

IMPORTANT: STIR WELL BEFORE USING

GROUP

7 M

FUNGICIDE

Vitaflo[®]-280 Fungicide (undyed)

SUSPENSION

Fungicide seed protectant for use on wheat, barley, oats, rye, triticale, flax, corn, dry common beans, snap common beans, peas, lentils and soybeans. For use on canola seed that is destined for export only. Contains carbathiin and thiram for the control of smuts, common bunt, dwarf bunt, seed rots and seedling blights.

ALL SEED TREATED WITH THIS PRODUCT MUST BE CONSPICUOUSLY COLOURED AT THE TIME OF TREATMENT

AGRICULTURAL

CAUTION: SKIN IRRITANT

WARNING: EYE IRRITANT

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

REGISTRATION No.: 22473, PEST CONTROL PRODUCTS ACT

KEEP OUT OF REACH OF CHILDREN

READ LABEL BEFORE USING

Made in Canada

Special Use Restrictions: This product contains no colourant. An appropriate colourant must be added when the product is applied to seed. VITAFLO-280 Fungicide (undyed) is sold only to commercial seed treaters who can comply with these requirements. Regulations pertaining to colouration of treated seed enforced under the 'Seeds Act' must be strictly adhered to when using this product.



Net Contents: 10L/100L/200L/1000L

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

002/

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

GENERAL INFORMATION:

VITAFLO®-280 Fungicide (undyed) 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, provides suppression of net blotch

WHEAT: loose smut, stinking smut or common bunt and seed-borne dwarf bunt

OATS: loose and covered smut

RYE: damping-off, seedling blight and seed decay, stem smut

TRITICALE: damping-off, seedling blight and seed decay

FLAX: damping-off and seed decay

EDIBLE OIL FLAX (low linolenic acid varieties): seed rots and seedling blights

CORN: damping-off and seed decay

DRY COMMON BEANS: damping-off and seed decay

SNAP COMMON BEANS: damping-off and seed decay

PEAS: control of seedling blight caused by *Pythium* and *Rhizoctonia*

LENTILS: control of seedling blight caused by *Pythium* and *Fusarium*

SOYBEANS: damping-off and seed decay

CANOLA (EXPORT ONLY): protection against damping-off, seed decay, *Rhizoctonia solani*, *Pythium* seed and seedling decay, *Phoma* (blackleg) and *Alternaria* blight.

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

DIRECTIONS FOR USE:

VITAFLO-280 Fungicide (undyed) is designed to be used undiluted in commercial seed treaters. Undiluted VITAFLO-280 Fungicide (undyed) 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 (undyed). Use of a Vitaflo Pump is recommended. Contact your Vitaflo-280 dealer or Chemtura Canada Co./Cie (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 (undyed). Polypropylene lines are preferred.

Addition of Seed Colourant:

NOTE: This product contains no colourant. All seed treated with this product must be conspicuously coloured at the time of treatment. Pro-Ized Seed Colourant available from Bayer CropScience Inc. can be used with VITAFLO-280 Fungicide (undyed) at the time of treatment.

Add 1000-3000 mL of Pro-Ized Seed Colourant per 20L of VITAFLO-280 Fungicide (undyed). If other seed colourants are preferred, contact Chemtura Canada for information on compatibility and specific mixing instructions.

1000L Tote Tanks:

Users of VITAFLO-280 Fungicide (undyed) purchased in 1000L tote tanks should contact their VITAFLO-280 Fungicide (undyed) 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 (undyed) contains a Group 7 and a Group M fungicide. Any fungal population may contain individuals naturally resistant to Vitaflo-280 Fungicide (undyed) 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 (undyed) 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:

Note: Application rates will need to be adjusted to account for the additional volume of colourant. If using Pro-Ized Colourant, application rates must be increased by 5% - 15% for addition of 1000 mL – 3000 mL of colourant respectively. Contact Chemtura Canada Co./Cie for information on application rates when colourants other than Pro-Ized Colourants are to be used.

**Treatment Rate for Undiluted
VITAFLO-280 Fungicide (undyed)
in mL per 100 kg seed**

Barley	230-330
Wheat	230-330
Rye	230-330
<i>(The 230 mL rate will give partial control of true loose smut in wheat and barley and stem smut in rye. Use the 330 mL rate for control of true loose smut, seedborne dwarf bunt and stem smut.)</i>	
Oats	330
Triticale	200
Flax including edible oil flax	525
Corn (field & sweet)	280
Peas	330
Lentils	330
Soybeans	260
Dry common beans	260
Snap common beans	260
Canola (export only)	600 (or consult with the importer for acceptable rates)

CORN HEAD SMUT:

For control of seed-borne head smut. Treat corn at 560 to 750 mL of UNDILUTED VITAFLO-280 Fungicide (undyed) 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 (undyed) 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 (undyed) in direct sunlight. Do not store VITAFLO-280 Fungicide (undyed) at temperatures above 35°C.
4. VITAFLO-280 Fungicide (undyed) will not freeze solid even in extreme winter temperatures.
5. Stir well before using..
6. Mixing of VITAFLO-280 Fungicide (undyed) 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 (undyed).
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, to minimize exposure to dust from treated seeds."
11. VITAFLO-280 Fungicide (undyed) 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 (undyed) 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.
14. Canola seed destined for export: All bags containing treated canola seed must be labelled as follows: "For export only. This seed has been treated with VITAFLO-280 Fungicide (undyed) Liquid Seed Protectant - contains carbathiin and thiram: do not use for food, feed or oil processing. Store away from feeds and other foodstuffs."

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, 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 (undyed) 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.

TOXICOLOGICAL INFORMATION:

This product contains petroleum distillate. Vomiting may cause aspiration pneumonia. Treat symptomatically. Alcohol intake within 24 hours of contact with thiram may cause flushing, sweating, headaches and nausea. If reaction with alcohol occurs, treat as disulfiram-alcohol reaction.

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.

ENVIRONMENTAL HAZARDS:

The product contains a petroleum distillate, which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct 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 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 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 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 (undyed) 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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