

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 1/7
(30252198/SDS_CPA_CA/EN)

1. Product and Company Identification

Use: crop protection product, fungicide

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)

Molecular formula: C₁₇ H₂₀ Cl N₃ O + C₆ H₁₂ N₂ S₄
Chemical family: fungicide
27826
Synonyms: triticonazole + thiram

2. Hazards Identification

Emergency overview

CAUTION:
POISON.
Contains 1,2-benzisothiazolin-3-one as a preservative.
Eye irritant.
Potential skin sensitizer.
KEEP OUT OF REACH OF CHILDREN.
Avoid contact with the skin, eyes and clothing.
MAY CAUSE EYE IRRITATION.
Potential sensitizer.
May be fatal if inhaled.
HARMFUL IF ABSORBED THROUGH SKIN.
HARMFUL IF SWALLOWED.
Avoid inhalation of dusts.
Avoid contact with eyes.

State of matter: liquid
Colour: pink
Odour: odourless
Odour: odourless

Potential health effects

Acute toxicity:

Slightly toxic after single ingestion. Slightly toxic after short-term skin contact. Moderately toxic after short-term inhalation.

Irritation / corrosion:

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 2/7
(30252198/SDS_CPA_CA/EN)

Irritating to eyes.

Sensitization:

Caused skin sensitization in animal studies.

Medical conditions aggravated by overexposure:

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

Potential environmental effects

Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

Terrestrial toxicity:

Acutely toxic to terrestrial organisms. Acutely very toxic to honeybees.

Degradation / environmental fate:

Not readily biodegradable (by OECD criteria).

3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

General advice:

Remove contaminated clothing.

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.

5. Fire-Fighting Measures

Flash point: 94 °C (ASTM D93, closed cup)
Self-ignition temperature: not self-igniting

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons, Sulphur dioxide,
If product is heated above decomposition temperature, toxic vapours will be released.

Protective equipment for fire-fighting:

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

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 3/7
(30252198/SDS_CPA_CA/EN)

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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.

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.

Storage incompatibility:

General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

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.

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

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, Protective glove selection must be based on the user's assessment of the workplace hazards.

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 4/7
(30252198/SDS_CPA_CA/EN)

Eye protection:

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

Body protection:

Impermeable protective clothing

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

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 ³	(25 °C)
Viscosity, dynamic:	279 mPa.s	
Solubility in water:		dispersible

10. Stability and Reactivity

Conditions to avoid:

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. No conditions known that should be avoided.

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.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Not an oxidizer.

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 5/7
(30252198/SDS_CPA_CA/EN)

Inhalation:

Type of value: LC50
Species: rat
Value: > 0.4 mg/l
Exposure time: 4 h

Dermal:

Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Irritation / corrosion

Skin:

Species: rabbit
Result: non-irritant
Method: Draize test

Species: rabbit
Result: Slightly irritating.

Eye:

Species: rabbit
Result: Irritating.
Method: Draize test

Sensitization:

Buehler test
Species: guinea pig
Result: sensitizing

Genetic toxicity

Information on: Triticonazole
No mutagenic effect was found in various tests with microorganisms and mammalian cell culture.

Information on: Thiram
Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity

Information on: Triticonazole
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: Thiram
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: Triticonazole
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Information on: Thiram
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Development:

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 6/7
(30252198/SDS_CPA_CA/EN)

Information on: Triticonazole

Causes developmental effects in animals at high, maternally toxic doses.

Information on: Thiram

Causes developmental effects in animals at high, maternally toxic doses.

12. Ecological Information

Fish

Information on: Triticonazole

Acute:

EPA 72-1 Flow through.

Oncorhynchus mykiss/LC50 (96 h): > 3.6 mg/l

EPA 72-1 Flow through.

Lepomis macrochirus/LC50 (96 h): > 8.9 mg/l

Information on: Thiram

Acute:

Salmo gairdneri, syn. O. mykiss/LC50 (96 h): 0.16 mg/l

Leuciscus idus/LC50 (96 h): 1.2 mg/l

Aquatic invertebrates

Information on: Triticonazole

Acute:

OECD Guideline 202, part 1 static

Daphnia magna/EC50 (48 h): 9 mg/l

Information on: Thiram

Acute:

Daphnia magna/LC50 (48 h): 0.21 mg/l

Aquatic plants

Information on: Triticonazole

Toxicity to aquatic plants:

other swollen duckweed/EC50 (14 d): 1.1 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

Degradability / Persistence

Biological / Abiological Degradation

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).

Other adverse effects:

Safety Data Sheet

GEMINI SEED TREATMENT

Revision date : 2011/04/12
Version: 3.2

Page: 7/7
(30252198/SDS_CPA_CA/EN)

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.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released; restriction on quantity / not listed

Crop Protection DSL, CA released / exempt

WHMIS does not apply to this product.

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.

16. Other Information

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:

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MSDS Prepared on: 2011/04/12

END OF DATA SHEET