

# Safety data sheet

## GEMINI SEED TREATMENT

Revision date : 2009/04/08  
Version: 3.1

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### 1. Substance/preparation and company identification

Company

BASF Canada Inc.  
100 Milverton Drive  
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666  
BASF HOTLINE: (800) 454-COPE (2673)

Substance number: 000000176420  
Molecular formula: C<sub>17</sub> H<sub>20</sub> Cl N<sub>3</sub> O + C<sub>6</sub> H<sub>12</sub> N<sub>2</sub> S<sub>4</sub>  
Chemical family: fungicide  
Synonyms: triticonazole + thiram

### 2. Hazardous ingredients

Not WHMIS controlled.

### 3. Hazard identification

Emergency overview

May be fatal if inhaled.  
HARMFUL IF SWALLOWED.  
HARMFUL IF ABSORBED THROUGH SKIN.  
KEEP OUT OF REACH OF CHILDREN.  
Do not breathe vapours/mists.  
Avoid contact with the skin, eyes and clothing.  
May produce an allergic reaction.

Potential health effects

See Product Label for additional precautionary statements.

**Irritation:**

Irritating to eyes.

**Sensitization:**

Caused skin sensitization in animal studies.

### 4. First-aid measures

**General advice:**

Remove contaminated clothing.

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**If inhaled:**

Keep patient calm, remove to fresh air, seek medical attention. Assist in breathing if necessary.

**If on skin:**

Wash affected areas thoroughly with soap and water. Consult a physician.

**If in eyes:**

Flush with copious amounts of water for at least 15 minutes. If irritation develops, seek medical attention.

**If swallowed:**

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

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### 5. Fire-fighting measures

Flash point: 94 °C (ASTM D93, closed cup)  
> 100 °C (DIN EN 22719; ISO 2719) No flash point -  
Measurement made up to the boiling point.  
Self-ignition temperature: not self-igniting

**Suitable extinguishing media:**

water fog, carbon dioxide, foam, dry extinguishing media

**Protective equipment for fire-fighting:**

Wear a self-contained breathing apparatus in confined areas or when exposed to combustion products.

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### 6. Accidental release measures

**Personal precautions:**

Avoid contact with the skin, eyes and clothing.

**Environmental precautions:**

Do not discharge into drains/surface waters/groundwater.

**Cleanup:**

Dispose of absorbed material in accordance with regulations.

For small amounts: Pick up with suitable absorbent material.

For large amounts: Dike spillage. Pump off product.

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### 7. Handling and storage

**Handling**

**General advice:**

Wear suitable gloves and eye/face protection.

**Storage**

**General advice:**

Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs.

**Temperature tolerance**

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

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### 8. Exposure controls and personal protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

**Advice on system design:**  
Ensure adequate ventilation.

#### Personal protective equipment

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

**Respiratory protection:**

Breathing protection if breathable aerosols/dust are formed. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours.

**Hand protection:**

Chemical resistant protective gloves (EN 374)

**Eye protection:**

Tightly fitting safety goggles (chemical goggles) and face shield.

**Body protection:**

Impermeable protective clothing

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### 9. Physical and chemical properties

Form:	liquid	
Odour:	odourless	
	odourless	
Odour threshold:	No data available.	
Colour:	pink	
pH value:	approx. 4.5	( 25 °C)
solidification temperature:	approx. -10 °C	
onset of boiling:	approx. 100 °C	Information applies to the solvent.
Vapour pressure:	approx. 23.3 hPa	( 20 °C) Information applies to the solvent.
Density:	1.12 g/cm <sup>3</sup>	( 25 °C)
Bulk density:		not applicable
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	279 mPa.s	
Solubility in water:		dispersible

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### 10. Stability and reactivity

**Conditions to avoid:**

No conditions known that should be avoided.  
Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage.

**Substances to avoid:**

No substances known that should be avoided.

**Decomposition products:**

No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

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**Corrosion to metals:**  
Corrosive effects to metal are not anticipated.

**Oxidizing properties:**  
Not an oxidizer.

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## 11. Toxicological information

### Acute toxicity

**Oral:**  
LD50/rat: > 2,000 mg/kg

**Inhalation:**  
LC50/rat: > 0.4 mg/l / 4 h

**Dermal:**  
LD50/rat: > 2,000 mg/kg

**Skin irritation:**  
rabbit: non-irritant (Draize test)  
  
rabbit: Slightly irritating.

**Eye irritation :**  
rabbit: Irritating. (Draize test)

**Sensitization:**  
Buehler test/guinea pig: sensitizing

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## 12. Ecological information

### Environmental fate and transport

#### **Biodegradation:**

Evaluation: Not readily biodegradable (by OECD criteria).

*Information on: Triticonazole*

*Test method: Directive 84/449/EEC, C.5, activated sludge, adapted*

*Method of analysis: CO2 formation relative to the theoretical value*

*Degree of elimination: 0 % (28 d)*

*Information on: Thiram*

*Test method: OECD Guideline 302 C*

*Degree of elimination: 0 % (28 d)*

*Evaluation: Not readily biodegradable (by OECD criteria).*

*Evaluation: Not readily biodegradable (by OECD criteria).*

*Information on: Triticonazole*

*Bioconcentration factor 72.55*

*Information on: Thiram*

### Environmental toxicity

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*Information on: Triticonazole*  
*Acute and prolonged toxicity to fish:*  
*EPA 72-1 Flow through.*  
*Rainbow trout/LC50 (96 h): > 3.6 mg/l*  
*EPA 72-1 Flow through.*  
*sunfish, bluegill/LC50 (96 h): > 8.9 mg/l*

*Information on: Thiram*  
*Acute and prolonged toxicity to fish:*  
*trout, rainbow/LC50 (96 h): 0.16 mg/l*  
*golden orfe/LC50 (96 h): 1.2 mg/l*  
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*Information on: Triticonazole*  
*Acute toxicity to aquatic invertebrates:*  
*Directive 92/69/EEC, C.2 semistatic*  
*Daphnia magna/EC50 (48 h): > 50 mg/l*

*Information on: Thiram*  
*Acute toxicity to aquatic invertebrates:*  
*Daphnia magna/LC50 (48 h): 0.21 mg/l*  
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*Information on: Triticonazole*  
*Toxicity to aquatic plants:*  
*other swollen duckweed/EC50 (14 d): 1.1 mg/l*  
*See user defined text. Algae/EC50 (5 d): > 2.6 mg/l*  
*OECD Guideline 201 green algae/EC50 (96 h): > 1 mg/l*

*Information on: Thiram*  
*Toxicity to aquatic plants:*  
*green algae/EC50 (96 h): 1 mg/l*  
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### **Other ecotoxicological advice:**

Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

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## 13. Disposal considerations

### **Waste disposal of substance:**

See product label for disposal and recycling instructions.

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## 14. Transport information

Reference Bill of Lading

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## 15. Regulatory information

### **Federal Regulations**

#### **Registration status:**

DSL, CA released / exempt

WHMIS does not apply to this product.

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**THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.**

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### 16. Other information

**Refer to product label for EPA registration number.**

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**Local contact information**  
BASF Canada Product Safety  
prod\_reg@basf.com

END OF DATA SHEET