

GROUP	3	4	7	FUNGICIDES
-------	---	---	---	------------

VIBRANCE™ XL® Seed Treatment

FUNGICIDE

AGRICULTURAL

SUSPENSION

A seed treatment for the control of certain seed- and soil-borne diseases of cereal crops.

GUARANTEE:

Difenoconazole 66.2 g/L
Metalaxyl-M (and S-isomer) 16.5 g/L
Sedaxane 13.8 g/L

Contains 1,2-benzisothiazolin-3-one at 0.019% as a preservative.

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

REGISTRATION NUMBER: **30437**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **1 L to 1050 L**

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario
N1G 4Z3
Telephone: 1-877-964-3682

Special Use Restrictions:

All seed treated with this product must be conspicuously coloured at the time of treatment.

No open transfer is permitted for commercial seed treatment of barley, wheat, oats, rye and triticale.

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.

FIRST AID

IF POISONING IS SUSPECTED, IMMEDIATELY contact a physician or a poison control centre. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. Do not induce vomiting unless told to do so by a 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 eyes 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.

TOXICOLOGICAL INFORMATION

Treat symptomatically. Contains petroleum distillate – vomiting may cause aspiration pneumonia.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND DOMESTIC ANIMALS. Wash hands and face after handling and before eating, using tobacco (including smoking), applying cosmetics, or using the toilet. Avoid contamination of feed and foodstuffs.

VIBRANCE™ XL® Seed Treatment is for use on-farm and for closed transfer commercial seed treatment (in facilities or with mobile treaters) only on barley, wheat, oats, rye, and triticale. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.

Treat seed in a well-ventilated area.

In commercial seed treatment facilities:

Cleaners must wear chemical-resistant coveralls over a long-sleeved shirt and long pants,

chemical-resistant gloves, work boots and socks. Treaters, baggers, sewers, stackers, forklift operators and others must wear cotton coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, work boots and socks. Wear a suitable dust mask when bagging or sewing bags of treated seed or when transferring seed to a storage bin. For good hygiene practice, it is also recommended to wear a NIOSH approved dust mask during all other job activities.

For on-farm treating and planting:

When treating seeds, handling and planting treated seed, workers should wear cotton coveralls or long sleeved shirt and long pants, chemical-resistant gloves, and work boots. Wear a suitable dust mask when bagging or sewing bags of treated seed or when transferring seed to a storage bin. For good hygiene practice, it is also recommended to wear a NIOSH approved dust mask during all other job activities.

NOTE: In case of accident, take the product label to the emergency facility or physician.

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 website at www.croplife.ca.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms.

Treated seed is toxic to birds and small wild mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

USE RESTRICTIONS

1. Treated seed must not be used for food, feed or oil processing.
2. Store away from food and feed.
3. For seed treated with VIBRANCE XL Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting.
4. Do not plant any crop other than cereals within 60 days to fields in which seeds treated with VIBRANCE XL Seed Treatment were planted.
5. All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows: **“This seed has been treated with difenoconazole, metalaxyl-M (and S-isomer), and sedaxane fungicides. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed. Do not graze or feed livestock on seeded area for 45 days after planting. Do not use for food, feed or oil processing. Store away from food and feed.”**

DECONTAMINATION AND DISPOSAL

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.

CONTAINER 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 further use.

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

For Returnable Containers:

Do not reuse this container for any purpose. For disposal, the empty container may be returned to the point of purchase (distributor/dealer).

For 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.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)***

VIBRANCE™ and XL® are trademarks of a Syngenta Group Company.

GROUP	3	4	7	FUNGICIDES
-------	---	---	---	------------

VIBRANCE™ XL® Seed Treatment

FUNGICIDE

AGRICULTURAL

SUSPENSION

A seed treatment for the control of certain seed- and soil-borne diseases of cereal crops.

GUARANTEE:

Difenoconazole	66.2 g/L
Metalaxyl-M (and S-isomer)	16.5 g/L
Sedaxane	13.8 g/L

Contains 1,2-benzisothiazolin-3-one at 0.019% as a preservative.

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

REGISTRATION NUMBER: **30437**
PEST CONTROL PRODUCTS ACT

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario
N1G 4Z3
Telephone: 1-877-964-3682

Special Use Restrictions:

All seed treated with this product must be conspicuously coloured at the time of treatment.

No open transfer is permitted for commercial seed treatment of barley, wheat, oats, rye and triticale.

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.

FIRST AID

IF POISONING IS SUSPECTED, IMMEDIATELY contact a physician or a poison control centre. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. Do not induce vomiting unless told to do so by a 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 eyes 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.

TOXICOLOGICAL INFORMATION

Treat symptomatically. Contains petroleum distillate – vomiting may cause aspiration pneumonia.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND DOMESTIC ANIMALS. Wash hands and face after handling and before eating, using tobacco (including smoking), applying cosmetics, or using the toilet. Avoid contamination of feed and foodstuffs.

VIBRANCE™ XL® Seed Treatment is for use on-farm and for closed transfer commercial seed treatment (in facilities or with mobile treaters) only on barley, wheat, oats, rye, and triticale. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.

Treat seed in a well-ventilated area.

In commercial seed treatment facilities:

Cleaners must wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, work boots and socks. Treaters, baggers, sewers, stackers, forklift operators and others must wear cotton coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, work boots and socks. Wear a suitable dust mask when bagging or

sewing bags of treated seed or when transferring seed to a storage bin. For good hygiene practice, it is also recommended to wear a NIOSH approved dust mask during all other job activities.

For on-farm treating and planting:

When treating seeds, handling and planting treated seed, workers should wear cotton coveralls or long sleeved shirt and long pants, chemical-resistant gloves, and work boots. Wear a suitable dust mask when bagging or sewing bags of treated seed or when transferring seed to a storage bin. For good hygiene practice, it is also recommended to wear a NIOSH approved dust mask during all other job activities.

NOTE: In case of accident, take the product label to the emergency facility or physician.

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 website at www.croplife.ca.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms.

Treated seed is toxic to birds and small wild mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

USE RESTRICTIONS

6. Treated seed must not be used for food, feed or oil processing.
7. Store away from food and feed.
8. For seed treated with VIBRANCE XL Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting.
9. Do not plant any crop other than cereals within 60 days to fields in which seeds treated with VIBRANCE XL Seed Treatment were planted.
10. All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows: **"This seed has been treated with difenoconazole, metalaxyl-M (and S-isomer), and sedaxane fungicides. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed. Do not graze or feed livestock on seeded area for 45 days after planting. Do not use for food, feed or oil processing. Store away from food and feed."**

DECONTAMINATION AND DISPOSAL

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.

CONTAINER 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:

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

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

For Returnable Containers:

Do not reuse this container for any purpose. For disposal, the empty container may be returned to the point of purchase (distributor/dealer).

For 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.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)***

GENERAL INFORMATION

VIBRANCE XL Seed Treatment is a combination of the fungicides difenoconazole, metalaxyl-M and S-isomer and sedaxane, which control or suppress certain seed- and soil-borne diseases of cereal crops as listed below.

Note: Treatment of highly mechanically scarred or damaged seed, or seed known to be of low vigour and poor quality, may result in reduced germination and/or reduction of seed and seedling vigour. Treat a small quantity of seed using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of the seed before committing the total seed lot to a selected seed treatment. Due to seed quality and seed storage conditions beyond the control of Syngenta Canada Inc., no claims are made to guarantee the germination of carry-over seed.

Note: Experience has shown that strains of fungus resistant to metalaxyl-M (and S-isomer) may develop. Failure to control the disease will result in crop damage and/or yield losses. Since the occurrence of the resistance cannot be foreseen, Syngenta Canada Inc. accepts no responsibility for any loss of, or damage to, crops resulting from the failure of VIBRANCE XL Seed Treatment to control the resistant fungus strains. If disease appears in a treated field, consult the government extension specialist immediately.

DIRECTIONS FOR USE

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

VIBRANCE XL Seed Treatment may be applied through commercial or on-farm equipment. Apply VIBRANCE XL Seed Treatment utilizing seed treatment equipment that provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Depending on seed size, VIBRANCE XL Seed Treatment may be applied as a ready-to-apply application or water may be added to form slurry for more uniform coverage. Follow the manufacturer's application instructions for the seed treatment equipment being used. Allow the seed to dry before bagging or storing into bulk containers. Depending on planting equipment, seed treated with VIBRANCE XL Seed Treatment may not flow through planting equipment at the same rate as untreated seed. Recalibrate this equipment before planting treated seed.

Ideal storage temperature is above freezing and below 30°C. Repeated freeze-thawing of VIBRANCE XL Seed Treatment will not affect the physical integrity of the product. If the product should freeze, bring the product back to room temperature and ensure the contents are mixed well prior to application.

This product contains a pigment that will adequately colour the treated seed. However, users are responsible for ensuring that the treated seed, when dried and ready for bagging, has an unnatural colour. If the pigment contained in the formulation does not colour the seed adequately, additional colourant must be added to the mixture while treating the seed. Follow instructions on the colourant package for mixing. Regulations pertaining to colouration of treated seed enforced under the "Seeds Act" must be strictly adhered to when using this product.

USE RATES

Under normal field conditions, apply 180 mL of VIBRANCE XL per 100 kg of seed to the crops listed below. At this rate, VIBRANCE XL delivers 12 g of difenoconazole, 2.5 g of sedaxane and 3 g of metalaxyl-M (and S-isomer) per 100 kg of seed. Use the higher rate of 360 mL/100 kg if (a) there is a history of high disease pressures in the field due to short rotations, (b) where levels of seed-borne infections like smuts are high and field conditions favour seed- and soil-borne pathogens, (c) for extended control of post-emergent damping-off, or (d) when controlling seed-borne *Septoria* or early season *Septoria* leaf blotch.

Crop/Disease	Use Rate Per 100 kg seed
BARLEY – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Seed-borne <i>Septoria</i> ² Covered Smut False Loose Smut True Loose Smut	180 – 360 mL

Crop/Disease	Use Rate Per 100 kg seed
BARLEY – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.) <i>Fusarium</i> Crown and Foot Rot Take-All	180 – 360 mL
OATS – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Covered Smut Loose Smut	180 – 360 mL
OATS – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.)	180 – 360 mL
RYE – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Seed-borne <i>Septoria</i> ² Common Bunt ⁴ Dwarf Bunt ⁴	180 – 360 mL
RYE – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.) <i>Fusarium</i> Crown and Foot Rot Take-All	180 – 360 mL
TRITICALE – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Loose Smut	180 – 360 mL
TRITICALE – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.) <i>Fusarium</i> Crown and Foot Rot Take-All	180 – 360 mL
WINTER WHEAT – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Seed-borne <i>Septoria</i> ² <i>Septoria</i> Leaf Blotch ^{2,5} Common Bunt ⁴ Dwarf Bunt ⁴ Loose Smut	180 – 360 mL

Crop/Disease	Use Rate Per 100 kg seed
WINTER WHEAT – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.) <i>Fusarium</i> Crown and Foot Rot Take-All	180 – 360 mL
SPRING WHEAT – Diseases Controlled	
General Seed Rots ¹ Seedling Blight, Root Rot, and Damping-Off caused by seed- and soil-borne <i>Fusarium</i> spp. or <i>Rhizoctonia</i> spp. Seedling Blight, Root Rot, and Damping-Off caused by soil-borne <i>Pythium</i> spp. Seed-borne <i>Septoria</i> ² Common Bunt ⁴ Loose Smut	180 – 360 mL
SPRING WHEAT – Diseases Suppressed³	
Common Root Rot (<i>Cochliobolus</i> spp.) <i>Fusarium</i> Crown and Foot Rot Take-All	180 – 360 mL

1. General seed rots controlled include those caused by saprophytic organisms such as *Fusarium*, *Pythium*, *Rhizoctonia*, *Penicillium* and *Aspergillus*.
2. Use the 360 mL rate for control of this disease.
3. Suppression means consistent control at a level which is not optimal but is still of commercial benefit.
4. Controls both seed- and soil-borne bunts (common, dwarf).
5. Early season foliar disease control for first 4 weeks after planting. For full season control, apply a foliar fungicide according to label directions.

TANK MIXES

For protection from various insects on registered crops, VIBRANCE XL Seed Treatment may be mixed with CRUISER[®] 5FS or 350FS Seed Treatment Insecticide in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. This tank-mix option is only valid for those crops common to the registered labels of VIBRANCE XL Seed Treatment and CRUISER 5FS or 350FS Seed Treatment Insecticides. Consult each product label for registered use rates and follow all label use instructions. Read the label directions for each product and follow the most restrictive label precautions and limitations.

Resistance Management Recommendations

For resistance management, please note that VIBRANCE XL Seed Treatment contains Group 3, Group 4, and Group 7 fungicides. Any fungal population may contain individuals naturally resistant to VIBRANCE XL Seed Treatment and other Group 3, Group 4, and Group 7 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 VIBRANCE XL Seed Treatment or other Group 3, Group 4, and Group 7 fungicides with different groups that control the same pathogens/insect pests.

Fungicide use should be based on an Integrated Pest Management (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 sign of 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 product 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 disease problems in your area.

For further information and to report suspected resistance, contact Syngenta Canada Inc. at 1-87-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.

CRUISER[®], VIBRANCE[™] and XL[®] are trademarks of a Syngenta Group Company.