IMPORTANT: STIR WELL BEFORE USING

GROUP	7 M	FUNGICIDE

Vitaflo®-280 Fungicide

SUSPENSION

Fungicide seed protectant for use on wheat, barley, oats, rye, triticale, flax, corn, dry common beans, snap common beans, peas, lentils and soybeans. Contains carbathiin and thiram for the control of smuts, common bunt, dwarf bunt, leaf stripe, seed rots and seedling blights, and suppression of root rot.

AGRICULTURAL

CAUTION: SKIN IRRITANT
WARNING: EYE IRRITANT

GUARANTEE: Carbathiin…. 15.59%
Thiram…….. 13.25%

REGISTRATION NO: 11423, PEST CONTROL PRODUCTS ACT

KEEP OUT OF REACH OF CHILDREN

READ LABEL BEFORE USING

MADE IN CANADA

Net Contents:
10 L, 55 L, 100 L, 200 L, 1000 L

Chemtura

Manufactured by:
Chemtura Canada Co./Cie
25 Erb Street
Elmira, Ontario N3B 3A3

24 HOUR EMERGENCY PHONE 1-866-744-3060
GROWER INFORMATION 1-800-350-1745

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GENERAL INFORMATION:

VITAFLO-280 Fungicide is a combination of a systemic fungicide (carbathiin) and a contact fungicide (thiram) to control the following diseases:

BARLEY: false loose, covered and true loose smut and leaf stripe, provides suppression of net blotch. Controls seed rot and seedling blight caused by *Pythium spp.* and *Penicillium spp.* Provides control of seed rot, seedling blight and suppression of root rot caused by *Fusarium spp.* and *Cochliobolus sativus.* Also controls seed rot due to storage fungi *Aspergillus spp.* and *Alternaria.*

WHEAT: loose smut, stinking smut or common bunt and seed-borne dwarf bunt. Controls seed rot and seedling blight caused by *Pythium spp.,* and *Penicillium spp.* Provides control of seed rot, seedling blight and suppression of root rot caused by *Fusarium spp.* and *Cochliobolus sativus.* Also controls seed rot due to storage fungi *Aspergillus spp.* and *Alternaria.* Controls seed-borne *Septoria.*

OATS: loose and covered smut. Controls seed rot and seedling blight caused by *Pythium spp.* and *Penicillium spp.* Provides control of seed rot, seedling blight caused by *Fusarium spp.* and suppression of root rot caused by *Cochliobolus sativus.* Also controls seed rot due to storage fungi *Aspergillus spp.* and *Alternaria.*

RYE: damping-off, seedling blight and seed decay, stem smut. Controls seed rot and seedling blight caused by *Pythium spp.,* and *Penicillium spp.* Provides control of seed rot, seedling blight and suppression of root rot caused by *Fusarium spp.* and *Cochliobolus sativus.* Also controls seed rot due to storage fungi *Aspergillus spp.* and *Alternaria.*

TRITICALE: damping-off, seedling blight and seed decay.

FLAX AND EDIBLE OIL FLAX INCLUDING LOW LINOLENIC ACID VARIETIES: seed rot, root rot and seedling blight caused by *Rhizoctonia solani* and *Fusarium.*

CORN: damping-off and seed decay.

DRY COMMON BEANS: early season seed rot, root rot and seedling blight caused by *Rhizoctonia solani.* Also controls seedborne Anthracnose (*Colletotrichum lindemuthianum*). Will not protect from wind borne spores. This product will not control Anthracnose if seed is severely infected.

SNAP COMMON BEANS: early season seed rot, root rot and seedling blight caused by *Rhizoctonia solani.* Also controls seedborne Anthracnose (*Colletotrichum lindemuthianum*). Will not protect from wind borne spores. This product will not control Anthracnose if seed is severely infected.

PEAS: seed rot and seedling blight caused by *Mycosphaerella* (Ascochyta), *Fusarium spp.* and *Rhizoctonia solani* and *Pythium.*

LENTILS: control of seed rot, early season root rot and seedling blight caused by *Botrytis cinerea, Fusarium, Pythium spp.* and *Rhizoctonia solani.*

SOYBEANS: seed rot and seedling blight caused by *Phomopsis spp., Rhizoctonia solani* and *Fusarium spp.*

VITAFLO-280 Fungicide will generally increase emergence and plant stands of wheat, oats, barley and peas by reducing seed-borne seed rots and seedling blights.

VITAFLO-280 Fungicide has no vapour action. Thorough seed coverage is required.

DIRECTIONS FOR USE:

VITAFLO -280 Fungicide is designed to be used undiluted in commercial seed treaters. Undiluted **VITAFLO-280 Fungicide** can be used at temperatures down to -30°C. Treater calibration will be affected by temperature and should be rechecked on a regular basis.

Centrifugal pumps are not recommended for pumping **VITAFLO-280 Fungicide**. Use of a Vitaflo Pump is recommended. Contact your **VITAFLO-280 Fungicide** dealer or Chemtura Canada Co. (Elmira, Ontario) for complete information on the Vitaflo Pump.

Lines with a minimum inside diameter of 2 cm are recommended for pumping **Vitaflo-280 Fungicide**. Polypropylene lines are preferred.

If containers of **VITAFLO-280 Fungicide** have been in storage for several months, some settling may occur and require agitation. 10L containers can be shaken and drums (200L) turned upside down for ½ hour and then rolled back and forth several times. This will re-suspend the settled material prior to application.

<u>200L Returnable Drums and 1000L Tote Tanks</u>

Users of **VITAFLO-280 Fungicide** purchased in returnable drums and/or 1000L tote tanks should contact their

Vitaflo-280 Fungicide dealer or Chemtura Canada Co./Cie, Elmira, Ontario for information on connecting and transferring the product to a storage tank and washing of returnable containers.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that **VITAFLO-280 Fungicide** contains a Group 7 and a Group M fungicide. Any fungal population may contain individuals naturally resistant to **VITAFLO-280 Fungicide** and other Group 7 or M 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 **VITAFLO-280 Fungicide** or other Group 7 or M fungicides with different groups that control the same pathogens.

• Use tank mixtures with fungicide from a different group when such use is permitted.

• 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 target site 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 pathogens.

• For further information and to report suspected resistance, contact Chemtura Canada Co./Cie at (1-800-350-1745) or at www.chemtura.com.

RATE OF APPLICATION:

	Treatment Rate for Undiluted **VITAFLO-280 Fungicide** in mL per 100 kg seed	
Barley	230-330	
Wheat	230-330	
Rye	230-330	
(The 230 mL rate will give partial control of true loose smut in wheat and barley and stem smut in rye. Use 330 mL rate for the control of seed borne Septoria on wheat and seed rot and seedling blight caused by Fusarium spp., Cochliobolus sativus, Pythium spp., Penicillium spp., Aspergillus spp, Alternaria; also suppression of root rot caused by Cochliobolus sativus on cereals (wheat, barley, oats and rye.)		
Oats	330	
Triticale	200	
Flax including edible oil flax (solin)	525	
Corn (field & sweet)	280	
Peas	260	for control of *Rhizoctonia solani* and *Fusarium spp.*
	330	for control of *Mycosphaerella pinodes* (Ascochyta)
Lentils	330	
Soybeans	260	
Dry common beans	260	
Snap common beans	260	

CORN HEAD SMUT**:**

For control of seed-borne head smut. Treat corn at 560 to 750 mL of UNDILUTED **VITAFLO-280 Fungicide** per 100 kg of seed. Avoid planting corn under cold, wet conditions. Stress conditions during the first few weeks after planting may increase the incidence of head smut. Will not control soil-borne head smut.

EDIBLE OIL FLAX (low linolenic acid varieties)**:**

Care should be taken to prevent damaged/split seeds when combining the seed crop to maximize the benefit from this treatment.

DWARF BUNT OF WINTER WHEAT:
Dwarf Bunt is caused primarily by soil-borne teliospores of *Tilletia controversa.* The incidence of disease can be significantly reduced through a combination of cultural practises and seed treatment. Fields known to be infested with Dwarf Bunt should be planted later and deeper (i.e. seeding depth 3-4 cm) as the teliospores are most active in the warmer top 2 cm of soil. Plant only seed treated with **VITAFLO-280 Fungicide** at 330 mL/100 kg seed in these fields.

USE RESTRICTIONS:

1. DO NOT use treated seed for food, feed or oil processing.
2. Do not contaminate food, feed domestic or irrigation water supplies, lakes, streams and ponds.
3. Do not store **VITAFLO-280 Fungicide** in direct sunlight. Do not store **VITAFLO-280 Fungicide** at temperatures above 35°C.
4. **VITAFLO-280 Fungicide** will not freeze solid even in extreme winter temperatures.
5. Stir well before using..
6. Mixing of **VITAFLO-280 Fungicide** with other seed treatment products may result in gelling or sedimentation. Seed treater lines and reservoirs should therefore be thoroughly cleaned before changing over to **VITAFLO-280 Fungicide**.
7. For cleaning lines and reservoirs, flush with water containing a detergent.
8. Seeding rate should be checked during planting.
9. Do not graze or feed livestock on treated areas for 4 weeks after planting except for the following crops:
   Soybeans – Do not graze or feed livestock on forage and hay on treated areas.
   Dry Beans – Do not graze or feed on bean forage for 60 days after planting.
   Barley, Oats, Wheat – Do not graze or feed on treated area for six weeks after planting.
10. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows:
    "This seed has been treated with carbathiin and thiram. Wear a long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. DO NOT use treated seed for food, feed or oil processing. Store away from food and feed. Baggers, sowers and workers involved in handling treated seeds must wear a long-sleeved shirt and long pants, chemical-resistant gloves, shoes and socks, and a dust mask or appropriate respirator to minimize exposure to dust from treated seeds."
11. **VITAFLO-280 Fungicide** treated wheat, oats, barley, rye, triticale and flax seed may be stored for up to 18 months without reduction in germination due to the treatment chemical.
12. **VITAFLO-280 Fungicide** treated corn seed may be stored for up to one year without reduction in germination due to the treatment chemical.
13. Do not store treated snap common bean, dry common bean, peas, lentils or soybean seed.

PRECAUTIONS:

1. **KEEP OUT OF REACH OF CHILDREN.**
2. **Warning: Eye Irritant.** DO NOT get into eyes. The operator is advised to wear goggles to protect eyes from possible splashing. In case of contact with eyes, flush IMMEDIATELY with running water and seek medical attention.
3. Harmful if swallowed, inhaled or absorbed through the skin. Do not swallow, do not get on skin or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash separately before reuse.
4. All workers involved in treating seeds, clean-up, repair and maintenance of seed treatment equipment must wear a long-sleeved shirt and long pants, chemical-resistant gloves, shoes and socks. Baggers, sowers and workers involved in handling treated seeds must wear a long-sleeved shirt and long pants, chemical-resistant gloves, shoes and socks, and a dust mask or appropriate respirator to minimize exposure to dust from treated seeds.
5. Because of possible unpleasant side effects, alcoholic beverages should be avoided for 24 hours before or after working with **VITAFLO-280 Fungicide** or treated seed.
6. 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.

FIRST AID:
IF SWALLOWED:
Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
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 immediately 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 immediately 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.

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

TOXICOLOGICAL INFORMATION: This product contains petroleum distillate. Vomiting may cause aspiration pneumonia. Treat symptomatically.

ENVIRONMENTAL HAZARDS:
The product contains petroleum distillate, which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Also, in cleaning of equipment or disposing of wastes, do not contaminate water used for human or animal consumption or by wildlife and aquatic life or for irrigation purposes.
Treated seed may be hazardous to birds and mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

STORAGE AND DISPOSAL:
STORAGE:
Store product in original container or in storage tank, away from other pesticides, fertilizer, food or feed. Keep container closed.
DISPOSAL:
1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instruction 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 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.

Returnable Drums and 1000L Tote Tanks:
1. Users of **VITAFLO-280 Fungicide** purchased in returnable drums/totetanks should contact Chemtura Canada Co./Cie, Elmira, Ontario, for information on washing and return of the drum/tote tanks.
2. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer or 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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