC OEL</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>CA BC OEL</td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td></td>
<td>CA QC OEL</td>
<td>TWA EV</td>
<td>52 mg/m³, 10 ppm</td>
</tr>
<tr>
<td></td>
<td>CA QC OEL</td>
<td>STEV</td>
<td>79 mg/m³, 15 ppm</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
<tr>
<td></td>
<td>CA BC OEL</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>
Product name: CEREFIT™ B Fungicide

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow to brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No test data available</td>
</tr>
</tbody>
</table>
### 10. STABILITY AND REACTIVITY

**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Thermally stable at recommended temperatures and pressures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Active ingredient decomposes at elevated temperatures.

**Incompatible materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.
11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product: Single dose oral LD50 has not been determined. Based on information for component(s): Estimated.
LD50, Rat, 2,500 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s): Estimated.
LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity
Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Signs and symptoms of excessive exposure may include: May cause central nervous system effects. Anesthetic or narcotic effects. Headache. Sweating. Nausea and/or vomiting.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation
May cause slight eye irritation.
May cause slight corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization
For the active ingredient(s):
Skin contact may cause an allergic skin reaction.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For the active ingredient(s):
In animals, effects have been reported on the following organs:
Liver.
For the solvent(s):
In animals, effects have been reported on the following organs:
Gastrointestinal tract.
Respiratory tract.
Thyroid.
Urinary tract.
Lung.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Ingestion of naphthalene by humans has caused hemolytic anemia.
Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.

Carcinogenicity
For the active ingredient(s): Has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown. Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

Teratogenicity
For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Has caused birth defects in laboratory animals only at doses producing severe toxicity in the mother.

Reproductive toxicity
For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
For the active ingredient(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. For the minor component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard
May be fatal if swallowed and enters airways.

COMPONENTS INFLUENCING TOXICOLOGY:

Propiconazole
Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 5.8 mg/l

Heavy aromatic naphtha
Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 4.8 mg/l

LC50, Rat, 4 Hour, vapour, > 0.2 mg/l No deaths occurred following exposure to a saturated atmosphere.

Naphthalene
Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may cause lung injury. Signs and symptoms of excessive exposure may include: Headache. Confusion. Sweating. Nausea and/or vomiting.

LC50, Rat, 4 Hour, vapour, > 0.41 mg/l The LC50 value is greater than the Maximum Attainable Concentration.
1,2,4-Trimethylbenzene

**Acute inhalation toxicity**
Prolonged excessive exposure may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

LC50, Rat, 4 Hour, vapour, 18 mg/l

Propylene glycol

**Acute inhalation toxicity**
Mist may cause irritation of upper respiratory tract (nose and throat). LC50, Rabbit, 2 Hour, dust/mist, 317.042 mg/l No deaths occurred at this concentration.

Balance

**Acute inhalation toxicity**
The LC50 has not been determined.

### Carcinogenicity

<table>
<thead>
<tr>
<th>Component</th>
<th>List</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy aromatic naphtha</td>
<td>ACGIH</td>
<td>A3: Confirmed animal carcinogen with unknown relevance to humans.</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

**Toxicity**

Propiconazole

**Acute toxicity to fish**
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), 96 Hour, 5.1 mg/l
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 0.83 - 506 mg/l
LC50, Cyprinus carpio (Carp), 96 Hour, 5.7 - 46 mg/l

**Acute toxicity to aquatic invertebrates**
LC50, saltwater mysid Mysidopsis bahia, 96 Hour, 0.5 mg/l, Method Not Specified.
LC50, scud Gammarus sp., flow-through test, 96 Hour, 1.3 mg/l, Method Not Specified.
EC50, Daphnia magna (Water flea), 48 Hour, 10.2 mg/l, Method Not Specified.

**Acute toxicity to algae/aquatic plants**
EC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, 0.57 mg/l
EC50, diatom Navicula sp., 11 d, 0.093 mg/l

**Chronic toxicity to fish**
Cyprinodon variegatus (sheepshead minnow), 100 d, 0.068 mg/l

**Chronic toxicity to aquatic invertebrates**
Daphnia magna (Water flea), 21 d, 0.31 mg/l
Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm). oral LD50, Coturnix japonica (Japanese quail), 1,777 - 2,223 mg/kg dietary LC50, Anas platyrhynchos (Mallard duck), 8 d, > 5,620 ppm contact LD50, Apis mellifera (bees), > 100micrograms/bee oral LD50, Apis mellifera (bees), > 100micrograms/bee

Heavy aromatic naphtha
Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Gambusia affinis (Mosquito fish), 96 Hour, 811 mg/l

Acute toxicity to algae/aquatic plants
EC50, Algae, 72 Hour, 21 - 165 mg/l

Naphthalene
Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 0.11 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 1.6 - 24.1 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Skeletonema costatum (marine diatom), Growth rate inhibition, 72 Hour, 0.4 mg/l

Chronic toxicity to fish
NOEC, Other, flow-through, 40 d, mortality, 0.37 mg/l

1,2,4-Trimethylbenzene
Acute toxicity to fish
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 7.7 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 3.6 mg/l

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 96 Hour, 2.356 mg/l

Propylene glycol
Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
LC50, Ceriodaphnia dubia (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202
Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

Toxicity to bacteria
NOEC, Pseudomonas putida, 18 Hour, > 20,000 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

Balance
Acute toxicity to fish
No relevant data found.

Persistence and degradability

Propiconazole
Biodegradability: No relevant information found.

Theoretical Oxygen Demand: 2.01 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 5.533 Hour
Method: Estimated.

Heavy aromatic naphtha
Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Naphthalene
Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Theoretical Oxygen Demand: 3.00 mg/mg

Biological oxygen demand (BOD)

<table>
<thead>
<tr>
<th>Incubation Time</th>
<th>BOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 d</td>
<td>57.000 %</td>
</tr>
<tr>
<td>10 d</td>
<td>71.000 %</td>
</tr>
<tr>
<td>20 d</td>
<td>71.000 %</td>
</tr>
</tbody>
</table>

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 5.9 Hour
Method: Estimated.

1,2,4-Trimethylbenzene
Biodegradability: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

Biodegradation: 100 %
Exposure time: 1 d
Theoretical Oxygen Demand: 3.19 mg/mg

Photodegradation
- **Test Type:** Half-life (indirect photolysis)
- **Sensitization:** OH radicals
- **Atmospheric half-life:** 0.641 d
- **Method:** Estimated.

**Propylene glycol**
- **Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).
  - 10-day Window: Pass
  - **Biodegradation:** 81 %
  - **Exposure time:** 28 d
  - **Method:** OECD Test Guideline 301F or Equivalent
- **Theoretical Oxygen Demand:** 1.68 mg/mg

**Chemical Oxygen Demand:** 1.53 mg/mg

**Biological oxygen demand (BOD)**

<table>
<thead>
<tr>
<th>Incubation Time</th>
<th>BOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 d</td>
<td>69.000 %</td>
</tr>
<tr>
<td>10 d</td>
<td>70.000 %</td>
</tr>
<tr>
<td>20 d</td>
<td>86.000 %</td>
</tr>
</tbody>
</table>

**Photodegradation**
- **Atmospheric half-life:** 10 Hour
- **Method:** Estimated.

**Balance**
- **Biodegradability:** No relevant data found.

**Bioaccumulative potential**

**Propiconazole**
- **Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
- **Partition coefficient: n-octanol/water (log Pow):** 3.72 Measured
- **Bioconcentration factor (BCF):** 116  *Lepomis macrochirus* (Bluegill sunfish) 14 d

**Heavy aromatic naphtha**
- **Bioaccumulation:** For similar material(s): Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Naphthalene
- **Bioaccumulation**: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
- **Partition coefficient**: n-octanol/water(log Pow): 3.4 OECD Test Guideline 107
- **Bioconcentration factor (BCF)**: 40 - 300 Fish 28 d Measured

1,2,4-Trimethylbenzene
- **Bioaccumulation**: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
- **Partition coefficient**: n-octanol/water(log Pow): 3.63 Measured
- **Bioconcentration factor (BCF)**: 33 - 275 Cyprinus carpio (Carp) 56 d Measured

Propylene glycol
- **Bioaccumulation**: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
- **Partition coefficient**: n-octanol/water(log Pow): -1.07 Measured
- **Bioconcentration factor (BCF)**: 0.09 Estimated

Balance
- **Bioaccumulation**: No relevant data found.

Mobility in soil

Propiconazole
- Potential for mobility in soil is medium (Koc between 150 and 500).
- **Partition coefficient (Koc)**: 382 - 1789 Measured

Heavy aromatic naphtha
- No relevant data found.

Naphthalene
- Potential for mobility in soil is low (Koc between 500 and 2000).
- **Partition coefficient (Koc)**: 664

1,2,4-Trimethylbenzene
- Potential for mobility in soil is low (Koc between 500 and 2000).
- **Partition coefficient (Koc)**: 720 Estimated

Propylene glycol
- Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
- Potential for mobility in soil is very high (Koc between 0 and 50).
- **Partition coefficient (Koc)**: < 1 Estimated

Balance
- No relevant data found.

13. DISPOSAL CONSIDERATIONS

**Disposal methods**: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.
14. TRANSPORT INFORMATION

TDG

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propiconazole, Naphthalene)

UN number: UN 3082
Class: 9
Packing group: III
Marine pollutant: Propiconazole, Naphthalene

Classification for SEA transport (IMO-IMDG):

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propiconazole, Naphthalene)
UN number: UN 3082
Class: 9
Packing group: III
Marine pollutant: Propiconazole, Naphthalene
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code
Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Propiconazole, Naphthalene)
UN number: UN 3082
Class: 9
Packing group: III

Further information:
NOT REGULATED PER TDG EXEMPTION 1.45.1 FOR ROAD OR RAIL

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Hazardous Products Act Information: WHMIS Classification
This product is exempt under WHMIS.

National Fire Code of Canada
Class IIIA

Canadian Domestic Substances List (DSL)
This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements.

Pest Control Products Act (PCPA) Registration Number: 33348
16. OTHER INFORMATION

Hazard Rating System
NFPA

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<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
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<tr>
<td>1</td>
<td>2</td>
<td>0</td>
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Revision
Identification Number: 97071023 / A215 / Issue Date: 01/15/2020 / Version: 2.0
DAS Code: GF-242
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACGIH</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
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<tr>
<td>CA AB OEL</td>
<td>Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)</td>
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<tr>
<td>CA BC OEL</td>
<td>Canada. British Columbia OEL</td>
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<td>CA ON OEL</td>
<td>Canada. Ontario OELs</td>
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<tr>
<td>CA QC OEL</td>
<td>Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants</td>
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<tr>
<td>Dow IHG</td>
<td>Dow Industrial Hygiene Guideline</td>
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<tr>
<td>STEL</td>
<td>15-minute occupational exposure limit</td>
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<td>STEV</td>
<td>Short-term exposure value</td>
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<tr>
<td>TWA</td>
<td>8-hr TWA</td>
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<tr>
<td>TWAEEV</td>
<td>time-weighted average exposure value</td>
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<tr>
<td>US WEEL</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
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</tbody>
</table>

Full text of other abbreviations
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HIMS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of
Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES CANADA INC. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.