# A LIQUID FLOWABLE FOR CONTROL OF VARIOUS SEED AND SOIL-BORNE DISEASES IN WHEAT, BARLEY AND OATS

# GEMINI SEED TREATMENT FUNGICIDE

# **CONTAINS TRITICONAZOLE AND THIRAM**

**AGRICULTURAL** 

**GUARANTEE:** 

TRITICONAZOLE .....1.25%

THIRAM ..... 12.5%

Contains 1,2-BENZISOTHIAZOLIN-3-ONE at 0.02% as a preservative

**CAUTION** 



**POISON** 

EYE IRRITANT AND POTENTIAL SKIN SENSITIZER

READ THE LABEL AND BOOKLET BEFORE USING

REGISTRATION NO. 27826 PEST CONTROL PRODUCTS ACT

Do not exceed a maximum 20,000 kg seed treated per person per day.

If CHARTER Seed Treatment and GEMINI Seed Treatment are to be used on the same day, the sum of seed treated using CHARTER Seed Treatment and GEMINI Seed Treatment must not exceed 20,000 kg in total.

BASF Canada Inc. 100 Milverton Drive 5th Floor Mississauga, Ontario L5R 4H1 1-877-371-2273

IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS PRODUCT, CALL DAY OR NIGHT 1-800-454-2673

NET CONTENTS: 0.1 L

## **PRECAUTIONS**

KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN, EYES OR CLOTHING. May irritate eyes. Avoid contact with eyes. Potential skin sensitizer. May be fatal if inhaled. Harmful if swallowed or absorbed through the skin. Discontinue if an allergic reaction occurs. Avoid inhaling or breathing dust. Wear chemical resistant gloves and chemical resistant coveralls made of laminated, non-woven or composite fabric when handling **GEMINI Seed Treatment Fungicide** and when treating seed or while augering or handling **GEMINI Seed Treatment Fungicide** and when treating seed or while augering or handling treated seed, work in a well ventilated area. Wear a NIOSH approved dust filtering respirator during cleanup activities, when handling **GEMINI Seed Treatment Fungicide** or if working area is not well ventilated. Wash hands and exposed skin thoroughly after handling the concentrate and after application.

**NOTE:** "If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at www.croplife.ca."

## **ENVIRONMENTAL PRECAUTIONS**

Ensure proper soil incorporation of the seeds. **DO NOT** feed treated seed to, or otherwise expose, wildlife or domestic birds. If treated seed is spilled outdoors or in areas accessible to birds, promptly clean up or bury to prevent ingestion. Ensure proper disposal of any surplus treated seed not intended for later planting. **DO NOT** contaminate domestic or irrigation water supplies, lakes, streams, ponds or any body of water with the chemical, used containers, treated seed or bags, which have held treated seed. **DO NOT** contaminate water by cleaning of equipment or disposal of wastes. Unused or leftover treated seed should not be stored where there is a chance of it becoming mixed with untreated seed.

# **FIRST AID**

**If in eyes:** Hold eye 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 eye. Call a poison control centre or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

## TOXICOLOGICAL INFORMATION

No specific antidote is available. Treat symptomatically. Consumption of alcoholic beverages increases the toxic effects of thiram.

# STORAGE CONDITIONS

Store in original container with the lid tightly closed.

Store in an area that is out of reach of children and animals, away from food, feed stuffs, fertilizers and seed.

Protect from frost and freezing.

## DISPOSAL

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for any further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

# **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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NET CONTENTS: 0.1 L - 1000 L

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## TOXICOLOGICAL INFORMATION

No specific antidote is available. Treat symptomatically. Consumption of alcoholic beverages increases the toxic effects of thiram.

## **GENERAL INFORMATION**

**GEMINI Seed Treatment Fungicide** is a water-based ready-to-use seed treatment formulation containing triticonazole and thiram. **GEMINI Seed Treatment Fungicide** controls or suppresses certain seed- and soil-borne diseases in wheat, barley, and oats.

## **DIRECTIONS FOR USE**

**GEMINI Seed Treatment Fungicide** is a ready-to-use seed treatment formulation for use in commercial seed treatment plants and for use in on-farm standard gravity flow or mist type treatment machines. **GEMINI Seed Treatment Fungicide** can also be used in "On the Go" air seeder treatments systems.

When used at the recommended rate of 360 mL/100 kg seed, no additional dyes or dilutions with water are needed unless recommended by the manufacturer of the seed treatment application equipment/machines. Please consult the seed treatment application equipment manufacturer in question for further directions.

Agitate or shake well prior to usage.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

#### **DISEASES CONTROLLED**

**GEMINI Seed Treatment Fungicide** will generally increase emergence and plant stands by controlling seedling blights caused by seed- and/or soil-borne root rots pathogens such as *Cochliobolus sativus, Fusarium sp.* and *Phythium sp.* 

**GEMINI Seed Treatment Fungicide** will suppress early season infections caused by *Fusarium* Crown and Root Rot and *Cochliobolus* (Common) Root Rot.

| CROP   | USE RATE/<br>100 kg seed | DISEASES CONTROLLED  | DISEASES SUPPRESSED                    |
|--------|--------------------------|--|--|
| Wheat  | 360 mL                   | Seed Rot caused by Fusarium sp.                                    | Fusarium Crown and Root Rot            |
|        |                          | Seedling Blights caused by seed and soil-borne Fusarium sp.        |  |
|        |                          | Loose Smut   | Cochliobolus (Common) Root Rot         |
|        |                          | Common Bunt  |  |
|        |                          | Pythium Damping Off  | Seedling Blight caused by Cochliobolus |
| Barley | 360 mL                   | Seed Rot caused by Fusarium sp.                                    | Fusarium Crown and Root Rot            |
|        |                          | Seedling Blights caused by seed and soil-borne <i>Fusarium sp.</i> | Cochliobolus (Common) Root Rot         |
|        |                          | True Loose Smut  | Seedling Blight caused by Cochliobolus |
|        |                          | Covered Smut   |  |
|        |                          | False Loose Smut   |  |
|        |                          | Pythium Damping Off  |  |
| Oats   | 360 mL                   | Loose Smut   |  |
|        |                          | Covered Smut   |  |

# STORAGE CONDITIONS

Store in original container with the lid tightly closed.

Store in an area that is out of reach of children and animals, away from food, feed stuffs, fertilizers and seed.

Protect from frost and freezing.

## DISPOSAL

# For Recyclable Containers

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for any further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

# For Non-Returnable Containers

- 1. Triple or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
- 3. Make the empty container unsuitable for further use.
- 4. Dispose of the container in accordance with provincial requirements.
- 5. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

#### For Returnable-Refillable Containers

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

#### NOTICE TO USER

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#### RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, please note that **GEMINI Seed Treatment Fungicide** contains Group 3 and Group M³ Fungicides. Any fungal population may contain individuals naturally resistant to **GEMINI Seed Treatment Fungicide**, and other Group 3 and Group M³ fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Where possible rotate the use of **GEMINI Seed Treatment Fungicide** or other Group 3 and Group M<sup>3</sup> fungicides with different groups that control the same pathogens.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation, and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development. If disease continues to
  progress after treatment with this product, do not increase the use rate. Discontinue use
  of this product, and switch to another fungicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and disease problems in your area.
- For further information and to report suspected resistance, contact BASF at 1-877-371-2273.

#### **USE RESTRICTIONS**

- Do not use treated seed for food, feed or oil processing.
- Do not store **GEMINI Seed Treatment Fungicide** near feed or foodstuffs.
- Do not contaminate feed or foodstuffs.

Any seed treated with this product must be either thoroughly stained with a conspicuous color or coated with a material that renders it conspicuous. **GEMINI Seed Treatment** is sold only to individuals who can comply with these requirements. Regulations pertaining to the coloration of treated seed enforced under the "Seeds Act" must be strictly adhered to when using this product.

# **SEED LABELLING**

## TREATED SEED MUST BE LABELLED AS FOLLOWS:

"This seed has been treated with **GEMINI Seed Treatment Fungicide** containing triticonazole and thiram. DO NOT use for food, feed or oil processing". The date of treatment must also be included.

DO NOT store treated seed for more than 18 months. Treated seed stored for periods in excess of 18 months may decrease in germination at a faster rate than untreated seed. Treated seed stored for more than 6 months should be tested for germination before planting.

Thoroughly clean auger after handling treated seed before using same auger for handling commercial or feed grains.

Leftover treated seed should not be stored where there is a chance of it becoming mixed with untreated seed.

Store treated seed in cool, dry conditions.

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This label transcript service is offered by the Pest Management Regulatory Agency to provide efficient searching for label information. This service and this information do not replace the official hard-copy label. The PMRA does not provide any guarantee or assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.