

GROUP	4	INSECTICIDE
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ACTARA® 25WG

INSECTICIDE

COMMERCIAL

Water Dispersible Granule Insecticide for control of listed insect pests on fruits, vegetables and outdoor ornamentals.

GUARANTEE:

Thiamethoxam 25%

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

CAUTION - EYE IRRITANT

REGISTRATION NO.: **28408**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **450 g - 3.4 kg**

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

Label

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, call a doctor or poison control centre **IMMEDIATELY**. 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. 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.

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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. Hazard to Humans and Domestic Animals.
2. KEEP OUT OF THE REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
3. Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash hands and face after handling and before eating or smoking.
4. Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots during mixing, loading, clean-up and repair; wear long-sleeved shirt, long pants, socks and boots during application. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
5. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

6. Avoid contamination of feed and foodstuffs.
7. For aerial application on potatoes. Do not use human flaggers with this product.
8. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.
9. Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

Environmental Hazards:

TOXIC to aquatic organisms, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORE IN A COOL, DRY PLACE.

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 DISPOSAL OF PLASTIC JUGS:

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.

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

ACTARA® is a trademark of a Syngenta Group Company.

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Pamphlet

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6. Avoid contamination of feed and foodstuffs.
7. For aerial application on potatoes. Do not use human flaggers with this product.
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To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

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GENERAL INFORMATION

ACTARA[®] 25WG Insecticide controls listed sucking and chewing insects through contact and ingestion when used on the crops listed on this label.

ACTARA 25WG Insecticide should be applied to plant foliage when insect pest populations begin to build, but before pest populations reach economically damaging levels. Economic thresholds for pests controlled by ACTARA 25WG Insecticide may be available from your local agricultural authorities.

ACTARA 25WG Insecticide is taken up into foliage after application. However, thorough spray coverage is essential for best performance. Apply ACTARA 25WG Insecticide in sufficient water to ensure good coverage. See specific application information in the Use Directions section of this label. The use of higher water volumes will generally result in better coverage, especially under adverse conditions (e.g. hot, dry weather) or where a dense plant canopy exists.

ACTARA 25WG Insecticide is rainfast once the spray solution has dried on treated plants.

NOTE: DO NOT use a foliar application of ACTARA 25WG Insecticide following in-furrow or soil application of ACTARA 240SC Insecticide which also contains thiamethoxam.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

Apply ACTARA 25WG Insecticide using sufficient water volume to provide thorough and uniform

coverage. For ground applications, use a minimum of 100 L/ha unless otherwise indicated on this label. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid spray overlap.

Precautions:

- 1) When using water volumes of 100 L/ha, fine-sized droplets may be used to improve spray coverage.
- 2) Select nozzles that can produce the desired droplet sizes at the normal rated pressure range.
- 3) When spraying fine-sized droplets, carefully check all nozzles for flow and calibrate the sprayer.
- 4) The sprayer should travel at a uniform speed across the field.
- 5) Monitor environmental conditions and follow **Recommendations to Avoid Spray Drift** carefully.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

Aerial application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop		Buffer Zones (metres) Required for the Protection of		
			Freshwater Habitats of Depths:		Terrestrial Habitats:
			Less than 1 m	Greater than 1 m	
Airblast	Apples, Crabapples, Pears, Bushberries, Cherries	Early growth stage	2	0	10
		Late growth stage	1	0	4
Field Sprayer	Potatoes, Leafy vegetables (Crop Group 4)		0	0	1
	Fruiting vegetables (Crop Group 8, Low growing berries (Crop sub group 13-07G), caneberries (Crop subgroup 13-07A), Field peppers and Outdoor Ornamentals		1	0	1
			1	0	1
Aerial	Potatoes	Fixed or rotary wing	0	0	15

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

MIXING PROCEDURES

1. Add 1/2 of the required amount of water to the mix tank.
2. With the agitator running, add the desired amount of ACTARA 25WG Insecticide to the tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after ACTARA 25WG Insecticide has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been applied.

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

AERIAL APPLICATION

Instruction for Aerial Application

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Apply in 20-50 litres of water per hectare.

Do not spray when the wind blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Coarse sprays are less likely to drift; therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply with spray droplets smaller than the ASAE medium classification. Aerial drift is increased under certain meteorological conditions. Do not apply during periods of dead calm, when winds are gusty, or when wind speed is greater than 15 km/hr at 2 metres above ground at the site of application. Do not overspray non-crop terrestrial habitats. Buffer zone of 3 m is required between the downwind edge of the boom and

sensitive aquatic habitats such as sloughs, ponds, prairie potholes, lakes, rivers, streams and wetlands. Do not overspray these sensitive habitats. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

USE DIRECTIONS

CROP	PEST	PRODUCT RATE g/ha	REMARKS
Potato	Colorado potato beetle Aphids (including green peach, potato, buckthorn, and foxglove aphid) Potato leafhopper	105 g/ha	Apply before pests reach damaging levels. Scout fields and treat again 7-10 days later if populations rebuild to potentially damaging levels. Potato leafhopper: Control may require the use of two applications made at a 7-10 day interval.

Remarks: Do not exceed a total of 210 g of ACTARA 25WG Insecticide per hectare during each growing season. Allow at least 7 days between applications. Do not apply closer than 7 days before harvest (7 day PHI). Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 100 L/ha for ground applications.

Can be applied by aerial or ground application

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

CROP	PEST	PRODUCT RATE g /ha	REMARKS
Apples, Crabapples	Plum curculio Mullein bug	315 g/ha	PREBLOOM: one application only Mullein bug: Apply only when thresholds have been reached. Plum Curculio: Consult local extension personnel for recommendations relevant to your area.
		315-385 g/ha	POSTBLOOM: up to 2 applications Mullein bug: Make first application immediately after petal fall, when thresholds have been reached. A second application may be necessary if pest pressure continues. Plum curculio: Make first application immediately following petal fall. A second application may be necessary if pest pressure continues.
	Spotted tentiform leafminer	315 g/ha	PREBLOOM: one application only. Apply when eggs are being deposited. POSTBLOOM: up to 2 applications To control first generation populations make application immediately following petal fall. For control of second and third generations make applications to coincide with egg deposition.
	Rosy apple aphid	160 g/ha	PREBLOOM: one application only Apply when aphid colonies are first observed at the green tip through pink growth stage before leaf curling occurs. POSTBLOOM: up to 2 applications Apply before leaf curling occurs.

DO NOT APPLY MORE THAN 2 APPLICATIONS TOTAL PER SEASON (MAXIMUM 2 APPLICATIONS POSTBLOOM OR ONE APPLICATION PREBLOOM PLUS ONE APPLICATION POSTBLOOM).

DO NOT APPLY BY AIR.

Apply before pests reach damaging level. Apply higher rates for heavy infestations and for improved residual control. Scout fields and treat again if populations rebuild to potentially damaging levels. Do not make more than one prebloom application. Do not apply more than 2 applications total per season (maximum 2 applications postbloom or one application prebloom plus one application postbloom). Do not apply more than 770 g product per hectare per season per crop. ACTARA 25WG Insecticide may be applied up to 60 days before harvest (60 day PHI). Allow a minimum of 10 days between applications. A minimum spray volume of 1000 litres water/ha is recommended. If adequate spray coverage of the plant canopy requires less solution per hectare, adjust the spray volume accordingly while using the same spray concentration (ratio of grams of product to litres of water).

REMARKS: DO NOT APPLY ACTARA 25WG INSECTICIDE DURING BLOOM.**Pollinator Precautions:**

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide after pre-bloom (early pink growth stage) or before post bloom (petal fall growth stage). Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. This is especially critical if there are adjacent orchards that are blooming (Refer to Recommendations to Avoid Spray Drift for additional information). If bees are foraging in the orchard ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. This restriction does not apply to blooming crops (such as potatoes) that are not attractive to bees. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

DO NOT APPLY BY AIR.

CROP	PEST	PRODUCT RATE g/ha	REMARKS
Pear Oriental pear	Pear psylla Plum curculio	315-385 g/ha	<u>POSTBLOOM Only:</u> up to 2 applications Pear psylla: Apply immediately following petal fall. A second application may be necessary if pest pressure continues. Plum curculio: Apply immediately following petal fall. A second application may be necessary if pest pressure continues.

DO NOT APPLY MORE THAN 2 APPLICATIONS TOTAL PER SEASON.

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Do not apply ACTARA 25WG Insecticide before postbloom (petal fall). Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. This is especially critical if there are adjacent orchards that are blooming (Refer to Recommendations to Avoid Spray Drift for additional information). If bees are foraging in the orchard ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. This restriction does not apply to blooming crops (such as potatoes) that are not attractive to bees. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

DO NOT APPLY BY AIR.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Syngenta Canada Inc. harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

ROOT VEGETABLES (CROP SUBGROUPS 1B AND 1C)**					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Aphids Aster leafhopper	105	Apply in sufficient water volume to ensure adequate coverage. Do not use less than 100 L/ha.	Allow at least 7 days between applications.	7	Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Ground application only. DO NOT apply by air. Maximum of 2 applications per growing season.

**Crop Subgroup 1B: Garden beet, edible burdock, carrot, celeriac, turnip-rooted chervil, chicory, ginseng, horseradish, turnip-rooted parsley, parsnip, radish, ornamental radish (daikon), rutabaga, salsify, black salsify, Spanish salsify, skirret, turnip,
Crop Subgroup 1C: Arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, potato, sweet potato, tanier (cocoyam), turmeric, yam bean, true yam.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

APPLE, CRABAPPLE, PEAR, ORIENTAL PEAR					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Brown marmorated stink bug (suppression)	385	A minimum spray volume of 1000 L /ha is recommended. If adequate spray coverage of the plant canopy requires less solution per hectare, adjust the spray volume accordingly while using the same spray concentration (ratio of grams of product to litres of water).	Allow at least 10 days between applications.	60	Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Ground application only. DO NOT apply by air. Maximum of 2 applications per growing season. Post-bloom application only. Do not apply more than 770 g product/ha per season.

REMARKS: DO NOT APPLY ACTARA 25WG INSECTICIDE DURING BLOOM.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide after pre-bloom (early pink growth stage) or before post bloom (petal fall growth stage). Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. This is especially critical if there are adjacent orchards that are blooming (Refer to Recommendations to Avoid Spray Drift for additional information). If bees are foraging in the orchard ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. This restriction does not apply to blooming crops (such as potatoes) that are not attractive to bees. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

CANEBERRIES (CROP SUB GROUP 13-07A)*				
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Black vine weevil (<i>Otiorhynchus sulcatus</i>) and obscure root weevil (<i>Sciopithes obscurus</i>)	210-280	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.	Allow at least 7 days between treatments.	Apply as a foliar application by broadcast spray before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Maximum 2 applications per season. Do not apply within 3 days of harvest. DO NOT apply by air.

* Blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora.); Loganberry (*rubus loganobaccus*); Raspberry, black and red (*Rubus* spp.); Wild raspberry (*Rubus muelleri*) and cultivars, varieties and/or hybrids of these.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming plants if bees are visiting the treated area. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

BUSHBERRIES (CROP GROUP 13-07B)*					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Weevils (<i>Otiorhynchus sulcatus</i> , <i>Sciopithes obscurus</i>)	210-280	Sufficient water volume to ensure adequate coverage of the foliage. Use at least 100 L/ha.	7	3	Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates for heavy infestations. Ground application only. DO NOT apply by air. Maximum of 2 applications per growing season.
Brown marmorated stink bug suppression	280				

* Crop Group 13-07B: Aronia berry; blueberry, highbush; blueberry, lowbush; buffalo currant; Chilean guava; currant, black; currant, red; elderberry; European barberry; gooseberry; cranberry, highbush; honeysuckle, edible; huckleberry; jostaberry; Juneberry; lingonberry; native currant; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

FRUITING VEGETABLES (CROP GROUP 8)*					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Aphids Tarnished plant bug (<i>Lygus lineolaris</i>), Stink bugs (<i>Acrosternum hilare</i> <i>Euschistus servus</i> , <i>E. variolarus</i>) Reduction in damage caused by brown marmorated stink bug	105 105 – 210 (foliar) 210 (foliar)	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.	Allow at least 7 days between applications.	1	Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Maximum of 2 applications per growing season.
Aphids, Suppression of Tarnished plant bug (<i>Lygus lineolaris</i>), Suppression of stink bugs (<i>Acrosternum hilare</i> <i>Euschistus servus</i> , <i>E. variolarus</i>)	3.4 – 4.4 g product/100m row (in-furrow)***	Apply in sufficient water volume to ensure adequate coverage.	N/A	30	If applying in-furrow, apply at transplanting. Maximum of 1 application per growing season.
Aphids, Suppression of tarnished plant bug (<i>Lygus lineolaris</i>), Suppression of stink bugs (<i>Acrosternum hilare</i> <i>Euschistus servus</i> , <i>E. variolarus</i>)	365 – 468 (transplant water application)	Use 100 – 200 ml water per plant	N/A	30	Maximum of 1 application per growing season. Apply the product in 100 to 200 mL per plant in transplant water. For example, if the area to treat is 1 hectare and the plant population within is 30 000 plants then mix 365 to 468 g product in 3000 (to 6000) L water and apply 100 (to 200) mL to each transplant.

* Eggplant, Tomato, Peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Groundcherry, and Pepino.
** Ground application only. DO NOT apply by air. Use the higher application rate when pest pressure is high (or anticipated to be high).
*** For in-furrow application, follow the rates outlined below per 100 m row:

Rate g/100 m row	Rate in g/ha of product for specified row spacing and rate per 100 m row						
	75 cm	90 cm	100 cm	120 cm	135 cm	150 cm	175 cm
3.4	453	378	340	283	252	227	194
4.4	587	489	440	367	326	293	251

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

LEAFY VEGETABLES (CROP GROUP 4)*					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Aphids (green peach, potato and foxglove)	105	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.	Reapply after a minimum of 7 days if monitoring indicates further applications are required for aphid control	7	Maximum of 2 applications per growing season. DO NOT apply by air.
Reduction in damage caused by tarnished plant bug	210	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare.		7	Maximum 1 application per growing season. DO NOT apply by air.

*Celery, lettuce (head and leaf), spinach, amaranth, arugula, cardoon, Chinese celery, celtuce, fresh chervil leaves, edible leaved chrysanthemum, garland chrysanthemum, corn salad, garden cress, upland cress, dandelion leaves, dock, endives, fresh Florence fennel leaves and stalk, orach leaves, fresh parsley leaves, garden purslane, winter purslane, radicchio, rhubarb, New Zealand spinach, vine spinach, and Swiss chard.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

CHERRIES (sweet and sour)

Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Aphids (including black cherry aphid)	160	A minimum spray volume of 1000 L water/ha is recommended. If adequate spray coverage of the plant canopy requires less solution per hectare, adjust the spray volume accordingly while using the same spray concentration (ratio of grams of product to litres of water).	10	Maximum of two applications per year. Do not apply more than 320 g product per hectare per season per crop. Apply before pests reach damaging level. Scout fields and treat again if populations rebuild to potentially damaging levels. Airblast application only. DO NOT apply by air. Do not harvest cherries within 14 days of application.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

LOW GROWING BERRIES (CROP GROUP 13-07G)* subgroup*				
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Adult black vine weevil (<i>Otiorhynchus sulcatus</i>) Cranberry weevil (<i>Anthonomus musculus</i>)	210 – 280	Apply in sufficient water volume to ensure adequate coverage (minimum 200 L of water per hectare).	7 days	Apply as a foliar application by broadcast spray before pests reach damaging levels. If pests reach damaging levels during bloom, applications are to be made as soon as possible post-bloom. Scout fields and treat again if populations rebuild to potentially damaging levels. Maximum two (2) foliar applications per season. Do not apply within 3 days of harvest. DO NOT APPLY BY AIR. Do not follow a soil application of a Group 4 insecticide with a foliar application of ACTARA 25WG Insecticide.
Suppression of black vine weevil (<i>Otiorhynchus sulcatus</i>) and strawberry root weevil (<i>O. ovatus</i>)	560	Use sufficient water to ensure adequate coverage	N/A – post renovation application only	Apply as a soil drench post renovation only. Maximum 1 application per season. Do not exceed 560 g/ha of ACTARA 25WG Insecticide on low-growing berries per year. DO NOT apply a drench application of ACTARA 25WG on low-growing berries if one or more foliar applications were used in the same year. DO NOT APPLY BY AIR. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) insecticide following in-furrow or soil application of ACTARA 25WG Insecticide.

* Crop Subgroup 13-07G: lowbush blueberry, bearberry, bilberry, cloudberry, cranberry, lingonberry, muntries, partridgeberry, strawberry, and cultivars, varieties and/or hybrids of these.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

FIELD PEPPER					
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	PHI (days)	Remarks
Pepper Weevil (suppression)	280	Applied in sufficient water to ensure thorough coverage (minimum 100L/ha).	7 days	1 day	Apply before pests reach damaging levels. Scout field and treat again if population rebuild to potentially damaging levels. Maximum 2 applications per year. DO NOT APPLY BY AIR.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

Outdoor Ornamentals				
Pest	Product Rate (g/100L water)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Aphids, leafhoppers	105	Sufficient water volume to ensure adequate coverage of the foliage, use at least 100 L/ha.	7	Foliar application only. DO NOT make more than 2 applications per season. Apply before pests reach damaging levels or damage are first observed. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates for heavy infestations. DO NOT apply by air.
Tarnished plant bug (suppression)	210 - 280	Do not exceed 1000 L/ha.		

Pollinator Precautions:
This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

OUTDOOR NURSERIES AND LANDSCAPE				
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Brown marmorated stink bug suppression	280	Adequate water volume to achieve thorough and uniform coverage without excessive runoff (to drip).	N/A	Foliar application only Maximum 1 application per season. Apply before pests cause significant damage to the host plant. For use in residential or landscape settings, do not allow re-entry into treated areas until residues have dried. Before making large scale applications to any crop, a representative subset of material should be treated to determine plant safety under the cultural conditions. Growing conditions and cultural practices vary and may influence phytotoxicity. It is strongly recommended that evaluations be conducted on a sample set of plant material to observe for phytotoxicity prior to treating an entire crop.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.

Celeriac				
Pest	Product Rate (g/ha)	Spray Volume (L/ha)	Application Interval (days)	Remarks
Tarnished plant bug (<i>Lygus lineolaris</i>)	210 g – 280	Apply in sufficient water volume to ensure adequate coverage. Use at least 100 L of water per hectare for ground application. Do not apply by air.	7	Apply as a foliar application by broadcast spray before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Maximum 2 applications per season. Use the higher application rate for heavy infestations and for improved residual control. Do not harvest within 7 days of application.

Pollinator Precautions:

This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 25WG Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After an ACTARA 25WG Insecticide application, wait at least 5 days before placing the beehives in the treated field.'

Rotational Restrictions

Treated areas may be replanted immediately following harvest or as soon as practical following the last application with any crop listed on this label or to sorghum, wheat, barley, and canola. Any cover crop planted for erosion control or soil improvement may be planted as soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120 day plant-back interval must be observed.

Resistance-Management Recommendations

For resistance management, please note that ACTARA 25WG Insecticide contains a Group 4 insecticide (neonicotinoid class of chemistry). Any insect population may contain individuals naturally resistant to ACTARA 25WG Insecticide and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide resistance:

Where possible, rotate the use of ACTARA 25WG Insecticide or other Group 4 insecticides with different groups that control the same pests in a field.

Use tank mixtures with miticides/insecticides from a different group when such use is permitted. Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

GROUP	4	INSECTICIDE
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ACTARA® 240SC Insecticide

AGRICULTURAL

SUSPENSION

COMMERCIAL

Soluble concentrate insecticide for control of listed insect pests of labeled crops.

GUARANTEE:

Thiamethoxam 240 g/L

Contains 1,2-benzisothiazolin-3-one at 0.03% as a preservative or 1,2-benzisothiazolin-3-one at 0.03% plus 2-bromo-2-nitropropane-1,3-diol at 0.03% as preservatives.

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

CAUTION



POISON

REGISTRATION NO.: **28407**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **453 mL - 20 L**

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

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, call a physician or poison control centre **IMMEDIATELY**. 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. Hazard to humans and domestic animals.
2. KEEP OUT OF REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
3. Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash hands and face after handling and before eating or smoking.
4. Wear coveralls over a long-sleeved shirt, long pants, goggles, chemical-resistant gloves, socks and boots during mixing, loading, clean-up, and repair; and wear long-sleeved shirt, long pants, socks, and boots during application. When handling treated potato seed pieces or when working with or around equipment used to transport treated potato seed pieces,

workers must wear coveralls over a long-sleeved shirt, long pants, a dust mask, goggles, chemical-resistant gloves, socks, and boots.

5. DO NOT use open treating equipment when treating potato seed pieces. Use only closed system treatment equipment.
6. DO NOT use open cab planting equipment when planting potato seed pieces treated with ACTARA 240SC Insecticide. Use only closed cab planting equipment. Workers working outside the closed cab must wear coveralls over a long-sleeved shirt, long pants, a dust mask, goggles, chemical resistant gloves, socks and boots.
7. Avoid contamination of feed and foodstuffs.
8. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
9. For aerial application on potatoes. Do not use human flaggers with this product.
10. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Environmental Hazards:

TOXIC to aquatic organisms, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORE IN A COOL, DRY PLACE.

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, this 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 use this container for any other purpose.

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

GROUP	4	INSECTICIDE
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ACTARA® 240SC Insecticide

AGRICULTURAL

SUSPENSION

COMMERCIAL

Soluble concentrate insecticide for control of listed insect pests of labeled crops.

GUARANTEE:

Thiamethoxam 240 g/L

Contains 1,2-benzisothiazolin-3-one at 0.03% as a preservative or 1,2-benzisothiazolin-3-one at 0.03% plus 2-bromo-2-nitropropane-1,3-diol at 0.03% as preservatives.

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

CAUTION



POISON

REGISTRATION NO.: **28407**
PEST CONTROL PRODUCTS ACT

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

Pamphlet

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, call a physician or poison control centre **IMMEDIATELY**. 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. Hazard to humans and domestic animals.
2. KEEP OUT OF REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
3. Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash hands and face after handling and before eating or smoking.
4. Wear coveralls over a long-sleeved shirt, long pants, goggles, chemical-resistant gloves, socks and boots during mixing, loading, clean-up, and repair; and wear long-sleeved shirt, long pants, socks, and boots during application. When handling treated potato seed pieces or when working with or around equipment used to transport treated potato seed pieces,

workers must wear coveralls over a long-sleeved shirt, long pants, a dust mask, goggles, chemical-resistant gloves, socks, and boots.

5. DO NOT use open treating equipment when treating potato seed pieces. Use only closed system treatment equipment.
6. DO NOT use open cab planting equipment when planting potato seed pieces treated with ACTARA 240SC Insecticide. Use only closed cab planting equipment. Workers working outside the closed cab must wear coveralls over a long-sleeved shirt, long pants, a dust mask, goggles, chemical resistant gloves, socks and boots.
7. Avoid contamination of feed and foodstuffs.
8. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
9. For aerial application on potatoes. Do not use human flaggers with this product.
10. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Environmental Hazards:

TOXIC to aquatic organisms, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORE IN A COOL, DRY PLACE.

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, this 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 use this container for any other purpose.

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

GENERAL INFORMATION

ACTARA[®] 240SC Insecticide controls listed sucking and chewing insects through contact and ingestion.

For crops labeled for foliar applications, ACTARA 240SC Insecticide should be applied when insect pest populations begin to build, but before pest populations reach economically damaging levels. Economic thresholds for pests controlled by ACTARA 240SC Insecticide may be available from your local agricultural authorities.

ACTARA 240SC Insecticide is taken up into foliage after application. However, thorough spray coverage is essential for best performance. Apply ACTARA 240SC Insecticide in sufficient water to ensure good coverage. See specific application information in the Use Directions section of this label. The use of higher water volumes will generally result in better coverage, especially under adverse conditions (e.g. hot, dry weather) or where a dense plant canopy exists.

ACTARA 240SC Insecticide is rainfast once the spray solution has dried on treated plants.

ACTARA 240SC Insecticide can be applied as an in-furrow spray during planting, which allows the insecticide to be absorbed by plant roots. Although ACTARA 240SC Insecticide is rapidly taken up by plant roots and rapidly moves throughout the plant, the use of sufficient water volume will ensure optimal uptake and performance.

DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with a soil application of ACTARA 240SC Insecticide.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

Foliar Application:

Apply ACTARA 240SC Insecticide using sufficient water volume to provide thorough and uniform coverage. For ground applications, use a minimum of 100 L/ha unless otherwise indicated on this label. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid spray overlap.

Precautions:

- 1) When using water volumes of 100 L/ha, fine-sized droplets may be used to improve spray coverage.
- 2) Select nozzles that can produce the desired droplet sizes at the normal rated pressure range.
- 3) When spraying fine-sized droplets, carefully check all nozzles for flow and calibrate the sprayer.
- 4) The sprayer should travel at a uniform speed across the field.
- 5) Monitor environmental conditions and follow **Recommendations to Avoid Spray Drift** carefully.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:
		Terrestrial Habitats
Field sprayer	Potato	1
Aerial (Fixed or Rotary Wing)	Potato	15

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

Soil Application:

Spray nozzles should provide accurate and uniform spray deposition. ACTARA 240SC Insecticide may be applied in-furrow at application or as a narrow surface band above the seedline during planting. To help ensure accuracy, calibrate sprayer before each use. Apply in sufficient water volume to ensure uniform application and incorporation into the soil. For information on spray equipment and calibration, consult sprayer manufacturers and/or your local agricultural representative specialists.

MIXING INSTRUCTIONS:

1. Add 1/2 of the required amount of water to the mix tank.
2. With the agitator running, add the ACTARA 240SC Insecticide to the tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after the ACTARA 240SC Insecticide has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

AERIAL APPLICATION:

Instruction for Aerial Application

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Do not spray when the wind blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Do not apply with spray droplets smaller than the ASAE classification. Aerial drift is increased under certain meteorological conditions. Do not apply during periods of dead calm, when winds are gusty, or when wind speed is greater than 16 km/h at flying height at the site of application. Do not overspray non-crop terrestrial habitats. Do not overspray sensitive freshwater aquatic habitats such as sloughs, ponds, prairie potholes, lakes, rivers, streams and wetlands. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

USE DIRECTIONS**POTATOES**

CROP	POTATOES – IN FURROW APPLICATION
PESTS	Colorado potato beetle, Aphids (including green peach, potato, buckthorn, and foxglove aphid), Potato leafhopper
PRODUCT RATE (mL/100 m row)	3.4 – 4.4
APPLICATION METHOD	Apply as an in-furrow spray during planting. Use the higher rate for extended residual control. Apply in sufficient water to ensure good coverage.
NOTES	DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with a soil application of ACTARA 240SC Insecticide.

CROP	POTATOES – FOLIAR APPLICATION
PESTS	Colorado potato beetle, Aphids (including green peach, potato, buckthorn, and foxglove aphid), Potato leafhopper
PRODUCT RATE (mL/ha)	109
APPLICATION METHOD	<p>Apply before pests reach damaging levels. Scout fields and treat again 7-10 days later if populations rebuild to potentially damaging levels.</p> <p>Potato Leafhopper: Control may require the use of two applications made at a 7-10 day interval.</p> <p>Can be applied by aerial or ground application. Use sufficient water volume to ensure thorough coverage of foliage.</p> <p>Do not use less than 100 L/ha for ground applications.</p> <p>Apply in 20-50 litres of water per hectare for aerial applications.</p> <p>MIXING INSTRUCTIONS:</p> <ol style="list-style-type: none"> 1. Add 1/2 of the required amount of water to the mix tank. 2. With the agitator running, add the ACTARA 240SC Insecticide to the tank. 3. Continue agitation while adding the remainder of the water. 4. Begin application of the solution after the ACTARA 240SC Insecticide has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied. <p>Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.</p>
NOTES	<p>DO NOT exceed a total of 218 mL of ACTARA 240SC Insecticide per hectare during each growing season.</p> <p>Allow at least 7 days between applications.</p> <p>DO NOT apply closer than 7 days before harvest (7 day PHI).</p> <p>DO NOT use more than two foliar applications of thiamethoxam (either ACTARA 240SC Insecticide or ACTARA 25WG Insecticide) or one in-furrow application of ACTARA 240SC Insecticide per season.</p> <p>DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with a soil application of ACTARA 240SC Insecticide.</p> <p>POLLINATOR PRECAUTIONS: This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply ACTARA 240SC Insecticide or allow it to drift onto blooming plants if bees are visiting treated areas. After an ACTARA 240SC Insecticide application, wait at least 5 days before placing the beehives in the treated field.</p>

CROP	POTATOES – TANK MIX WITH QUADRIS® FLOWABLE FUNGICIDE AND RIDOMIL GOLD® 480SL FUNGICIDE (OR RIDOMIL GOLD 480EC FUNGICIDE)
PESTS	Colorado potato beetle, Potato leafhopper, Aphids - including green peach, potato, buckthorn, and foxglove aphid, Rhizoctonia stem and stolon canker, Black scurf, Pink rot (suppression only)
PRODUCT RATE (mL/100 m row)	ACTARA 240SC Insecticide: 3.4 - 4.4 QUADRIS Flowable Fungicide: 4 - 6 RIDOMIL GOLD 480SL Fungicide (RIDOMIL GOLD 480EC Fungicide): 4
APPLICATION METHOD	Apply once as in-furrow spray in sufficient water to ensure good coverage. Use the higher rate of ACTARA 240SC Insecticide for extended residual control. Use the higher rate of QUADRIS Flowable Fungicide when the risk of disease is high. Mount spray nozzle so the spray is directed into the furrow as a 15-20 cm band just before the seed is covered. MIXING INSTRUCTIONS: 1. Fill tank at least 1/2 full of clean water. 2. With the agitator running, add ACTARA 240SC Insecticide and QUADRIS Flowable Fungicide, followed by RIDOMIL GOLD 480SL Fungicide (or RIDOMIL GOLD 480EC Fungicide). 3. Continue filling the spray tank with water until the desired volume is reached. 4. Begin application of the solution after the products have dispersed into the mix water. Maintain agitation until all of the mixture has been applied.
NOTES	PRECAUTIONS: Read the labels for all products in the tank-mix and follow the precautionary statements, directions for use (rates, diseases controlled and application intervals) and other restrictions. Always check the compatibility of the ACTARA 240SC Insecticide tank-mix using a jar test with proportionate amounts of QUADRIS Flowable Fungicide, RIDOMIL GOLD 480SL Fungicide (or RIDOMIL GOLD 480EC Fungicide) and water before mixing in the spray tank. Provide sufficient jet or mechanical agitation during filling and application to keep the tank mix uniformly suspended. DO NOT leave tank mix combinations in the spray tank for prolonged periods without agitation. Mix and apply in the same day. DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with a soil application of ACTARA 240SC Insecticide. A plant back interval of 30 days for potatoes (root crops) is required. Do not apply more than one application per season. DO NOT apply by air.

ACTARA 240SC INSECTICIDE – SOIL APPLICATION - RATE CONVERSION CHART

Rate mL/100 m row	Rate in mL/ha of product for specified row spacing and rate per 100 m row													
	75 cm	80 cm	85 cm	90 cm	95 cm	100 cm	105 cm	110 cm	115 cm	120 cm	125 cm	150 cm	185 cm	215 cm
3.4	453	425	400	378	358	340	323.8	309	296	283.3	272	226.7	183.8	158
4.4	586.7	550	517.6	488.9	463.2	440	419	400	382.6	366.7	352	293.3	237.8	204.7

CROP	POTATOES – SEED PIECE TREATMENT APPLICATION
PESTS	Colorado potato beetle, Aphids (including green peach, potato, buckthorn and foxglove aphid), Potato leafhopper
PRODUCT RATE (mL/ha)	Choose the appropriate rate for ACTARA 240SC Insecticide from the chart below, based upon the seeding rate. Use high rate for extended residual control. Do not apply more than 24.4 mL product /100 kg seed pieces or 488 mL product per hectare.
APPLICATION METHOD	<p>MIXING INSTRUCTIONS: Shake or mix well before using. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Apply ACTARA 240SC Insecticide as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect control. Thoroughly mix the recommended amount of ACTARA 240SC Insecticide into the required amount of water for the slurry treater and dilution rate to be used. Follow the manufacturer’s application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the treatment.</p>
NOTES	<p>Cut seed is particularly vulnerable to excess moisture. Too much moisture will induce seed decay. ACTARA 240SC Insecticide has been designed to be delivered in very low volumes of liquid to ensure good coverage without increasing tuber decay. ACTARA 240SC Insecticide, delivered at a diluted volume of 263 mL/100 kg of seed gives good coverage over the seed. Do not add excess water to the cut seed. Store cut seed at or below 7 °C. Temperatures above 10 °C promote soft rot in seed. Apply only in areas with adequate ventilation or in areas that are equipped to remove mist or dust. Seed loading on to the belt after cutting should be uniform. Do not overload. If there are several layers of seed under the hood, coverage will be erratic. Calibrate the output to the actual flow rate. If calibrated properly, there will be no liquid material dripping off of the roller table. If the treated seed needs to be stored or held for a few days, make sure that there is adequate cool air movement through the pile of cut seed potatoes at relative humidity of 85-90%. Cut and treated seed should not be piled above 1.8m in height. Best results are obtained if potatoes are planted immediately after ACTARA 240SC Insecticide is applied to the seed. When transporting cut and ACTARA 240SC Insecticide treated seed make sure the seed is covered. When treating cut seed, ACTARA 240SC Insecticide should be followed with a dust/talc treatment to improve suberization. Do not apply any subsequent application of thiamethoxam in-furrow or foliar application or other group 4 insecticide following seed piece treatment with ACTARA 240SC Insecticide. Avoid using excessively sprouted seed for liquid seed treatment.</p>

ACTARA 240SC INSECTICIDE – SEED PIECE TREATMENT- RATE CONVERSION CHART

To use this Rate Conversion Chart, first determine whether the low or high rate is required*, then choose the appropriate rate (mL product/100kg seed piece) based on the planned seeding rate (number of 100 kg seed piece units per hectare).

SEEDING RATE (# 100 kg units/ha)	APPLICATION RATE (mL product/100 kg potato seed piece)	
	Low Rate (equivalent to 380 mL product per ha)	High Rate* (equivalent to 488 mL product per ha)
16	23.7	
17	22.3	
18	21.1	
20	19.0	24.4
21	18.0	23.2
22	17.2	22.2
23	16.5	21.2
24	15.8	20.3
25	15.2	19.5
26	14.6	18.8
27	14.0	18.1
28	13.5	17.4
29	13.1	16.8
30	12.6	16.3
31	12.2	15.7
32	11.8	15.2
33	11.5	14.8
34	11.2	14.3
35	10.8	13.9
36	10.5	13.5
37	10.3	13.2
38	10.0	12.8
39	9.7	12.5
40	9.5	12.2
41	9.3	11.9
42	9.0	11.6
43	8.8	11.3
44	8.6	11.1
45	8.4	10.8
46	8.2	10.6
47	8.1	10.4
48	7.9	10.2

*Use the high rate for extended residual control.

Example calculation:

Seeding rate of 20 100 kg units of seed/ha X 19 mL product/100 kg unit of seed = 380 mL product/ha

Seeding rate of 20 100 kg units of seed/ha X 24.4 mL product/100 kg unit of seed = 488 mL product/ha

The ranges in the table above take into account various row widths, plant spacings within the row and seed sizes. The rates for ACTARA 240SC Insecticide used as a seed treatment are based upon the seeding rate.

VEGETABLES

CROPS	LEAFY VEGETABLES – CROP GROUP 4 (including amaranth (leafy amaranth, Chinese spinach, tampala), arugula (rocket), cardoon, celery, Chinese celery, celtuce, chervil, edible leaved chrysanthemum, garland chrysanthemum, corn salad, garden cress, upland cress, dandelion, dock (sorrel) endive (escarole), Florence fennel (finocchio), head and leaf lettuce, orach, parsley, garden purslane, winter purslane, radicchio (red chicory), rhubarb, spinach, New Zealand spinach)
PEST	Aphids, leafhoppers, dipteran leafminers, early season suppression of flea beetles
PRODUCT RATE (mL/ha)	375 – 625
APPLICATION METHOD	In-furrow application at the seeding or transplant depth or a narrow surface band above the seedline during planting. For surface applications, incorporate to the seeding depth with sufficient sprinkle or drip irrigation within 24 hours after planting.
NOTES	Use lower rate for short residual control and higher rates for long residual control DO NOT apply more than 625 mL of ACTARA 240SC Insecticide (150 g ai) per ha per year. Water Volume: Apply in sufficient water volume to ensure uniform application and incorporation into the soil. DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with ACTARA 240SC Insecticide soil application.
CROPS	BRASSICA VEGETABLES – CROP GROUP 5 (including broccoli, Chinese broccoli (gai lan), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy), Chinese mustard cabbage (gai choy), cauliflower, cavolo broccoli, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens)
PEST	Aphids, early season suppression of flea beetles
PRODUCT RATE (mL/ha)	375 – 625
APPLICATION METHOD	In-furrow application at the seeding or transplant depth or a narrow surface band above the seedline during planting. For surface applications, incorporate to the seeding depth with sufficient sprinkle or drip irrigation within 24 hours after planting.
NOTES	Use lower rate for short residual control and higher rates for long residual control DO NOT apply more than 625 mL of ACTARA 240SC Insecticide (150 g ai) per ha per year. Water Volume: Apply in sufficient water volume to ensure uniform application and incorporation into the soil. DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with ACTARA 240SC Insecticide soil application.

CROPS	FRUITING VEGETABLES – CROP GROUP 8-09 (African eggplant, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, okra, pea eggplant, pepino, pepper, bell, pepper, non-bell, roselle, scarlet eggplant, sunberry, tomatillo, tomato, cultivars, varieties and hybrids of these commodities)
PEST	Aphids, Colorado potato beetles, leafhoppers, dipteran leafminers, potato psyllids, early season suppression of flea beetles
PRODUCT RATE (mL/ha)	375 – 625
APPLICATION METHOD	In-furrow application at the seeding or transplant depth or a narrow surface band above the seedline during planting. For surface applications, incorporate to the seeding depth with sufficient sprinkle or drip irrigation within 24 hours after planting.
NOTES	Use lower rate for short residual control and higher rates for long residual control DO NOT apply more than 625 mL of ACTARA 240SC Insecticide (150 g ai) per ha per year. DO NOT follow a soil application of ACTARA 240SC Insecticide with a foliar application of ACTARA 25WG Insecticide. Water Volume: Apply in sufficient water volume to ensure uniform application and incorporation into the soil. DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with ACTARA 240SC Insecticide soil application.
CROPS	CUCURBIT VEGETABLES-CROP GROUP 9 (Chinese waxgourd, citron melon, cucumber, edible gourd, gherkin, momordica species, muskmelon, pumpkin, summer and winter squash, and watermelon)
PEST	Aphids, leafhoppers, dipteran leafminers, early season suppression of flea beetles
PRODUCT RATE (mL/ha)	375 – 625
APPLICATION METHOD	In-furrow application at the seeding or transplant depth or a narrow surface band above the seedline during planting. For surface applications, incorporate to the seeding depth with sufficient sprinkle or drip irrigation within 24 hours after planting.
NOTES	Use lower rate for short residual control and higher rates for long residual control DO NOT apply more than 625 mL of ACTARA 240SC Insecticide (150 g ai) per ha per year. Water Volume: Apply in sufficient water volume to ensure uniform application and incorporation into the soil. DO NOT apply any subsequent application of a Group 4 Insecticide (for example, in-furrow, soil or foliar application) following treatment with ACTARA 240SC Insecticide soil application.

Rotational Restrictions

Treated areas may be replanted immediately following harvest or as soon as practical following the last application with any crop listed on this label or to sorghum, wheat, barley, canola and pome fruit. Any cover crop planted for erosion control or soil improvement may be planted as

soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120 day plant-back interval must be observed.

Resistance-Management Recommendations

For resistance management, please note that ACTARA 240SC Insecticide contains a Group 4 insecticide (neonicotinoid class of chemistry). Any insect population may contain individuals naturally resistant to ACTARA 240SC Insecticide and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide resistance:

Where possible, rotate the use of ACTARA 240SC Insecticide or other Group 4 insecticides with different groups that control the same pests in a field. Use tank mixtures with insecticides from a different group when such use is permitted.

Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

ACTARA[®], QUADRIS[®] and RIDOMIL GOLD[®] are trademarks of a Syngenta Group Company

GROUPS	4	28	INSECTICIDE
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MINECTO™ DUO 40WG

INSECTICIDE

COMMERCIAL

WETTABLE GRANULE

Broad spectrum insecticide for control of listed insect pests on leafy, Brassica, fruiting and cucurbit vegetables and potatoes

GUARANTEE:

Thiamethoxam 20%
Cyantraniliprole 20%

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

REGISTRATION NO.: **30900**
PEST CONTROL PRODUCTS ACT

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

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

Label

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, call a doctor or poison control centre **IMMEDIATELY**. 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. 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.

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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. Hazard to humans and domestic animals.
2. KEEP OUT OF THE REACH OF CHILDREN and domestic animals.
3. Wash hands and face after handling and before eating or smoking.
4. Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots and safety glasses or goggles when mixing and loading this product. Wear long-sleeved shirt, long pants, socks and boots during application. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
5. Wash personal protective equipment (PPE) after each use. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.
6. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
7. Avoid contamination of feed and foodstuffs.

8. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Environmental Precautions:

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.

Do not apply by air.

Apply by closed cab groundboom only.

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

Toxic to bees. This product is systemic and bees can be exposed to product residues in flower, leaves, pollen and/or nectar resulting from soil applications.

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.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is forecast.

TOXIC to aquatic organisms. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORE IN A COOL, DRY PLACE.

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 DISPOSAL OF PLASTIC JUGS:

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.

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

MINECTO™ is a trademark of a Syngenta Group Company.

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

REGISTRATION NO.: **30900**
PEST CONTROL PRODUCTS ACT

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

Label

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, call a doctor or poison control centre **IMMEDIATELY**. 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. 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.

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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. Hazard to humans and domestic animals.
2. KEEP OUT OF THE REACH OF CHILDREN and domestic animals.
3. Wash hands and face after handling and before eating or smoking.
4. Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots and safety glasses or goggles when mixing and loading this product. Wear long-sleeved shirt, long pants, socks and boots during application. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
5. Wash personal protective equipment (PPE) after each use. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.
6. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
7. Avoid contamination of feed and foodstuffs.

8. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Environmental Precautions:

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.

Do not apply by air.

Apply by closed cab groundboom only.

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

Toxic to bees. This product is systemic and bees can be exposed to product residues in flower, leaves, pollen and/or nectar resulting from soil applications.

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.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is forecast.

TOXIC to aquatic organisms. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORE IN A COOL, DRY PLACE.

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 DISPOSAL OF PLASTIC JUGS:

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.

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

GENERAL INFORMATION

MINECTO™ DUO 40WG is a soil applied insecticide with dual modes of action that controls listed lepidopteran, sucking and chewing insect pests. MINECTO DUO 40WG also provides residual control of key insect pests in vegetables and potatoes.

When MINECTO DUO 40WG is applied to the soil, it is readily taken up by the roots of germinating seedlings or transplants and it is rapidly translocated throughout the plant.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

MIXING INSTRUCTIONS:

1. Add 1/2 of the required amount of water to the mix tank.
2. With the agitator running, add the MINECTO DUO 40WG to the tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after the MINECTO DUO 40WG has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

APPLICATION METHOD:

Soil Application: Apply specified dosage in sufficient water volume to ensure uniform application and incorporation at least 5 cm (2 in) into the soil. Apply as an in-furrow spray at the seeding or transplant depth or a narrow surface band above the seedline during planting. For

surface-banded applications, incorporate to the seeding depth with sufficient sprinkle or drip irrigation within 24 hours.

Spray nozzles should provide accurate and uniform spray deposition. To help ensure accuracy, calibrate sprayer before each use. Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective pest control. For information on spray equipment and calibration, consult sprayer manufacturers and/or your local agricultural representative specialists.

USE DIRECTIONS

CROP GROUP 4: LEAFY VEGETABLES	
CROP	Crop Group 4: Leafy Vegetables – amaranth (leafy amaranth, Chinese spinach, tampala), arugula (roquette), cardoon, celery, Chinese celery, celtuce, chervil, edible-leaved chrysanthemum, garland chrysanthemum, corn salad, garden cress, upland cress, dandelion, dock (sorrel), endive (escarole), Florence fennel, head and leaf lettuce, orach, parsley, garden purslane, winter purslane, radicchio (red chicory), rhubarb, spinach, New Zealand spinach, vine spinach and Swiss chard
PEST	Control of aphids, dipteran leafminers and leafhoppers. Early season control of cabbage looper. Early season suppression of flea beetles. Reduces damage caused by beet armyworm, corn earworm and fall armyworm.
RATE	750 g/ha See Rate Conversion Chart – Vegetables for rates per 100 m row
APPLICATION METHOD	Ground application
APPLICATION TIMING	In-furrow application at the seeding or transplant depth, or a narrow surface band above the seedline during planting.
NOTES	Apply in sufficient water volume to ensure uniform application and incorporation at least 5 cm (2 in) into the soil Apply only one application per season. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) or Group 28 (diamide) insecticide following in-furrow or soil application of MINECTO DUO 40WG.

CROP GROUP 5: BRASSICA VEGETABLES	
CROP	Crop Group 5: Brassica Vegetables –broccoli, Chinese broccoli (gai lon), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), cauliflower, cavolo broccolo, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach and rape greens
PEST	Control of aphids, dipteran leafminers and flea beetles. Early season control of cabbage looper, diamondback moth and imported cabbageworm. Early season suppression of flea beetles and thrips. Reduces damage caused by beet armyworm, corn earworm, fall armyworm and yellowstriped armyworm.
RATE	750 g/ha
APPLICATION METHOD	Ground application
APPLICATION TIMING	In-furrow application at the seeding or transplant depth, or a narrow surface band above the seedline during planting.
NOTES	Apply in sufficient water volume to ensure uniform application and incorporation at least 5 cm (2 in) into the soil Apply only one application per season. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) or Group 28 (diamide) insecticide following in-furrow or soil application of MINECTO DUO 40WG.

CROP GROUP 8-09: FRUITING VEGETABLES	
CROP	Crop Group 8-09: Fruiting Vegetables –African eggplant, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, okra, pea eggplant, pepino, bell pepper, non-bell pepper, scarlet eggplant, sunberry, tomatillo, tomato, and cultivars, varieties and hybrids of these commodities
PEST	Control of aphids, Colorado potato beetle, dipteran leafminers, leafhoppers and potato psyllid. Early season control of cabbage looper. Early season suppression of flea beetles and thrips. Reduces damage caused by beet armyworm, fall armyworm, tomato fruitworm and yellowstriped armyworm.
RATE	440 - 750 g/ha See Rate Conversion Chart – Vegetables for rates per 100 m row Use the high rate for beet armyworm, fall armyworm, tomato fruitworm and yellowstriped armyworm.
APPLICATION METHOD	Ground application
APPLICATION TIMING	In-furrow application at the seeding or transplant depth, or a narrow surface band above the seedline during planting.
NOTES	Apply in sufficient water volume to ensure uniform application and incorporation at least 5 cm (2 in) into the soil Apply only one application per season. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) or Group 28 (diamide) insecticide following in-furrow or soil application of MINECTO DUO 40WG.

CROP GROUP 9: CUCURBIT VEGETABLES	
CROP	Crop Group 9: Cucurbit Vegetables –Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), <i>Momordica</i> spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), muskmelon (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), pumpkin, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (includes butternut squash, calabaza, hubbard squash acorn squash, spaghetti squash), watermelon
PEST	Control of aphids, dipteran leafminers and leafhoppers. Early season suppression of cucumber beetles, flea beetles and thrips.
RATE	750 g/ha See Rate Conversion Chart – Vegetables for rates per 100 m row
APPLICATION METHOD	Ground application
APPLICATION TIMING	In-furrow application at the seeding or transplant depth, or a narrow surface band above the seedline during planting.
NOTES	Apply in sufficient water volume to ensure uniform application and incorporation at least 5 cm (2 in) into the soil Apply only one application per season. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) or Group 28 (diamide) insecticide following in-furrow or soil application of MINECTO DUO 40WG.
POTATOES	
CROP	Potatoes
PEST	Aphids, Colorado potato beetle, flea beetles, potato leafhopper
RATE	440 to 700 g/ha See Rate Conversion Chart – Potatoes for rates per 100 m row
APPLICATION METHOD	Ground application
APPLICATION TIMING	In-furrow application at the seeding depth, or a narrow surface band above the seedline during planting.
NOTES	Apply in sufficient water volume to ensure uniform application and incorporation into the soil. DO NOT use a foliar application of a product containing a Group 4 (neonicotinoid) or Group 28 (diamide) insecticide following in-furrow or soil application of MINECTO DUO 40WG.

MINECTO DUO 40WG – RATE CONVERSION CHART – VEGETABLES

Rate g product /ha	Rate in g product /100 m row of product for specified row spacing							
	Row Spacing (cm)							
	15	30	46	51	62	76	91	100
440	0.66	1.32	2.02	2.24	2.73	3.34	4.00	4.40
750	1.13	2.25	3.45	3.83	4.65	5.70	6.83	7.50
Rate g product /ha	Rate in g product /100 m row of product for specified row spacing							
	Row Spacing (cm)							
	110	120	150	180	210	240	270	300
440	4.84	5.28	6.60	7.92	9.24	10.56	11.88	13.20
750	8.25	9.00	11.25	13.50	15.75	18.00	20.25	22.50

MINECTO DUO 40WG – RATE CONVERSION CHART - POTATOES

Rate g product /ha	Rate in g product /100 m row of product for specified row spacing													
	Row Spacing (cm)													
	75	80	85	90	95	100	105	110	115	120	125	150	185	215
440	3.30	3.52	3.74	3.96	4.18	4.40	4.62	4.84	5.06	5.28	5.50	6.60	8.14	9.46
700	5.63	6.00	6.38	6.75	7.13	7.50	7.88	8.25	8.63	9.00	9.38	11.25	13.88	16.13

Rotational Restrictions**Recommended Plant-Back Intervals (PBI) for Rotational Crops.**

PBI	CROPS
0 days	Crop Group 1C (Tuberous and corm vegetables); Crop Group 3-07 (Bulb vegetables); Crop Group 4 (Leafy vegetables; except <i>Brassica</i> vegetables); Crop Group 5 (<i>Brassica</i> (Cole) leafy vegetables); Crop Group 8-09 (Fruiting vegetables); Crop Group 9 (Cucurbit vegetables); Crop Group 13-07B (Bushberry subgroup); Crop Group 20 (Oilseed)
30 days	Crop Group 1A (Root and tuber vegetables); Crop Group 2 (Leaves of root and tuber vegetables); Crop Group 6 (Legume vegetables (succulent or dried)); Crop Group 7 (Foliage of legume vegetables); Crop Group 13-07G (Lowgrowing berry subgroup); Crop Group 15 (Cereal grains); Crop Group 16 (Forage, fodder, and straw of cereal grains); Crop Group 17 (Grass forage, fodder, and hay); Crop Group 18 (Nongrass animal feeds: Forage, fodder, straw and hay)
365 days	Other crops

Resistance-Management Recommendations

For resistance management, please note that MINECTO DUO 40WG contains a Group 4A insecticide (thiamethoxam, belonging to the neonicotinoid class of chemistry) and a Group 28 insecticide (cyantraniliprole, belonging to the diamide class of chemistry). Any insect population may contain individuals naturally resistant to MINECTO DUO 40WG and other Group 4 or 28 insecticides. The resistant individuals may dominate the insect population if this group of

insecticides is used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide resistance:

Where possible, rotate the use of MINECTO DUO 40WG or other Group 4 or 28 insecticides with different groups that control the same pests in a field.

Use tank mixtures with miticides/insecticides from a different group when such use is permitted.

Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development. If resistance is suspected, do not reapply MINECTO DUO 40WG or other Group 4A or Group 28 insecticides.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

MINECTO™ is a trademark of a Syngenta Group Company.

GROUP	3	4	12	FUNGICIDES
GROUP		4		INSECTICIDE

HELIX[®] LIQUID SEED TREATMENT

INSECTICIDE AND FUNGICIDE

SUSPENSION

AGRICULTURAL

HELIX[®] LIQUID SEED TREATMENT is a liquid seed treatment for use on canola and mustard for early season control of flea beetles, seed-borne blackleg, seed-borne *Alternaria*, and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium* spp., *Fusarium* spp. and *Rhizoctonia* spp.

This product is for use in areas where low to moderate early season flea beetle pressure is expected.

GUARANTEE:

Thiamethoxam 10.3%
Difenoconazole 1.24%
Metalaxyl-M and S-isomer 0.39%
Fludioxonil 0.13%

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

READ THE ENTIRE LABEL BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL

CAUTION



POISON

REGISTRATION NUMBER: 26637
PEST CONTROL PRODUCTS ACT
NET CONTENTS: 105 L, 200 L, 450 L, 1000L, 1050 L, Bulk

Syngenta Canada Inc.

140 Research Lane, Research Park
Guelph, ON N1G 4Z3
Telephone: 1-877-964-3682

For use in commercial seed treatment facilities with closed transfer systems only. No open transfer of HELIX LIQUID SEED TREATMENT. All seed treated with this product must be conspicuously coloured at the time of treatment.

Label

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

IN CASE OF POISONING, 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 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 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.

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 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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If ingested, induce emesis or lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS and PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during handling. At the beginning of breaks, remove protective clothing. At the end of work shifts, remove protective clothing and wash thoroughly.
2. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
3. Store the product in a well ventilated, secure area. Avoid contamination of feed and foodstuffs.
4. Clean up spilled material, equipment and work area as soon as possible after use.
5. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing

personal protective equipment may be in the area during application.

6. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.

Environmental Hazards

Toxic to bees. Bees can be exposed to product residues in flower, leaves, pollen and/or nectar resulting from seed treatment applications. 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 or other surfaces.

Use Restrictions:

1. Treated seed must not be used for food, feed or oil processing.
2. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
3. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“This seed has been treated with HELIX LIQUID SEED TREATMENT which contains an insecticide (thiamethoxam) and fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). Wear long-sleeve shirt, long pants, and chemical-resistant gloves when handling treated seed. Do not use for food, feed or oil processing. Store away from food and feed.”**

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 U.S., visit CropLife Canada's website at www.croplife.ca.

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 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 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:

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GROUP		4		INSECTICIDE

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POISON

REGISTRATION NUMBER: **26637**
 PEST CONTROL PRODUCTS ACT

Syngenta Crop Protection Canada Inc.

140 Research Lane, Research Park
 Guelph, ON N1G 4Z3
 Telephone: 1-877-964-3682

For use in commercial seed treatment facilities with closed transfer systems only. No open transfer of HELIX LIQUID SEED TREATMENT. All seed treated with this product must be conspicuously coloured at the time of treatment.

PAMPHLET

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2. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
3. Store the product in a well-ventilated, secure area. Avoid contamination of feed and foodstuffs.
4. Clean up spilled material, equipment and work area as soon as possible after use.
5. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing

personal protective equipment may be in the area during application.

6. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.

Environmental Hazards

Toxic to bees. Bees can be exposed to product residues in flower, leaves, pollen and/or nectar resulting from seed treatment applications. 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 or other surfaces.

Use Restrictions:

1. Treated seed must not be used for food, feed or oil processing.
2. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
3. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“This seed has been treated with HELIX LIQUID SEED TREATMENT which contains an insecticide (thiamethoxam) and fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). Wear long-sleeve shirt, long pants, and chemical-resistant gloves when handling treated seed. Do not use for food, feed or oil processing. Store away from food and feed.”**

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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 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 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 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.

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

GENERAL INFORMATION

HELIX LIQUID SEED TREATMENT is a ready to use liquid seed treatment for canola and mustard. HELIX LIQUID SEED TREATMENT contains an insecticide (thiamethoxam) and three fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). The insecticide component of HELIX LIQUID SEED TREATMENT provides early season control of flea beetles for 14 – 21 days. The fungicide component of HELIX LIQUID SEED TREATMENT provides early season control of seed-borne blackleg (*Leptosphaeria maculans*), seed-borne *Alternaria* (*Alternaria* spp.), and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium* spp., *Fusarium* spp. and *Rhizoctonia* spp.

Integrated Pest Management:

Control of Diseases and (or) Flea Beetles can be reduced significantly if:

- Canola is seeded into the same field more than once every three years.
- Seeding depths are excessive (>4 cm).
- Emerging seedlings are subjected to poor growing conditions.
- Canola is planted into fields with reduced tillage practices.

Canola fields should be monitored on a regular basis after emergence. Flea beetles often migrate from field edges inward. Field scouting will determine if a foliar insecticide application is warranted and whether it will be required over the entire field or on the headlands only.

Foliar insecticide application should be considered if:

- Flea beetle damage has reached or is approaching the economic threshold of 25% leaf area damage on the cotyledons or first true leaves.
- Canola stubble or a canola field is adjacent to emerging canola fields.
- Flea beetle populations in previous years have been observed to be high and the level of pressure sustained.

Foliar insecticide applications should be made immediately if:

- Stem feeding is observed. This may occur under cool and windy conditions.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

HELIX LIQUID SEED TREATMENT is a liquid ready to use product, which includes a pigment. No additional colorant, dyes, binders, polymers or water are required.

Apply 1.5 L/100 kg seed of HELIX LIQUID SEED TREATMENT using standard commercial seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect or disease control. Consult the manufacturer of the seed treating equipment for advice on the operation and calibration of the equipment. Maintain constant product agitation during the seed treatment process. Allow the seed to dry before bagging.

For additional disease control in canola, HELIX LIQUID SEED TREATMENT may be mixed with DYNASTY® 100FS Fungicide in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

This product contains a pigment, which 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 “Seed Act” must be strictly adhered to when using this product.

Crops	Insect Controlled	Diseases Controlled	Rate (L/100 kg seed)
Canola, Oriental Mustard (condiment types)	Flea beetles	Seed-borne Blackleg (<i>Leptosphaeria maculans</i>) Seed-borne <i>Alternaria</i> (<i>Alternaria</i> spp.) Seedling disease complex (<i>damping-off</i> , <i>seedling blight</i> <i>seed rot</i> , and <i>root rot</i>) <i>Pythium</i> spp. <i>Fusarium</i> spp. <i>Rhizoctonia</i> spp.	1.5

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below. Accordingly, the User assume all risks related to performance and crop tolerance arising, and agree to hold Syngenta Canada Inc. harmless, from any claims based on efficacy and/or phytotoxicity in connection with the uses described below.

Crop	Insect Controlled	Diseases Controlled	Rate (L/100 kg seed)	Notes
Oriental Mustard (oilseed types)	Flea beetles	Seed-borne Blackleg (<i>Leptosphaeria maculans</i>) Seed-borne <i>Alternaria</i> (<i>Alternaria</i> spp.) Seedling disease complex (damping-off, seedling blight seed rot, and root rot) <i>Pythium</i> spp. <i>Fusarium</i> spp. <i>Rhizoctonia</i> spp.	1.5	One application as a seed treatment

Note:**Seed Storage:**

Lab and field studies have shown that HELIX LIQUID SEED TREATMENT treated canola and mustard can be stored without loss in germination or insect and disease performance. However, 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 or propagating materials for all crop seed.

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. Treating such seed with HELIX LIQUID SEED TREATMENT should only be done for curative control of existing disease pests. 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 seed before committing the total seed lot to a selected seed treatment.

Seeding Equipment:

Depending on the seeding equipment used, seed treated with HELIX LIQUID SEED TREATMENT may not flow through the equipment at the same rate as untreated seed or seed treated with other canola seed treatment products. Re-calibration of seeding equipment is recommended before planting seed treated with HELIX LIQUID SEED TREATMENT.

Resistance Management Recommendations

For resistance management, HELIX LIQUID SEED TREATMENT contains a Group 4 insecticide and Group 3, 4 and 12 fungicides. Any insect or fungal population may contain individuals naturally resistant to HELIX LIQUID SEED TREATMENT and other Group 4 insecticides or Group 3, 4 and 12 fungicides. A gradual or total loss of pest control may occur over time if these insecticides and fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide and fungicide resistance:

Where possible, rotate the use of HELIX LIQUID SEED TREATMENT or other Group 4 insecticides and Groups 3, 4 and 12 fungicides with different groups that control the same insects or pathogens.

Insecticide and 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 insect and fungal populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pests problems in your area.

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

GROUP	3	4	7	12	FUNGICIDES
GROUP	4				INSECTICIDE

HELIX[®] VIBRANCE[®]

INSECTICIDE AND FUNGICIDE SEED TREATMENT

SUSPENSION

AGRICULTURAL

A liquid seed treatment to control diseases and insect pests in labeled crops.

GUARANTEE:

Thiamethoxam	269 g/L
Difenoconazole	16 g/L
Metalaxyl-M and S-isomer	5 g/L
Sedaxane	3.4 g/L
Fludioxonil	1.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.048% and 2-bromo-2-nitropropane-1,3-diol at 0.021% as preservatives.



CAUTION POISON

READ THE LABEL AND BROCHURE BEFORE USING

KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL

REGISTRATION NUMBER: **31454**
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

For use by commercial treaters (facilities and mobile treaters) with closed transfer systems only. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. No open transfer of HELIX[®] VIBRANCE[®] is permitted. All seed treated with this product must be conspicuously coloured at the time of treatment.

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

IN CASE OF POISONING, 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 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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS and PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during handling. At the beginning of breaks, remove protective clothing. At the end of work shifts, remove protective clothing and wash thoroughly.
2. Harmful if swallowed. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
3. Store the product in a well-ventilated, secure area. Avoid contamination of feed and foodstuffs.
4. Do not graze or feed livestock on treated areas.
5. Do not plant any crop other than those on the HELIX VIBRANCE or VIBRANCE 500FS Seed Treatment label within 60 days to fields in which seed treated with HELIX VIBRANCE were planted.
6. Clean up spilled material, equipment and work area as soon as possible after use.

7. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing personal protective equipment may be in the area during application.
8. Treat seed in a well-ventilated area. Workers involved in clean-up of seed-treating equipment must wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in treating seeds or repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH-approved dust mask during all job activities.

Environmental Precautions:

1. Do not apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.
2. Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
3. TOXIC to aquatic organisms.
4. Toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.
5. 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. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
3. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **"This seed has been treated the insecticide, thiamethoxam and fungicides, difenoconazole, metalaxyl-M and S-isomer, fludioxonil and sedaxane. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves and a dust mask do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed."**

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

DISPOSAL OF UNUSED, UNWANTED PRODUCT

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 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 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 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 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.

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

HELIX[®] and VIBRANCE[®] are trademarks of a Syngenta Group Company.

GROUP	3	4	7	12	FUNGICIDES
GROUP	4				INSECTICIDE

HELIX[®] VIBRANCE[®]

INSECTICIDE AND FUNGICIDE SEED TREATMENT

SUSPENSION

AGRICULTURAL

A liquid seed treatment to control diseases and insect pests in labeled crops.

GUARANTEE:

Thiamethoxam	269 g/L
Difenoconazole	16 g/L
Metalaxyl-M and S-isomer	5 g/L
Sedaxane	3.4 g/L
Fludioxonil	1.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.048% and 2-bromo-2-nitropropane-1,3-diol at 0.021% as preservatives.



CAUTION POISON

READ THE LABEL AND BROCHURE BEFORE USING

KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL

REGISTRATION NUMBER: **31454**
PEST CONTROL PRODUCTS ACT

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

For use by commercial treaters (facilities and mobile treaters) with closed transfer systems only. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. No open transfer of HELIX[®] VIBRANCE[®] is permitted. All seed treated with this product must be conspicuously coloured at the time of treatment.

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

IN CASE OF POISONING, 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 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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS and PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during handling. At the beginning of breaks, remove protective clothing. At the end of work shifts, remove protective clothing and wash thoroughly.
2. Harmful if swallowed. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
3. Store the product in a well-ventilated, secure area. Avoid contamination of feed and foodstuffs.
4. Do not graze or feed livestock on treated areas.
5. Do not plant any crop other than those on the HELIX VIBRANCE or VIBRANCE 500FS Seed Treatment label within 60 days to fields in which seed treated with HELIX VIBRANCE were planted.
6. Clean up spilled material, equipment and work area as soon as possible after use.

7. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing personal protective equipment may be in the area during application.
8. Treat seed in a well-ventilated area. Workers involved in clean-up of seed-treating equipment must wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in treating seeds or repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH-approved dust mask during all job activities.

Environmental Precautions:

1. Do not apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.
2. Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
3. TOXIC to aquatic organisms.
4. Toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.
5. 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. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
3. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **"This seed has been treated the insecticide, thiamethoxam and fungicides, difenoconazole, metalaxyl-M and S-isomer, fludioxonil and sedaxane. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves and a dust mask do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed."**

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

DISPOSAL OF UNUSED, UNWANTED PRODUCT

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 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 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 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 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.

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

GENERAL INFORMATION

HELIX VIBRANCE contains an insecticide, thiamethoxam, and four fungicides, difenoconazole, metalaxyl-M and S-isomer, fludioxonil and sedaxane. This product controls a broad spectrum of seed and soil-borne diseases as well as early-season control of flea beetles.

Integrated Pest Management for Canola:

Control of diseases and/or flea beetles can be reduced significantly if:

- Canola is seeded into the same field more than once every three years
- Seeding depths are excessive (>4 cm)
- Emerging seedlings are subjected to poor growing conditions
- Canola is planted into fields with reduced tillage practices

Canola fields should be monitored on a regular basis after emergence. Flea beetles often migrate from field edges inward. Field scouting will determine if a foliar insecticide application is warranted and whether it will be required over the entire field or on the headlands only.

Foliar insecticide application should be considered if:

- Flea beetle damage has reached or is approaching the economic threshold of 25% leaf area damage on the cotyledons or first true leaves.
- Canola stubble or a canola field is adjacent to emerging canola fields.
- Flea beetle populations in previous years have been observed to be high and the level of pressure sustained.

Foliar insecticide applications should be made immediately if:

- Stem feeding is observed. This may occur under cool and windy conditions.

DIRECTIONS FOR USE

HELIX VIBRANCE is a premix formulation that includes a pigment. To optimize seed coverage, water, additional colourant and polymers can be added to facilitate application.

Apply 1.5 L/100 kg seed of HELIX VIBRANCE using standard commercial seed treatment equipment that provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect or disease control. Consult the manufacturer of the seed treating equipment for advice on the operation and calibration of the equipment. Maintain constant product agitation during the seed treatment process. Allow the seed to dry before bagging.

Ideal storage temperature is above freezing and below 30 °C. Repeated freeze-thawing of HELIX VIBRANCE 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 “Seed Act” must be strictly adhered to when using this product.

CROPS	Canola Rapeseed Mustard Seed (condiment and oilseed)
INSECTS CONTROLLED	Flea beetles
DISEASES CONTROLLED	Seed-borne Blackleg (<i>Leptosphaeria maculans</i>) Seed-borne Alternaria (<i>Alternaria</i> spp.) Seedling disease complex (damping-off, seedling blight seedling blight seed rot, and root rot) caused by <i>Pythium</i> spp., <i>Fusarium</i> spp. and <i>Rhizoctonia</i> spp.
RATE	1.5 L product/100 kg seed
NOTES	One application as a seed treatment. Do not make any subsequent application of a Group 4 Insecticide (i.e., in-furrow or foliar application) following treatment with HELIX VIBRANCE.

Note: Seed Storage

Lab and field studies have shown that HELIX VIBRANCE treated canola and mustard can be safely stored for 18 months without loss in germination or insect and disease performance. However, 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 or propagating materials for all crop seed. 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. Treating such seed with HELIX VIBRANCE should only be done for curative control of existing disease pests. 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 seed before committing

the total seed lot to a selected seed treatment.

Seeding Equipment:

Depending on the seeding equipment used, seed treated with HELIX VIBRANCE may not flow through the equipment at the same rate as untreated seed or seed treated with other canola seed treatment products. Re-calibration of seeding equipment is recommended before planting seed treated with HELIX VIBRANCE.

Resistance Management Recommendations

For resistance management, HELIX VIBRANCE contains a Group 4 insecticide and Groups 3, 4, 7 and 12 fungicides. Any insect or fungal population may contain individuals naturally resistant to HELIX VIBRANCE and other Group 4 insecticides or Groups 3, 4, 7 and 12 fungicides. A gradual or total loss of pest control may occur over time if these insecticides and fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide and fungicide resistance:

Where possible, rotate the use of HELIX VIBRANCE or other Group 4 insecticides and Groups 3, 4, 7 and 12 fungicides with different groups that control the same insects or pathogens.

Insecticide and 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 insect and fungal populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pests 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.

HELIX[®] and VIBRANCE[®] are trademarks of a Syngenta Group Company.

GROUP	3	4	12	FUNGICIDES
GROUP		4		INSECTICIDE

HELIX XTra® Seed Treatment

INSECTICIDE AND FUNGICIDE

SUSPENSION

AGRICULTURAL

HELIX XTra® Seed Treatment is a liquid seed treatment for use on canola mustard and *Brassica carinata* for early season control of flea beetles, seed-borne blackleg, seed-borne *Alternaria* and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium* spp., *Fusarium* spp. and *Rhizoctonia* spp.

This product is for use in areas with high flea beetle pressure where extended early season control is required.

GUARANTEE:

Thiamethoxam	20.70%
Difenoconazole	1.25%
Metalaxyl-M and S-isomer	0.39%
Fludioxonil	0.13%

Contains 1,2-benzisothiazolin-3-one at 0.012 % as a preservative.

READ THE LABEL AND BROCHURE BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL

CAUTION



POISON

REGISTRATION NUMBER: **26638**
PEST CONTROL PRODUCTS ACT
NET CONTENTS: **105 L, 200 L, 450 L, 1050 L, Bulk**

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

For use in commercial seed treatment facilities with closed transfer systems only. No open transfer of HELIX XTra Seed Treatment. All seed treated with this product must be conspicuously coloured at the time of treatment.

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

IN CASE OF POISONING, 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If ingested, induce emesis or lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. **KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS and PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.** Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during handling. At the beginning of breaks, remove protective clothing. At the end of work shifts, remove protective clothing and wash thoroughly.
2. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
3. Store the product in a well ventilated, secure area. Avoid contamination of feed and foodstuffs.
4. Clean up spilled material, equipment and work area as soon as possible after use.
5. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing personal protective

equipment may be in the area during application.

6. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.
7. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.
8. Wear a suitable dust mask when bagging, or sewing bags of treated seed or when transferring seed to a storage bin.

Environmental Precautions:

1. Do not apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.
2. Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
3. If treated seed is spilled outdoors, promptly clean up.
4. Toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. **TOXIC to aquatic organisms.**

Use Restrictions:

1. Treated seed must not be used for food, feed or oil processing.
2. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
3. All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows: **“This seed has been treated with HELIX XTra SEED TREATMENT which contains an insecticide (thiamethoxam) and fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). Wear a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH/MSHA-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed.”**

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.

DISPOSAL OF UNUSED, UNWANTED PRODUCT

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 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 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 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.

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

HELIX XTra[®] is a trademark of a Syngenta Group Company.

GROUP	3	4	12	FUNGICIDES
GROUP		4		INSECTICIDE

HELIX XTra® Seed Treatment

INSECTICIDE AND FUNGICIDE

SUSPENSION

AGRICULTURAL

HELIX XTra® Seed Treatment is a liquid seed treatment for use on canola, mustard and *Brassica carinata* for early season control of flea beetles, seed-borne blackleg, seed-borne *Alternaria* and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium* spp., *Fusarium* spp. and *Rhizoctonia* spp.

This product is for use in areas with high flea beetle pressure where extended early season control is required.

GUARANTEE:

Thiamethoxam	20.70%
Difenoconazole	1.25%
Metalaxyl-M and S-isomer	0.39%
Fludioxonil.....	0.13%

Contains 1,2-benzisothiazolin-3-one at 0.012 % as a preservative.

**READ THE LABEL AND BROCHURE BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED
PERSONNEL**

CAUTION



POISON

REGISTRATION NUMBER: **26638**
PEST CONTROL PRODUCTS ACT

Syngenta Canada Inc.

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

For use in commercial seed treatment facilities with closed transfer systems only. No open transfer of HELIX XTra Seed Treatment. All seed treated with this product must be conspicuously coloured at the time of treatment.

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

IN CASE OF POISONING, 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If ingested, induce emesis or lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

9. **KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS and PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.** Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke during handling. At the beginning of breaks, remove protective clothing. At the end of work shifts, remove protective clothing and wash thoroughly.
10. Avoid inhalation of vapours or treated seed dust. Wash hands and face after handling and before eating, smoking, drinking or using the toilet.
11. Store the product in a well ventilated, secure area. Avoid contamination of feed and foodstuffs.
12. Clean up spilled material, equipment and work area as soon as possible after use.
13. Do not apply in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing personal protective

- equipment may be in the area during application.
14. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.
 15. Treat seed in a well-ventilated area. Workers involved in treating, clean-up, repair or maintenance of seed treating equipment must wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH/MSHA-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA-approved dust mask during all job activities.
 16. Wear a suitable dust mask when bagging, or sewing bags of treated seed or when transferring seed to a storage bin.

Environmental Precautions:

5. Do not apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.
6. Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
7. If treated seed is spilled outdoors, promptly clean up.
8. Toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. **TOXIC to aquatic organisms.**

Use Restrictions:

4. Treated seed must not be used for food, feed or oil processing.
5. Not for use in hopper-box, planter-box, slurry-box or other non-commercial seed treatment applications (e.g. on-farm treaters).
6. All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows: **“This seed has been treated with HELIX XTra SEED TREATMENT which contains an insecticide (thiamethoxam) and fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). Wear a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH/MSHA-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed.”**

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.

DISPOSAL OF UNUSED, UNWANTED PRODUCT

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 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 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 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.

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

GENERAL INFORMATION

HELIX XTra Seed Treatment is a ready to use liquid seed treatment for canola, mustard and *Brassica carinata*. HELIX XTra Seed Treatment contains an insecticide (thiamethoxam) and three fungicides (difenoconazole, metalaxyl-M and S-isomer, and fludioxonil). The insecticide component of HELIX XTra Seed Treatment provides early season control of flea beetles for 28 – 35 days. This product is for use in areas with high flea beetle pressure where extended early season control is required. The fungicide component of HELIX XTra Seed Treatment provides early season control of seed-borne blackleg (*Leptosphaeria maculans*), seed-borne *Alternaria* (*Alternaria* spp.) and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium* spp., *Fusarium* spp. and *Rhizoctonia* spp. Thiamethoxam is a Group 4 Insecticide. Do not make any subsequent application of a Group 4 Insecticide (i.e., in-furrow or foliar application) following treatment with HELIX XTra Seed Treatment.

Integrated Pest Management:

Control of Diseases and (or) Flea Beetles can be reduced significantly if:

- Canola is seeded into the same field more than once every three years.
- Seeding depths are excessive (>4 cm).

- Emerging seedlings are subjected to poor growing conditions.
- Canola is planted into fields with reduced tillage practices.

Canola fields should be monitored on a regular basis after emergence. Flea beetles often migrate from field edges inward. Field scouting will determine if a foliar insecticide application is warranted and whether it will be required over the entire field or on the headlands only.

Foliar insecticide application should be considered if:

- Flea beetle damage has reached or is approaching the economic threshold of 25% leaf area damage on the cotyledons or first true leaves.
- Canola stubble or a canola field is adjacent to emerging canola fields.
- Flea beetle populations in previous years have been observed to be high and the level of pressure sustained.

Foliar insecticide applications should be made immediately if:

- Stem feeding is observed. This may occur under cool and windy conditions.

DIRECTIONS FOR USE

HELIX XTra Seed Treatment is a ready to use product, which includes a pigment. No additional colorant, dyes, binders, polymers or water are required.

Apply 1.5 L/100 kg seed of HELIX XTra Seed Treatment using standard commercial seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect or disease control. Consult the manufacturer of the seed treating equipment for advice on the operation and calibration of the equipment. Maintain constant product agitation during the seed treatment process. Allow the seed to dry before bagging.

For additional disease control in canola, HELIX XTra Seed Treatment may be mixed with DYNASTY® 100FS Fungicide in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

This product contains a pigment, which 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 “Seed Act” must be strictly adhered to when using this product.

Crop	Insect Controlled	Diseases Controlled	Rate (L/100 kg seed)	Notes
Canola, Oriental Mustard (condiment types)	Flea beetles	Seed-borne Blackleg (<i>Leptosphaeria maculans</i>) Seed-borne Alternaria (<i>Alternaria</i> spp.) Seedling disease complex (damping-off, seedling blight)	1.5	One application as a seed treatment. Do not make any subsequent application of a Group 4 Insecticide

		seed rot, and root rot) <i>Pythium</i> spp. <i>Fusarium</i> spp. <i>Rhizoctonia</i> spp.		(i.e., in-furrow or foliar application) following treatment with HELIX XTra Seed Treatment.
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NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below. Accordingly, the Buyer and User assumes all risks related to performance and crop tolerance arising, and agrees to hold Syngenta Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the uses described below.

Crop	Insect Controlled	Diseases Controlled	Rate (L/100 kg seed)	Notes
Oriental Mustard (oilseed types), <i>Brassica carinata</i>	Flea beetles	Seed-borne Blackleg (<i>Leptosphaeria maculans</i>) Seed-borne Alternaria (<i>Alternaria</i> spp.) Seedling disease complex (damping-off, seedling blight seed rot and root rot) <i>Pythium</i> spp. <i>Fusarium</i> spp. <i>Rhizoctonia</i> spp.	1.5	One application as a seed treatment. Do not make any subsequent application of a Group 4 Insecticide (i.e., in-furrow or foliar application) following treatment with HELIX XTra Seed Treatment.

Note:

Seed Storage:

Lab and field studies have shown that HELIX XTra Seed Treatment treated canola and mustard can be safely stored for 18 months without loss in germination or insect and disease performance. However, 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 or propagating materials for all crop seed.

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. Treating such seed with HELIX XTra Seed Treatment should only be done for curative control of existing disease pests. 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 seed before committing the total seed lot to a selected seed treatment.

Seeding Equipment:

Depending on the seeding equipment used, seed treated with HELIX XTra Seed Treatment may not flow through the equipment at the same rate as untreated seed or seed treated with other canola seed treatment products. Re-calibration of seeding equipment is recommended before planting seed treated with HELIX XTra Seed Treatment.

Resistance Management Recommendations

For resistance management, HELIX XTra Seed Treatment contains a Group 4 insecticide and Groups 3, 4 and 12 fungicides. Any insect or fungal population may contain individuals naturally resistant to HELIX XTra Seed Treatment and other Group 4 insecticides or Groups 3, 4 and 12 fungicides. A gradual or total loss of pest control may occur over time if these insecticides and fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide and fungicide resistance:

Where possible, rotate the use of HELIX XTra Seed Treatment or other Group 4 insecticides and Groups 3, 4 and 12 fungicides with different groups that control the same insects or pathogens.

Insecticide and 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 insect and fungal populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pests 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.

DYNASTY® and HELIX XTra® are trademarks of a Syngenta Group Company.

GROUP	4	INSECTICIDE
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CRUISER[®] 5FS Seed Treatment

INSECTICIDE

SUSPENSION

AGRICULTURAL

A seed treatment insecticide for control of certain insect pests of labeled crops.

GUARANTEE:

Thiamethoxam 47.6 %

Contains 1,2-benzisothiazolin-3-one at 0.01% as a preservative.

**READ THE LABEL AND ATTACHED BROCHURE BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED
PERSONNEL**

CAUTION



POISON

REGISTRATION NUMBER: **27045**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **20 L to 1050 L, Bulk**

Syngenta Canada Inc.

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

For small-grain cereals (except oats) and pulse crops, CRUISER 5FS Seed Treatment may be applied on-farm or by commercial seed treaters (facilities and mobile treaters). For all other crops, application must be performed in commercial seed treatment facilities. All application must be applied with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment.

Special Use Restrictions:

This product contains no colourant. An appropriate colourant must be added when this product is applied. Regulations pertaining to the "Seeds Act" must be strictly adhered to when using this product. A red colourant must be added when this product is applied to grain.

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. 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.

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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN AND DOMESTIC ANIMALS. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
2. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid prolonged contact with skin. Avoid inhalation of vapours, spray mist or treated seed dust. Wash hands and face after handling and before eating or smoking.
3. Avoid contamination of feed and foodstuffs.
4. **For commercial seed treatment of corn with 500 g thiamethoxam/100 kg of seed, adhere to the following:** Treat seed in a well-ventilated area. Treaters and cleaners must wear chemical resistant coveralls over a long sleeved shirt, long pants and chemical resistant gloves. All other workers (repair, maintenance, bagger, sewer, stacker, forklift operator and other) must wear coveralls over a long-sleeved shirt, long pants and chemical

resistant gloves. In addition, treaters, baggers, sewers, stackers and cleaners must wear a NIOSH/MSHA approved dust mask during all activities.

5. **For commercial seed treatment of all crops with registered label rates, other than the 500 g thiamethoxam/100 kg seed rate, adhere to the following:** Treat seed in a well-ventilated area. All workers (treater, cleaner, repair, maintenance, bagger, sewer, stacker, forklift operator and others) must wear coveralls over a long-sleeved shirt, long pants and chemical resistant gloves. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA approved dust mask during all job activities.
6. **For on-farm seed treatment of small-grain cereals (except oats) and pulses (dried, shelled peas and beans):** Workers must wear cotton coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, and a NIOSH/MSHA approved dust mask during mixing, loading, treating, clean-up, and maintenance of seed treatment equipment.
7. **For commercial seed treatment of canola, rapeseed and mustard (condiment and oilseed):** Treat seed in a well-ventilated area. Workers involved in treating seeds or repair or maintenance or clean-up of seed treating equipment must wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH-approved dust mask during all job activities.

Environmental Hazards:

1. Thiamethoxam is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
2. To help minimize the dust generated during planting, refer to the "Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices" on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators.
3. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant.
4. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
5. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
6. This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present.
7. Treated seed is toxic to birds and small wild mammals.
8. Spilled or exposed seeds and dust must be incorporated into the soil or cleaned-up from the soil surface.

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 web site at www.croplife.ca.

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 CRUISER 5FS Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting.
4. All bags containing seed treated at the 500 g thiamethoxam/100 kg seed rate for sale or use in Canada must be labeled or tagged as follows: **“These seeds have been treated with 500 g thiamethoxam insecticide/100 kg seed. Wear cotton coveralls over long-sleeved shirt, long pants, chemical-resistant gloves and a NIOSH/MSHA approved respirator when handling treated seeds, including loading into seed hoppers and planting treated seed. Do not plant more than 1000 kg of corn seed per day. 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.**
5. All bags containing treated chickpea, lentil, dry pea (including field pea), lupin and faba bean for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. All individuals handling treated chickpeas, lentils, dry peas (including field peas), lupins and faba beans must wear cotton coveralls over a long sleeved shirt, long pants, chemical-resistant gloves and a properly fit-tested NIOSH/MSHA approved dust mask classified as N95 or higher when loading seed into hoppers and planting 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.**
6. All bags containing seed treated at a rate other than 500 g thiamethoxam/100 kg seed and that do not contain chickpeas, lentils, dry peas (including field peas) lupins or faba beans for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. 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.**
7. Additionally, all treated corn and soybean seed for sale or use in Canada must be labeled with the following information: **Thiamethoxam is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.**
8. All bags containing treated cucurbit seed for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. Use only closed cab planting equipment. In addition, all individuals handling treated cucurbit seed in enclosed areas (i.e. greenhouses) must wear a long-sleeved shirt, long pants, chemical-resistant gloves, and a properly fit-tested NIOSH/MSHA approved dust mask classified as N95 or higher when loading seed into**

automated planting equipment. Do not use for food, feed or oil processing. Store away from food and feed.

9. All bags containing treated canola, rapeseed or mustard (condiment or oilseed) for sale or use in Canada must be labelled or tagged as follows: **These seeds have been treated with the insecticide thiamethoxam. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves and a dust mask do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed.**
10. Do not plant treated seed by hand.

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 Returnable Containers:

Do not reuse this container for any purpose. For disposal, this 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)***

GROUP 4 INSECTICIDE

CRUISER® 5FS Seed Treatment

INSECTICIDE

SUSPENSION

AGRICULTURAL

A seed treatment insecticide for control of certain insect pests of labeled crops.

GUARANTEE:

Thiamethoxam 47.6 %

Contains 1,2-benzisothiazolin-3-one at 0.01% as a preservative.

**READ THE LABEL AND ATTACHED BROCHURE BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED
PERSONNEL**

CAUTION



POISON

REGISTRATION NUMBER: **27045**
PEST CONTROL PRODUCTS ACT

Syngenta Canada Inc.

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

For small-grain cereals (except oats) and pulse crops, CRUISER 5FS Seed Treatment may be applied on-farm or by commercial seed treaters (facilities and mobile treaters). For all other crops, application must be performed in commercial seed treatment facilities. All application must be applied with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment.

Special Use Restrictions:

This product contains no colourant. An appropriate colourant must be added when this product is applied. Regulations pertaining to the "Seeds Act" must be strictly adhered to when using this product. A red colourant must be added when this product is applied to grain.

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. 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.

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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. **KEEP OUT OF THE REACH OF CHILDREN AND DOMESTIC ANIMALS. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.**
2. Harmful if swallowed, inhaled or absorbed through skin. **DO NOT** get in eyes. Avoid prolonged contact with skin. Avoid inhalation of vapours, spray mist or treated seed dust. Wash hands and face after handling and before eating or smoking.
3. Avoid contamination of feed and foodstuffs.
4. **For commercial seed treatment of corn with 500 g thiamethoxam/100 kg of seed, adhere to the following:** Treat seed in a well-ventilated area. Treaters and cleaners must wear chemical resistant coveralls over a long sleeved shirt, long pants and chemical resistant gloves. All other workers (repair, maintenance, bagger, sewer, stacker, forklift operator and other) must wear coveralls over a long-sleeved shirt, long pants and chemical

resistant gloves. In addition, treaters, baggers, sewers, stackers and cleaners must wear a NIOSH/MSHA approved dust mask during all activities.

5. **For commercial seed treatment of all crops with registered label rates, other than the 500 g thiamethoxam/100 kg seed rate, adhere to the following:** Treat seed in a well-ventilated area. All workers (treater, cleaner, repair, maintenance, bagger, sewer, stacker, forklift operator and others) must wear coveralls over a long-sleeved shirt, long pants and chemical resistant gloves. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA approved dust mask during all job activities.
6. **For on-farm seed treatment of small-grain cereals (except oats) and pulses (dried, shelled peas and beans):** Workers must wear cotton coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, and a NIOSH/MSHA approved dust mask during mixing, loading, treating, clean-up, and maintenance of seed treatment equipment.
7. **For commercial seed treatment of canola, rapeseed and mustard (condiment and oilseed):** Treat seed in a well-ventilated area. Workers involved in treating seeds or repair or maintenance or clean-up of seed treating equipment must wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear. Workers involved in bagging, sewing, and stacking bags of treated seed, or when transferring seed to a storage bin must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, a NIOSH-approved dust mask, and socks and shoes. Forklift operators must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, and socks and shoes. For good hygiene practice, it is also recommended to wear a NIOSH-approved dust mask during all job activities.

Environmental Hazards:

1. Thiamethoxam is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
2. To help minimize the dust generated during planting, refer to the "Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices" on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators.
3. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant.
4. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
5. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
6. This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present.
7. Treated seed is toxic to birds and small wild mammals.
8. Spilled or exposed seeds and dust must be incorporated into the soil or cleaned-up from the soil surface.

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 web site at www.croplife.ca.

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 CRUISER 5FS Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting.
4. All bags containing seed treated at the 500 g thiamethoxam/100 kg seed rate for sale or use in Canada must be labeled or tagged as follows: **“These seeds have been treated with 500 g thiamethoxam insecticide/100 kg seed. Wear cotton coveralls over long-sleeved shirt, long pants, chemical-resistant gloves and a NIOSH/MSHA approved respirator when handling treated seeds, including loading into seed hoppers and planting treated seed. Do not plant more than 1000 kg of corn seed per day. 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.**
5. All bags containing treated chickpea, lentil, dry pea (including field pea), lupin and faba bean for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. All individuals handling treated chickpeas, lentils, dry peas (including field peas), lupins and faba beans must wear cotton coveralls over a long sleeved shirt, long pants, chemical-resistant gloves and a properly fit-tested NIOSH/MSHA approved dust mask classified as N95 or higher when loading seed into hoppers and planting 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.**
6. All bags containing seed treated at a rate other than 500 g thiamethoxam/100 kg seed and that do not contain chickpeas, lentils, dry peas (including field peas) lupins or faba beans for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. 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.**
7. Additionally, all treated corn and soybean seed for sale or use in Canada must be labeled with the following information: **Thiamethoxam is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.**
8. All bags containing treated cucurbit seed for sale or use in Canada must be labeled or tagged as follows: **These seeds have been treated with thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. Use only closed cab planting equipment. In addition, all individuals handling treated cucurbit seed in enclosed areas (i.e. greenhouses) must wear a long-sleeved shirt, long pants, chemical-resistant gloves, and a properly fit-tested NIOSH/MSHA approved dust mask classified as N95 or higher when loading seed into**

automated planting equipment. Do not use for food, feed or oil processing. Store away from food and feed.

9. All bags containing treated canola, rapeseed or mustard (condiment or oilseed) for sale or use in Canada must be labelled or tagged as follows: **These seeds have been treated with the insecticide thiamethoxam. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves when handling treated seeds, planting, and during maintenance, clean-up, and repair. In addition, wear a properly fit-tested NIOSH-approved dust mask rated N95 or higher when handling treated seeds (includes loading and unloading). Use only closed-cab planting equipment. Gloves and a dust mask do not need to be worn when inside the closed cab. Do not use for food, feed or oil processing. Store away from food and feed.**
10. Do not plant treated seed by hand.

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 Returnable Containers:

Do not reuse this container for any purpose. For disposal, this 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

CRUISER 5FS Seed Treatment belongs to the neonicotinoid class of chemistry that controls listed chewing and sucking insects through contact and systemic activity. Thorough seed coverage will offer the best protection of the seed from insect damage. When rate ranges are given, use the higher rate when insect pressure is expected to be high.

When seed is treated for post-planting protection against registered pests, CRUISER 5FS Seed Treatment will also provide protection during post-treatment storage of the seed against damage from many storage insect pests. Seed treated with CRUISER 5FS Seed Treatment has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian-meal moth.

For additional control of certain seed and soil borne pathogens, CRUISER 5FS Seed Treatment may be combined with the following seed treatment fungicides:

- Wheat and Barley: CRUISER 5FS Seed Treatment may be mixed with DIVIDEND® XL® (or DIVIDEND XL RTA®) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Corn: CRUISER 5FS Seed Treatment may be mixed with MAXIM® XL (or MAXIM 480FS + APRON XL® LS) and DYNASTY® 100FS in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Dry Edible Beans: CRUISER 5FS Seed Treatment may be mixed with APRON MAXX® RTA® or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Soybeans: CRUISER 5FS Seed Treatment may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.

When applied as a tank-mix combination, read and observe all label directions, including rates, restrictions, and grazing limitations for each product used in the tank-mix. Follow the more stringent precautionary measures for mixing, loading and applying stated on both product labels.

Note: Treatment of 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 or propagating material for all crop seed.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Ensure product is thoroughly mixed prior to application.

Apply CRUISER 5FS Seed Treatment utilizing closed system seed treatment equipment that provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect control. Thoroughly mix the recommended amount of CRUISER 5FS Seed Treatment into the required amount of water for the slurry rate to be used. Follow the manufacturer's application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry. Allow the seed to dry before bagging or storing into bulk containers. Depending on planting equipment, seed treated with CRUISER 5FS 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 CRUISER 5FS Seed Treatment will not affect the physical integrity of the product. If the product should freeze, bring the product back to room temperature, and then ensure the contents are mixed well prior to application.

This product does not contain a colourant. A suitable colourant (red for cereals) must be added prior to application to 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. Users are responsible for ensuring that the treated seed, when dried and ready for bagging, has an unnatural colour.

USE RATES:

The following uses must be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment):

Corn: (Field Corn, Seed Corn, Popcorn, Sweet Corn)

To provide protection against crop injury caused by Wireworms (*Agriotes* spp., *Limonius* spp. and *Melanotus* spp.) and European Chafer, apply CRUISER 5FS Seed Treatment at 83 mL/100 kg of seed. Do not apply less than 0.125 mg of active ingredient per kernel.

To provide protection against crop injury caused by Seed Corn Maggot, apply CRUISER 5FS Seed Treatment at 83 – 166 mL/100 kg seed (or 0.125 – 0.250 mg of active ingredient per kernel). Use the higher rate of CRUISER 5FS Seed Treatment for fields that have a history of moderate to severe pest pressure. To provide protection against Corn Flea Beetles which vector Stewart's Wilt disease, apply CRUISER 5FS Seed Treatment at 83 – 166 mL/100 kg seed. Do not apply less than 0.125 mg of active ingredient per kernel and do not exceed 0.250 mg of active ingredient per kernel.

To provide protection against crop injury caused by Corn Rootworm (including Western and Northern), apply CRUISER 5FS Seed Treatment at 830 mL/100 kg of seed. Do not apply less than 1.25 mg of active ingredient per kernel for seed planted in Canada. For seed destined to be exported from Canada, CRUISER 5FS Seed Treatment may be treated at 332 mL/100 kg of seed (0.500 mg of active ingredient per kernel).

It is recommended that seed with existing populations of storage pests be fumigated prior to treating and storage of seed.

For additional control of certain seed and soil borne pathogens, CRUISER 5FS Seed Treatment may be mixed with MAXIM XL (or MAXIM 480FS + APRON XL LS) and DYNASTY 100FS in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

Dry Edible Beans:

To provide protection against crop injury caused by Potato Leafhopper and Seed Corn Maggot, apply CRUISER 5FS Seed Treatment at 50 – 83 mL/100 kg of seed. Use the higher rate when insect populations are expected to be high. To provide protection against crop injury caused by Wireworms, apply CRUISER 5FS Seed Treatment at 83 mL/100 kg of seed.

For additional control of certain seed and soil borne pathogens, CRUISER 5FS Seed Treatment may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

Soybeans:

To reduce early season defoliation caused by Bean Leaf Beetle, Wireworm, and European Chafer, apply CRUISER 5FS Seed Treatment at 83 mL/100 kg seed. Apply 83 mL of CRUISER 5FS Seed Treatment per 100 kg of soybean seed for early season protection against soybean aphid. To provide protection against crop injury caused by Seed Corn Maggot, apply CRUISER 5FS Seed Treatment at 50 – 83 mL/100 kg of seed. Use the higher rate when insect populations are expected to be high.

For additional control of certain seed and soil borne pathogens, CRUISER 5FS Seed Treatment may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

Canola, Rapeseed and Mustard (Condiment and Oilseed):

To control flea beetles, apply 320 – 640 mL/100 kg seed of CRUISER 5FS Seed Treatment using standard commercial seed treatment equipment that provides uniform seed coverage.

Crop	Insects Controlled ¹	Use Rate/100 kg seed*		Notes
		mL product	grams a.i.	
Corn	Wireworms European Chafer	83	50 (0.125 mg per kernel)	Do not graze or feed livestock on treated areas for 45 days after planting.
	Seed Corn Maggot Flea Beetles that vector Stewart's Wilt	83 – 166	50 – 100 or 0.125 – 0.25 mg per kernel	
	Corn Rootworm (including Northern, Western)	332 (export use only) 830	200 (0.500 mg per kernel; export use only) 500 (1.25 mg per kernel)	
Soybeans ²	Seed Corn Maggot	50 – 83	30 – 50	
	Bean Leaf Beetles Wireworms European Chafer Soybean Aphid	83	50	
Dry Edible Beans	Potato Leafhopper** Seed Corn Maggot	50 – 83	30 – 50	
	Wireworms	83	50	
Canola, Rapeseed, Mustard (Condiment and Oilseed)	Flea beetles	320 – 640	200 – 400	

* Use the higher rate when insect populations are expected to be high.

** Use the higher rate to replace one (1) application of a foliar insecticide spray.

¹ When seed is treated for post-planting protection against registered pests, CRUISER 5FS Seed Treatment will also provide protection during post-treatment storage of the seed against damage from many storage insect pests. Seed treated with CRUISER 5FS Seed Treatment has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian meal moth.

² Based on 6 600 soybean seeds per kg, 50-83 mL of CRUISER 5FS Seed Treatment delivers 45-75 µg of the active ingredient, thiamethoxam, per soybean seed.

The following uses may be applied on-farm or by commercial treaters using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).

Wheat & Barley:

To provide protection against crop injury caused by Wireworms (*Agriotes* spp., *Limoniuss* spp. and *Melanotus* spp.), apply CRUISER 5FS Seed Treatment at 17 – 50 mL/100 kg of seed. For early season suppression only, treat at 17 mL/100 kg of seed. For fields with a history of moderate to high wireworm pressure or if control is required, then treat crops at 33 – 50 mL/100 kg of seed, using the higher rate when infestation pressure is considered to be heavy.

For added control of certain seed- and soil-borne pathogens, CRUISER 5FS Seed Treatment may be mixed with DIVIDEND XL RTA. Follow all appropriate directions, precautions, etc. as specified on the fungicide labels.

Crop	Insects Controlled ¹	Use Rate/100 kg seed*		Notes
		mL product	grams a.i.	
Wheat and Barley	Wireworms	17**	10**	Do not graze or feed livestock on treated areas for 45 days after planting.
		33 – 50	20 – 30	

* Use the higher rate when insect populations are expected to be high.

** Use 17 mL/100 kg of seed for suppression of wireworms; however, if pressure is moderate to high or control is required, then treat crops at 33 – 50 mL/100 kg of seed.

¹When seed is treated for post-planting protection against registered pests, CRUISER 5FS Seed Treatment will also provide protection during post-treatment storage of the seed against damage from many storage insect pests. Seed treated with CRUISER 5FS Seed Treatment has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian meal moth.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THE PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below.

Accordingly, the Buyer and User assumes all risks related to performance and crop tolerance arising, and agrees to hold Syngenta Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the uses described below.

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Wheat and Barley	European Chafer	50	30	—	<p>May be applied <u>on-farm</u> or by <u>commercial treaters</u> using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>For control of various diseases of cereal grains. CRUISER 5FS Seed Treatment may be tank mixed with DIVIDEND XL RTA Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels.</p> <p>Do not graze or feed livestock on treated areas for 45 days after planting.</p>
Edible-Podded and Succulent-Shellied Beans and Peas	Potato Leafhopper** Seed Corn Maggot	50 – 83	30 – 50	—	<p>To be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>CRUISER 5FS Seed Treatment tank mixed with APRON MAXX RTA or APRON MAXX RFC (or APRON XL LS and MAXIM 480FS) will control diseases listed on APRON MAXX RTA, APRON MAXX RFC, APRON XL LS and MAXIM 480FS labels. Follow all appropriate directions, precautions, etc. as specified on product labels.</p>
	Wireworms Soybean Aphid	83	50	—	

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Chickpeas, Lentils, Dry Peas (including field peas), Lupins, Faba Beans	Wireworms	17 [‡] 33-50 [‡]	10 20-30		<p>May be applied <u>on-farm</u> or by <u>commercial treaters</u> using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>For control of various seed- and soil-borne diseases, CRUISER 5FS Seed Treatment may be tank mixed with either APRON MAXX RTA or APRON MAXX RFC (or APRON XL LS and MAXIM 480FS) Seed Treatment Fungicides as part of a closed system application.</p> <p>Refer to product labels for specific application instructions and precautions. A suitable colourant must be added to the slurry prior to application to the seed.</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p>
Faba Beans	Pea leaf weevil	50	30		<p>May be applied <u>on-farm</u> or by <u>commercial treaters</u> using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p> <p>Refer to product labels for specific application instructions and precautions. A suitable colourant must be added to the slurry prior to application to the seed</p>

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Dry peas	Pea leaf Weevil	50	30		<p>May be applied <u>on-farm</u> or by <u>commercial treaters</u> using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>For control of various seed- and soil-borne diseases, CRUISER 5FS Seed Treatment may be tank mixed with either APRON MAXX RTA or APRON MAXX RFC (or APRON XL LS and MAXIM 480FS) Seed Treatment Fungicides as part of a closed system application.</p> <p>Refer to product labels for specific application instructions and precautions. A suitable colourant must be added to the slurry prior to application to the seed.</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p>

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Dry peas	Pea leaf Weevil	83	50		<p>This rate of CRUISER 5FS Seed Treatment must be applied by commercial treaters using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>CRUISER 5FS Seed Treatment tank mixed with APRON MAXX RTA or APRON MAXX RFC (or APRON XL LS and MAXIM 480FS) will control diseases listed on APRON MAXX RTA, APRON MAXX RFC, APRON XL LS and MAXIM 480FS labels. Follow all appropriate directions, precautions, etc. as specified on product labels.</p>
Peas (edible-podded, succulent-shelled)	Pea leaf Weevil	50 - 83	30 - 50		<p>To be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>CRUISER 5FS Seed Treatment tank mixed with APRON MAXX RTA or APRON MAXX RFC (or APRON XL LS and MAXIM 480FS) will control diseases listed on APRON MAXX RTA, APRON MAXX RFC, APRON XL LS and MAXIM 480FS labels. Follow all appropriate directions, precautions, etc. as specified on product labels.</p>

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Sunflowers	Wireworms	—	—	0.25	<p>To be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>CRUISER 5FS Seed Treatment tank mixed with APRON XL LS and MAXIM 480FS fungicides will control labelled diseases listed on APRON XL LS and MAXIM 480FS labels. Follow all appropriate directions, precautions, etc. as specified on product labels.</p> <p>Pre-harvest Interval: 120 days</p> <p>For Import Use Only – Not for Domestic Commercial or On-Farm Seed Treatment.</p>
Sugarbeet	Wireworms Sugar Beet Root Maggot	50 – 100 per 100 000 seeds	30 – 60 per 100 000 seeds	0.3 – 0.6	<p>To be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>For additional control of listed seed and soil borne pathogens in sugar beet seed, CRUISER 5FS Seed Treatment may be tank mixed with APRON XL LS Fungicide as part of a closed system application.</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p> <p>A suitable colorant must be added to the slurry prior to application to the seed.</p> <p>For Import Use Only – Not for Domestic Commercial or On-Farm Seed Treatment.</p>

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Rye, Triticale, Buckwheat, Millet (pearl and proso)	Wireworms	17 [‡] 33 - 50 [‡]	10 20-30	—	<p>May be applied <u>on-farm</u> or by <u>commercial treaters</u> using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>Use the higher control rate when wireworm populations are expected to be high.</p> <p>A suitable colourant must be added to the slurry prior to application to the seed.</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p> <p>For control of various diseases in cereal grains, CRUISER 5FS Seed Treatment can be tank mixed with DIVIDEND XL RTA Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels.</p>

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Sorghum	Wireworms	17 [†] 33 - 50 [†]	10 20-30	—	<p>To be applied in commercial seed treatment facilities using closed transfer (including closed mixing, loading, calibrating, and closed treatment equipment).</p> <p>Use the higher control rate when wireworm populations are expected to be high.</p> <p>A suitable colourant must be added to the slurry prior to application to the seed.</p> <p>Do not graze or feed livestock on seeded area for 45 days after planting.</p> <p>For control of various diseases in cereal grains, CRUISER 5FS Seed Treatment can be tank mixed with DIVIDEND XL RTA Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels.</p>

* Use the higher rate when insect populations are expected to be high.

** Use the higher rate to replace one (1) application of a foliar insecticide spray.

Crops	Insects Controlled	Use Rate/100 kg seed*		mg ai per seed	Notes
		mL product	grams a.i.		
Crop Group 9 (Cucurbit Vegetables) chayote, Chinese waxgourd, citron melon, cucumber, gherkin, edible gourds, Momordica spp., muskmelons, pumpkin, winter and summer squash and watermelon.	Cucumber beetle	--	--	0.25 – 0.75	For early season protection from cucumber beetle. Use the higher rate when insect populations are expected to be high. A suitable colourant must be added to the slurry prior to application to the seed. Do not graze or feed livestock on seeded area for 45 days after planting. For control of various diseases in cucurbit vegetables, CRUISER 5FS Seed Treatment can be tank-mixed with APRON XL LS Fungicide, MAXIM 480FS Colourless Seed Treatment Fungicide and/or DYNASTY 100FS Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels For import use only – Not for domestic, commercial or on-farm seed treatment.

* Use the higher rate when insect populations are expected to be high.
** Use the higher rate to replace one (1) application of a foliar insecticide spray.
*** Use 17 mL/100 kg of seed for suppression of wireworms; however, if pressure is moderate to high or control is required, then treat crops at 33 - 50 mL/100 kg of seed.

Resistance Management Recommendations

For resistance management, please note that CRUISER 5FS Seed Treatment contains a Group 4 insecticide. Any insect population may contain individuals naturally resistant to CRUISER 5FS Seed Treatment and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

Where possible, rotate the use of CRUISER 5FS Seed Treatment or other Group 4 insecticides with different groups that control the same pests in a field.

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

Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

APRON MAXX[®], APRON XL[®], CRUISER[®], DIVIDEND[®], DIVIDEND XL RTA[®], DYNASTY[®], MAXIM[®], RTA[®] and XL[®] are trademarks of a Syngenta Group Company.

GROUP	4	INSECTICIDE
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CRUISER® 350FS Seed Treatment

SUSPENSION

INSECTICIDE

AGRICULTURAL

A seed treatment insecticide for control of certain insect pests in wheat, barley, corn, rye, triticale, buckwheat, millet, sorghum, soybeans and dry edible beans

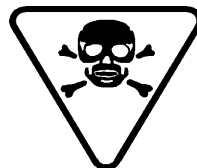
GUARANTEE:

Thiamethoxam 29.9%

Contains 1,2-benzisothiazolin-3-one at 0.05% as a preservative.

**READ THE LABEL BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED
PERSONNEL**

CAUTION



POISON

**CAUTION SKIN IRRITANT
POTENTIAL SKIN SENSITIZER**

REGISTRATION NUMBER: **27986**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **20 L to Bulk**

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

For use in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. No open transfer of CRUISER® 350FS Seed Treatment Insecticide. All seed treated with this product must be conspicuously coloured at the time of treatment.

Label

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 in eyes, hold eye open and rinse slowly and gently with water for 15 – 20 minutes, holding eyelids apart in order to rinse the entire surface of the eye and lids. 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 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 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 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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL and DOMESTIC ANIMALS.
2. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid prolonged contact with skin. Avoid inhalation of vapours, spray mist or treated seed dust. Wash hands and face after handling and before eating, drinking, smoking or using the toilet. Wash protective clothing prior to reuse.
3. Avoid contamination of feed and foodstuffs.
4. Recommended Personal Protective Equipment for Commercial Seed Treatment Settings:
Treat seed in a well-ventilated area. All workers (treater, cleaner, repair, maintenance,

bagger, sewer, stacker, forklift operator and others) must wear: coveralls over long sleeve shirt, long pants and chemical-resistant gloves. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA approved dust mask during all job activities.

Environmental Hazards:

1. Thiamethoxam is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
2. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators.
3. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant.
4. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
5. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
6. This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present.
7. Treated seed is TOXIC to birds and small wild mammals.
8. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil or other surfaces.

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 web site at www.croplife.ca.

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 CRUISER 350FS Seed Treatment Insecticide, do not graze or feed livestock on treated areas for 45 days after planting.
4. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“These seeds have been treated with a Thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. 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.”**
5. Additionally, all treated corn and soybean seed for sale or use in Canada must be labeled with the following information: **Thiamethoxam is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at**

www.healthcanada.gc.ca/pollinators. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide.

Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

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 Returnable Containers:

Do not reuse this container for any purpose. For disposal, this 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)***

CRUISER® is a trademark of a Syngenta Group Company.

GROUP 4 INSECTICIDE

CRUISER® 350FS Seed Treatment

SUSPENSION

INSECTICIDE

AGRICULTURAL

A seed treatment insecticide for control of certain insect pests in wheat, barley, corn, rye, triticale, buckwheat, millet, sorghum, soybeans and dry edible beans

GUARANTEE:

Thiamethoxam 29.9%

Contains 1,2-benzisothiazolin-3-one at 0.05% as a preservative.

**READ THE LABEL BEFORE USING
KEEP OUT OF THE REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED
PERSONNEL**

CAUTION



POISON

**CAUTION SKIN IRRITANT
POTENTIAL SKIN SENSITIZER**

REGISTRATION NUMBER: **27986**
PEST CONTROL PRODUCTS ACT

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

For use in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. No open transfer of CRUISER® 350FS Seed Treatment Insecticide. All seed treated with this product must be conspicuously coloured at the time of treatment.

Pamphlet

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 in eyes, hold eye open and rinse slowly and gently with water for 15 – 20 minutes, holding eyelids apart in order to rinse the entire surface of the eye and lids. 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 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 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 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.

TOXICOLOGICAL INFORMATION

NOTE TO PHYSICIAN: There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and DOMESTIC ANIMALS. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL and DOMESTIC ANIMALS.
2. Harmful if swallowed, inhaled or absorbed through skin. DO NOT get in eyes. Avoid prolonged contact with skin. Avoid inhalation of vapours, spray mist or treated seed dust. Wash hands and face after handling and before eating, drinking, smoking or using the toilet. Wash protective clothing prior to reuse.
3. Avoid contamination of feed and foodstuffs.
4. Recommended Personal Protective Equipment for Commercial Seed Treatment Settings:
Treat seed in a well-ventilated area. All workers (treater, cleaner, repair, maintenance,

bagger, sewer, stacker, forklift operator and others) must wear: coveralls over long sleeve shirt, long pants and chemical-resistant gloves. For good hygiene practice, it is also recommended to wear a NIOSH/MSHA approved dust mask during all job activities.

Environmental Hazards:

1. Thiamethoxam is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
2. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at www.healthcanada.gc.ca/pollinators.
3. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide. Only the Fluency Agent by Bayer CropScience is permitted. Carefully follow use directions for the seed flow lubricant.
4. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
5. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
6. This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present.
7. Treated seed is TOXIC to birds and small wild mammals.
8. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil or other surfaces.

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 web site at www.croplife.ca.

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 CRUISER 350FS Seed Treatment Insecticide, do not graze or feed livestock on treated areas for 45 days after planting.
4. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“These seeds have been treated with a Thiamethoxam insecticide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. 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.”**
5. Additionally, all treated corn and soybean seed for sale or use in Canada must be labeled with the following information: **Thiamethoxam is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators. To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed - Best Management Practices” on the Health Canada webpage on pollinator protection at**

www.healthcanada.gc.ca/pollinators. When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with this insecticide.

Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

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 Returnable Containers:

Do not reuse this container for any purpose. For disposal, this 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

CRUISER 350FS Seed Treatment Insecticide belongs to the neonicotinoid class of chemistry that controls listed chewing and sucking insects through contact and systemic activity. Thorough seed coverage will offer the best protection of the seed from insect damage. When rate ranges are given, use the higher rate when insect pressure is expected to be high.

When seed is treated for post-planting protection against registered pests, CRUISER 350FS Seed Treatment Insecticide will also provide protection during post-treatment storage of the seed against damage from many storage insect pests. Seed treated with CRUISER 350FS Seed Treatment Insecticide has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian meal moth.

For additional control of certain seed and soil borne pathogens, CRUISER 350FS Seed Treatment Insecticide may be combined with the following seed treatment fungicides:

- Wheat & Barley: CRUISER 350FS Seed Treatment Insecticide may be mixed with DIVIDEND[®] XL[®] (or DIVIDEND XL RTA[®]) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Corn: CRUISER 350FS Seed Treatment Insecticide may be mixed with MAXIM[®] XL (or MAXIM 480FS + APRON XL[®] LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Dry Edible beans: CRUISER 350FS Seed Treatment Insecticide may be mixed with APRON MAXX[®] RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.
- Soybeans: CRUISER 350FS Seed Treatment Insecticide may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only.

When applied as a tank-mix combination, read and observe all label directions, including rates, restrictions, and grazing limitations for each product used in the tank-mix. Follow the more stringent precautionary measures for mixing, loading and applying stated on both product labels.

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 Crop Protection Canada Inc., no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

MIXING INSTRUCTIONS (SLURRY APPLICATION):

Ensure product is thoroughly mixed prior to application.

Apply CRUISER 350FS Seed Treatment Insecticide utilizing closed system seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect control. Thoroughly mix the recommended amount of CRUISER 350FS Seed Treatment Insecticide into the required amount of seed treatment fungicide carrier for the slurry treater and dilution rate to be used. Follow the manufacturer's

application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the seed treatment process. Allow the seed to dry before bagging or storing into bulk containers. Depending on planting equipment, seed treated with CRUISER 350FS Seed Treatment Insecticide 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 CRUISER 350FS Seed Treatment Insecticide will not affect the physical integrity of the product. If the product should freeze, bring the product back to room temperature, then ensure the contents are mixed well prior to application.

This product contains a pigment, which 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 “Seed Act” must be strictly adhered to when using this product.

USE RATES:

Wheat & Barley:

To provide protection against crop injury caused by Wireworms, apply CRUISER 350FS Seed Treatment Insecticide at 29 - 86 mL / 100 kg of seed. For early season suppression only, treat at 29 mL / 100 kg of seed. For fields with a history of moderate to high wireworm pressure or if control is required, then treat crops at 57 – 86 mL / 100 kg of seed, using the higher rate when infestation pressure is considered to be heavy.

It is recommended that seed with existing populations of storage pests be fumigated prior to treating and storage of that seed.

For added control of certain seed and soil-borne pathogens, CRUISER 350FS Seed Treatment Insecticide may be mixed with DIVIDEND XL RTA in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on the fungicide labels.

Corn: (Field Corn, Seed Corn, Popcorn, Sweet Corn)

To provide protection against crop injury caused by Wireworms and European Chafer, apply CRUISER 350FS Seed Treatment Insecticide at 143 mL/100 kg of seed. Do not apply less than 0.125 mg of thiamethoxam per kernel.

To provide protection against crop injury caused by Seed Corn Maggot, apply CRUISER 350FS Seed Treatment Insecticide at 143 – 286 mL / 100 kg seed (or 0.125 – 0.250 mg of thiamethoxam per kernel). Use the higher rate of CRUISER 350FS Seed Treatment Insecticide for fields that have a history of moderate to severe pest pressure. To provide protection against Corn Flea Beetles which vectors Stewart's Wilt disease, apply CRUISER 350FS Seed Treatment Insecticide at 143 – 286 mL / 100 kg seed. Do not apply less than 0.125 mg of thiamethoxam per kernel and do not exceed 0.250 mg of thiamethoxam per kernel.

It is recommended that seed with existing populations of storage pests be fumigated prior to treating and storage of that seed.

For additional control of seed and soil-borne pathogens, apply CRUISER 350FS Seed Treatment Insecticide as a slurry seed treatment with MAXIM XL (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on fungicide labels.

Soybeans:

To provide protection against crop injury caused by Seed Corn Maggot, apply CRUISER 350FS Seed Treatment Insecticide at 86 – 143 mL / 100 kg of seed. Use the higher rate when insect populations are expected to be high. Apply 143 mL of CRUISER 350FS Seed Treatment Insecticide per 100 kg of soybean seed for early season protection against soybean aphid. To provide protection against crop injury caused by Bean Leaf Beetles, European Chafer and Wireworms, apply CRUISER 350FS Seed Treatment Insecticide at 143 mL / 100 kg of seed.

For additional control of certain seed and soil borne pathogens, CRUISER 350FS Seed Treatment Insecticide may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

Dry Edible Beans:

To provide protection against crop injury caused by Potato Leafhopper and Seed Corn Maggot, apply CRUISER 350FS Seed Treatment Insecticide at 86 – 143 mL / 100 kg of seed. Use the higher rate when insect populations are expected to be high. To provide protection against crop injury caused by Wireworms, apply CRUISER 350FS Seed Treatment Insecticide at 143 mL / 100 kg of seed.

For additional control of certain seed and soil borne pathogens, CRUISER 350FS Seed Treatment Insecticide may be mixed with APRON MAXX RTA or APRON MAXX RFC (or MAXIM 480FS + APRON XL LS) in commercial seed treatment facilities with closed transfer including closed mixing, loading, calibrating, and closed treatment equipments only. Follow all appropriate directions, precautions, etc. as specified on product labels.

Crop	Insects Controlled ¹	Use Rate / 100 kg seed*		Notes
		mL product	grams a.i.	
Wheat	Wireworms	29**	10**	Do not graze or feed livestock on treated areas for 45 days after planting.
		57 – 86	20 – 30	
Barley	Wireworms	29**	10**	
		57 – 86	20 – 30	
Corn	Wireworms	143	50 or 0.125 mg per kernel	
	European Chafer	143		
	Seed Corn Maggot	143 – 286	50 – 100 or 0.125 –	

Crop	Insects Controlled ¹	Use Rate / 100 kg seed*		Notes
	Flea Beetles which vectors Stewart's Wilt	143 – 286	0.25 mg per kernel	
Soybeans ²	Seed Corn Maggot	86 – 143	30 – 50	
	Bean Leaf Beetles Wireworms European Chafer Soybean Aphid	143	50	
Dry Edible Beans	Potato Leafhopper*** Seed Corn Maggot	86 - 143	30 – 50	
	Wireworms	143	50	

* Use the higher rate when insect populations are expected to be high.

** Use 29 mL / 100 kg of seed for suppression of wireworms; however, if pressure is moderate to high or control is required, then treat crops at 57 – 86 mL / 100 kg of seed.

*** Use the higher rate to replace one (1) application of a foliar insecticide spray.

¹ When seed is treated for post- planting protection against registered pests, CRUISER 350FS Seed Treatment Insecticide will also provide protection during post- treatment storage of the seed against damage from many storage insect pests. Seed treated with CRUISER 350FS Seed Treatment Insecticide has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian meal moth.

² Based on 6,660 soybean seeds per kg, 86 – 143 mL of CRUISER 350FS Seed Treatment Insecticide delivers 45 – 75 µg of the active ingredient, thiamethoxam, per soybean seed.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Syngenta Canada Inc. harmless from any claims based on efficacy or phytotoxicity in connection with the uses described below.

Crops	Insects Controlled	Use Rate / 100 kg seed		Notes
		mL product	grams a.i.	
Wheat and	European	86	30	For control of various diseases of cereal

Barley	Chafer			<p>grains. CRUISER 350FS Seed Treatment Insecticide may be tank-mixed with DIVIDEND XL RTA Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels.</p> <p>Do not graze or feed livestock on treated areas for 45 days after planting.</p>
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Crops	Insects Controlled	Use Rate / 100 kg seed		Notes
		mL product	grams a.i.	
Rye, Triticale, Buckwheat, Millet (pearl and proso) and Sorghum	Wireworm (suppression) Wireworm (control)	29* 57-86*	10 20-30	Use the higher control rate when wireworm populations are expected to be high. For control of various diseases in cereal grains, CRUISER 350FS Seed Treatment Insecticide can be tank mixed with DIVIDEND XL RTA Fungicide as part of a closed system application. Follow all appropriate directions, precautions, etc. as specified on product labels Do not graze or feed livestock on seeded area for 45 days after planting. A suitable colourant must be added to the slurry prior to application to the seed. * Use 29 mL CRUISER 350FS Seed Treatment Insecticide + 325-360 mL DIVIDEND XL RTA/100 kg of seed for suppression of wireworms; however, if pressure is moderate to high or control is required, then treat crops at 57-86 mL CRUISER 350FS Seed Treatment Insecticide + 325-360 mL DIVIDEND XL RTA/100 kg of seed.

Resistance Management Recommendations

For resistance management, please note that CRUISER 350FS Seed Treatment Insecticide contains a Group 4 insecticide. Any insect population may contain individuals naturally resistant to CRUISER 350FS Seed Treatment Insecticide and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

Where possible, rotate the use of CRUISER 350FS Seed Treatment Insecticide or other Group 4 insecticides with different groups that control the same pests in a field.

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

Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

APRON MAXX[®], APRON XL[®], CRUISER[®], DIVIDEND[®], MAXIM[®], RTA[®] and XL[®] are trademarks of a Syngenta Group Company

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.

GROUP	4	INSECTICIDE
GROUP	3 12	FUNGICIDE

CRUISER MAXX[®] POTATO EXTREME

Seed Piece Treatment

Suspension

AGRICULTURAL

Seed piece treatment for the control of black scurf/stem and stolon canker (*Rhizoctonia solani*), silver scurf (*Helminthosporium solani*), fusarium dry rot (*Fusarium* spp.) and insect pests on potato.

GUARANTEE:

Thiamethoxam 250 g/L
Fludioxonil 62.5 g/L
Difenoconazole 123 g/L

Contains 1,2-benzisothiazolin-3-one at 0.073% and 2-bromo-2-nitropropane-1,3-diol at 0.024% as preservatives.

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

REGISTRATION NO.: **31024**
PEST CONTROL PRODUCTS ACT

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

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

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, call a physician or poison control centre **IMMEDIATELY**. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical 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.

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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and domestic animals.
2. Keep treated potato seed pieces away from animals.
3. Wash hands and face after handling and before eating or smoking.
4. Wear coveralls over a long-sleeved shirt, long pants, goggles, chemical resistant gloves, socks and boots when mixing and loading and wear long-sleeved shirt, long pants, socks and boots during application. When handling treated potato seed pieces or when working with or around equipment used to transport or plant treated potato seed pieces workers must wear a long-sleeved shirt, long pants, gloves, socks, and boots. When riding at the back of the planter to monitor planting, workers must wear coveralls over a long-sleeved shirt, long pants, gloves, socks, boots and a NIOSH-approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested. For good hygiene practice, it is

also recommended to wear a NIOSH -approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested during all other job activities.

5. DO NOT use open treating equipment when treating potato seed pieces. Use only closed system treatment equipment.
6. Avoid contamination of feed and foodstuffs.
7. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

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 HAZARDS

TOXIC to bees, beneficial arthropods and aquatic organisms. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.

Treated seed is TOXIC to birds and small wild animals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil or other surfaces.

Do not use treated seed pieces for food and feed purposes.

STORAGE

Ideal storage temperature is above freezing and below 30 °C. Repeated freeze-thawing of CRUISER MAXX POTATO EXTREME 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.

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 DISPOSAL OF PLASTIC JUGS:

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 (1-800-FASTMED)***

CRUISER MAXX® is a trademark of a Syngenta Group Company

GROUP	4	INSECTICIDE
GROUP	3 12	FUNGICIDE

CRUISER MAXX[®] POTATO EXTREME

Seed Piece Treatment

Suspension

AGRICULTURAL

Seed piece treatment for the control of black scurf/stem and stolon canker (*Rhizoctonia solani*), silver scurf (*Helminthosporium solani*), fusarium dry rot (*Fusarium* spp.) and insect pests on potato.

GUARANTEE:

Thiamethoxam 250 g/L
 Fludioxonil 62.5 g/L
 Difenoconazole 123 g/L

Contains 1,2-benzisothiazolin-3-one at 0.073% and 2-bromo-2-nitropropane-1,3-diol at 0.024% as preservatives.

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

REGISTRATION NO.: **31024**
 PEST CONTROL PRODUCTS ACT

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

NOTICE TO USER

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FIRST AID

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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.

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.

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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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

Safety Precautions:

1. KEEP OUT OF THE REACH OF CHILDREN and domestic animals.
2. Keep treated potato seed pieces away from animals.
3. Wash hands and face after handling and before eating or smoking.
4. Wear coveralls over a long-sleeved shirt, long pants, goggles, chemical resistant gloves, socks and boots when mixing and loading and wear long-sleeved shirt, long pants, socks and boots during application. When handling treated potato seed pieces or when working with or around equipment used to transport or plant treated potato seed pieces workers must wear a long-sleeved shirt, long pants, gloves, socks, and boots. When riding at the back of the planter to monitor planting, workers must wear coveralls over a long-sleeved shirt, long pants, gloves, socks, boots and a NIOSH-approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested. For good hygiene practice, it is

also recommended to wear a NIOSH -approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested during all other job activities.

5. DO NOT use open treating equipment when treating potato seed pieces. Use only closed system treatment equipment.
6. Avoid contamination of feed and foodstuffs.
7. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

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 HAZARDS

TOXIC to bees, beneficial arthropods and aquatic organisms. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.

Treated seed is TOXIC to birds and small wild animals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil or other surfaces.

Do not use treated seed pieces for food and feed purposes.

STORAGE

Ideal storage temperature is above freezing and below 30 °C. Repeated freeze-thawing of CRUISER MAXX POTATO EXTREME 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.

DECONTAMINATION AND DISPOSAL

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FOR DISPOSAL OF PLASTIC JUGS:

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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.

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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 (1-800-FASTMED)***

GENERAL INFORMATION

CRUISER MAXX POTATO EXTREME controls listed sucking and chewing insects through ingestion when used on potatoes. This product controls seed-borne diseases of potatoes including stem and stolon canker (*Rhizoctonia solani*), silver scurf (*Helminthosporium solani*), and fusarium dry rot (*Fusarium* spp., including fludioxonil-resistant strains). CRUISER MAXX POTATO EXTREME also suppresses black scurf (*Rhizoctonia solani*). CRUISER MAXX POTATO EXTREME does not control bacterial diseases present within the seed.

CRUISER MAXX POTATO EXTREME is to be used as an integral part of a potato disease management strategy. This strategy includes the use of high quality seed and the incorporation of cultural techniques such as: crop rotation and optimal harvest time for tubers to minimize disease development, proper handling of tubers to avoid unnecessary bruising, management and sanitation of equipment and storage areas to reduce inoculum including avoidance of storage conditions that lead to free moisture or condensation and application of the seed piece treatment to clean seed pieces with a properly calibrated application system.

NOTE: Treatment of sprouted seed known to be of low vigour and poor quality may result in reduced germination and/or reduction of seed and seedling vigour. Due to seed quality and seed storage conditions beyond the control of Syngenta Canada Inc., no claims are made to guarantee the germination of potato seed pieces.

USE DIRECTIONS

POTATOES	
CROPS	Potato Seed Pieces
PEST	Colorado potato beetle Aphids (including green peach, potato, buckthorn and foxglove aphid) Potato leafhopper Black scurf (suppression only) and stem and stolon canker (<i>Rhizoctonia solani</i>)* Fusarium dry rot (<i>Fusarium</i> spp. including fludioxonil-resistant strains) Silver scurf (<i>Helminthosporium solani</i>)
RATE	20 mL/100 kg seed
NOTES	Shake or mix well before using. Apply using standard seed treatment equipment that provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Follow the manufacturer's application instructions for the seed treatment equipment being used. * CRUISER MAXX POTATO EXTREME should be applied under low to moderate <i>Rhizoctonia</i> pressure. When <i>Rhizoctonia solani</i> pressure is high or for control of black scurf, tank mix CRUISER MAXX POTATO EXTREME with MAXIM® Liquid PSP at a rate of 2.6 mL /100 kg seed.

Apply CRUISER MAXX POTATO EXTREME as a water-based slurry utilizing standard slurry seed treatment equipment that provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect or disease control. Thoroughly mix the specified amount of CRUISER MAXX POTATO EXTREME into the required amount of water or tank mix partner for the slurry treater and dilution rate to be used. Consult the manufacturer of the application equipment you plan to use for suitability for this application and for instructions on operation and calibration of the equipment.

Apply only in areas with adequate ventilation or in areas that are equipped to remove mist or dust.

Cut seed is particularly vulnerable to excess moisture. Too much moisture will induce seed decay. CRUISER MAXX POTATO EXTREME has been designed to be delivered in very low volumes of liquid to ensure good coverage without increasing tuber decay. Do not add excess water to the cut seed.

If soil conditions are ideal, plant potatoes immediately after application; however if soil is predicted to be cold and wet for 3 days following application, either a) wait to cut, treat, plant until conditions are favorable or b) cut, treat and store. If cutting, treating and storing, potatoes can be treated with an inert dust to improve suberization. Store properly until conditions improve by making sure that there is adequate cool air (7-10 °C) movement through the pile of cut seed potatoes and a relative humidity of 85-90%. Temperatures above 10 °C promote soft rot in seed. Cut and treated seed should not be piled above 1.8 m in height. Avoid storing treated potatoes for over 2 weeks. When transporting cut and treated seed make sure the seed is covered.

Avoid using liquid seed treatment on excessively sprouted seed.

DO NOT apply any subsequent application of thiamethoxam in-furrow or foliar application or other group 4 insecticide following seed piece treatment with CRUISER MAXX POTATO EXTREME.

DO NOT plant more than 128 700 kg of treated potato seed pieces/day. Refer to the following table for the area that can be planted/day by a single planter based on seeding rate and the restriction of 128 700 kg seed pieces/day.

Planting Rate		Planted Area	
kg/ha	lb/ac	ha/day	ac/day
1200	1071	107	265
1400	1249	92	227
1600	1428	80	199
1800	1606	72	177
2000	1784	64	159
2200	1963	59	145
2400	2141	54	133
2600	2320	50	122
2800	2498	46	114
3000	2677	43	106
3200	2855	40	99
3400	3033	38	94

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

Rotational Restrictions

Treated areas may be replanted immediately following harvest or as soon as practical following the last application with any crop listed on this label or to sorghum, wheat, barley, canola and pome fruit. Any cover crop planted for erosion control or soil improvement may be planted as soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120 day plant-back interval must be observed.

Resistance-Management Recommendations

For resistance management, please note that CRUISER MAXX POTATO EXTREME contains a Group 4 insecticide (neonicotinoid class of chemistry) and Group 3 and 12 fungicides. Any insect or fungal population may contain individuals naturally resistant to CRUISER MAXX POTATO EXTREME and other Group 4 insecticides or Group 3 and 12 fungicides. A gradual or total loss of pest control may occur over time if these insecticides and fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide and fungicide resistance:

Where possible, rotate the use of CRUISER MAXX POTATO EXTREME with different groups that control the same pests in a field. Use tank mixtures with insecticides and fungicides from different groups when such use is permitted.

Pesticide 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. Implement an integrated disease management program that helps to maintain lower inoculum levels, thereby reducing the probability for the development of resistant *Fusarium* spp. isolates. This includes planting disease free tubers, not growing potatoes in the same field two years in a row and practising good hygiene in the storage bins.

In order to minimize the potential for the development of resistance among the labeled disease organisms do not use CRUISER MAXX POTATO EXTREME in any two consecutive seed generations.

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.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

CRUISER MAXX[®] and MAXIM[®] are trademarks of a Syngenta Group Company

GROUP	4				INSECTICIDE
GROUP	3	4	7	12	FUNGICIDES

CRUISER[®] VIBRANCE[®] QUATTRO

SEED TREATMENT FUNGICIDES AND INSECTICIDE

SUSPENSION

AGRICULTURAL

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

GUARANTEE:

Thiamethoxam	61.5 g/L
Difenoconazole	36.9 g/L
Sedaxane	15.4 g/L
Metalaxyl-M (and S-isomer).....	9.2 g/L
Fludioxonil.....	7.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.023%, 2-bromo-2-nitropropane-1,3-diol at 0.021%, 5-chloro-2-methyl-4-isothiazolin-3-one at 0.00008% and 2-methyl-4-isothiazolin-3-one at 0.000026% as preservatives.

Warning, contains the allergen soy.

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

REGISTRATION NUMBER: **31453**
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 (facilities and mobile treaters) 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 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 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 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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. 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. Wear a dust mask when transferring seed to a storage bin. Avoid contamination of feed and foodstuffs.

CRUISER VIBRANCE® QUATTRO™ is for use on-farm on barley, wheat, oats, rye, and triticale. This product can also be applied by commercial seed treaters (facilities and mobile treaters) using closed system transfer. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.

Treat seed in a well-ventilated area.

For commercial seed treatment:

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. In addition, wear a NIOSH-approved dust mask when bagging or sewing bags of treated seed or when transferring seed to a storage bin.

For on-farm treating:

When treating seeds on-farm, all workers must wear coveralls over a long sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and a NIOSH-approved dust mask. In addition, wear a NIOSH-approved dust mask when transferring seed to a storage bin.

For planting:

When planting (including loading, sowing, maintenance, and clean-up) wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and NIOSH-approved dust mask. When using closed-cab planting equipment, chemical-resistant gloves and NIOSH-approved dust mask are not required inside cab. For good hygiene practice, it is also recommended to wear a suitable 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 other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

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.

TOXIC to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.

USE RESTRICTIONS

1. Treated seed must not be used for food, feed or oil processing.
2. To prevent contamination, store away from food and feed.
3. For seed treated with CRUISER VIBRANCE QUATTRO, do not graze or feed livestock on treated areas for 45 days after planting.
4. Do not plant any crop other than cereals, corn, soybeans, members of Crop Subgroup 6C (dried, shelled peas and beans), members of Crop Subgroup 20A (canola and rapeseed subgroup) or potatoes within 60 days to fields in which seeds treated with CRUISER VIBRANCE QUATTRO 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 the insecticide, thiamethoxam and the fungicides, difenoconazole, metalaxyl-M (and S-isomer), sedaxane and fludioxonil.**

Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and NIOSH-approved dust mask when handling treated seed, and during planting (including loading, sowing, maintenance, and clean-up). When using closed-cab planting equipment, chemical-resistant gloves and NIOSH -approved dust mask are not required inside cab. 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. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.”

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.

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)***

GROUP	4				INSECTICIDE
GROUP	3	4	7	12	FUNGICIDES

CRUISER VIBRANCE® QUATTRO™

SEED TREATMENT FUNGICIDES AND INSECTICIDE

SUSPENSION

AGRICULTURAL

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

GUARANTEE:

Thiamethoxam	61.5 g/L
Difenoconazole	36.9 g/L
Sedaxane	15.4 g/L
Metalaxyl-M (and S-isomer)	9.2 g/L
Fludioxonil	7.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.023%, 2-bromo-2-nitropropane-1,3-diol at 0.021%, 5-chloro-2-methyl-4-isothiazolin-3-one at 0.00008% and 2-methyl-4-isothiazolin-3-one at 0.000026% as preservatives.

Warning, contains the allergen Soy.

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

REGISTRATION NUMBER: **31453**
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 (facilities and mobile treaters) 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 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 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 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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. 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. Wear a dust mask when transferring seed to a storage bin. Avoid contamination of feed and foodstuffs.

CRUISER VIBRANCE® QUATTRO™ is for use on-farm on barley, wheat, oats, rye, and triticale. This product can also be applied by commercial seed treaters (facilities and mobile treaters) using closed system transfer. Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.

Treat seed in a well-ventilated area.

For commercial seed treatment:

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. In addition, wear a NIOSH-approved dust mask when bagging or sewing bags of treated seed or when transferring seed to a storage bin.

For on-farm treating:

When treating seeds on-farm, all workers must wear coveralls over a long sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and a NIOSH-approved dust mask. In addition, wear a NIOSH-approved dust mask when transferring seed to a storage bin.

For planting:

When planting (including loading, sowing, maintenance, and clean-up) wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and NIOSH-approved dust mask. When using closed-cab planting equipment, chemical-resistant gloves and NIOSH-approved dust mask are not required inside cab. For good hygiene practice, it is also recommended to wear a suitable 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 other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

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.

TOXIC to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications.

USE RESTRICTIONS

6. Treated seed must not be used for food, feed or oil processing.
7. To prevent contamination, store away from food and feed.
8. For seed treated with CRUISER VIBRANCE QUATTRO, do not graze or feed livestock on treated areas for 45 days after planting.
9. Do not plant any crop other than cereals, corn, soybeans, members of Crop Subgroup 6C (dried, shelled peas and beans), members of Crop Subgroup 20A (canola and rapeseed subgroup) or potatoes within 60 days to fields in which seeds treated with CRUISER VIBRANCE QUATTRO 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 the insecticide, thiamethoxam and the fungicides, difenoconazole, metalaxyl-M (and S-isomer), sedaxane and fludioxonil.**

Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, work boots, socks and NIOSH -approved dust mask when handling treated seed, and during planting (including loading, sowing, maintenance, and clean-up). When using closed-cab planting equipment, chemical-resistant gloves and NIOSH -approved dust mask are not required inside cab. 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. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.”

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.

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

CRUISER VIBRANCE QUATTRO is a combination of the insecticide thiamethoxam and the fungicides difenoconazole, metalaxyl-M (and S-isomer), sedaxane and fludioxonil that controls or suppresses certain insect pests and seed- and soil-borne diseases of cereal crops, as listed below.

When seed is treated for post-planting protection against registered pests, CRUISER VIBRANCE QUATTRO will also provide protection during post-treatment storage of the seed against damage from many storage insect pests. Seed treated with thiamethoxam has been tested and found to be effective against rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian meal moth. It is recommended that seed with existing populations of storage pests be fumigated prior to treating and storage of that seed.

Thiamethoxam is a Group 4 Insecticide. Do not make any subsequent application of a Group 4 Insecticide (i.e., in-furrow or foliar application) following treatment with CRUISER VIBRANCE QUATTRO.

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 CRUISER VIBRANCE QUATTRO 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.

CRUISER VIBRANCE QUATTRO is a ready-to-use water-based formulation for use in commercial seed treatment facilities or on-farm. Treatment equipment must provide uniform coverage of CRUISER VIBRANCE QUATTRO on the seed. Thorough seed coverage will offer the best protection of the seed from insect damage and disease. Uneven seed coverage may not give the desired level of disease/insect protection.

This product does not require the addition of water for application. Consult the manufacturer of the application equipment planned to be used for suitability for this application and for instructions on operation and calibration of the equipment.

Ideal storage temperature is above freezing and below 30 °C. Repeated freeze-thawing of CRUISER VIBRANCE QUATTRO 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

For control or suppression of certain seed- and soil-borne diseases and insects on small-grained cereals, apply 325 mL CRUISER VIBRANCE QUATTRO per 100 kg of seed to the crops listed below.

CROP GROUP 15 (CEREALS)	
CROPS	Barley
INSECTS CONTROLLED	Wireworms European Chafer ¹
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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 (<i>Ustilago hordei</i>) False loose smut (<i>Ustilago nigra</i>) True loose smut (<i>Ustilago nuda</i>)
DISEASES SUPPRESSED²	Common root rot (<i>Cochliobolus sativus</i>) Fusarium crown and foot rot (<i>Fusarium</i> spp.) Take-all (<i>Gaeumannomyces graminis</i>)
RATE	325 mL/100 kg seed
NOTES	¹ For control of European chafer activity on wheat and barley, mix CRUISER VIBRANCE QUATTRO with CRUISER 5FS Seed Treatment to achieve a total use rate of 30 g of thiamethoxam per 100 kg seed. 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. ² Suppression means consistent control at a level that is not optimal but is still of commercial benefit.
CROPS	Oats
INSECTS CONTROLLED	Wireworms
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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 (<i>Ustilago hordei</i>) Loose smut (<i>Ustilago avenae</i>)
DISEASES SUPPRESSED¹	Common root rot (<i>Cochliobolus sativus</i>)
RATE	325 mL/100 kg seed
NOTES	¹ Suppression means consistent control at a level that is not optimal but is still of commercial benefit.

CROPS	Rye
INSECTS CONTROLLED	Wireworms
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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. Common bunt (<i>Tilletia tritici</i>) ¹ Dwarf bunt (<i>Tilletia controversa</i>) ¹
DISEASES SUPPRESSED²	Common root rot (<i>Cochliobolus sativus</i>) Fusarium crown and foot rot (<i>Fusarium</i> spp.) Take-all (<i>Gaeumannomyces graminis</i>)
RATE	325 mL/100 kg seed
NOTES	¹ Controls both seed- and soil-borne bunts (common, dwarf). ² Suppression means consistent control at a level that is not optimal but is still of commercial benefit.
CROPS	Triticale
INSECTS CONTROLLED	Wireworms
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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 (<i>Ustilago tritici</i>)
DISEASES SUPPRESSED¹	Common root rot (<i>Cochliobolus sativus</i>) Fusarium crown and foot rot (<i>Fusarium</i> spp.) Take-all (<i>Gaeumannomyces graminis</i>)
RATE	325 mL/100 kg seed
NOTES	¹ Suppression means consistent control at a level that is not optimal but is still of commercial benefit.
CROPS	Winter Wheat
INSECTS CONTROLLED	Wireworms European Chafer ¹
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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. Common bunt (<i>Tilletia tritici</i>) ² Dwarf bunt (<i>Tilletia controversa</i>) ² Loose smut (<i>Ustilago tritici</i>)
DISEASES SUPPRESSED³	Common root rot (<i>Cochliobolus sativus</i>) Fusarium crown and foot rot (<i>Fusarium</i> spp.) Take-all (<i>Gaeumannomyces graminis</i>)
RATE	325 mL/100 kg seed
NOTES	¹ For control of European chafer activity on wheat and barley, mix CRUISER VIBRANCE QUATTRO with CRUISER 5FS Seed Treatment to achieve a total use rate of 30 g of thiamethoxam per 100 kg seed. 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. ² Controls both seed- and soil-borne bunts (common, dwarf). ³ Suppression means consistent control at a level that is not optimal but is still of

	commercial benefit.
CROPS	Spring Wheat
INSECTS CONTROLLED	Wireworms European Chafer ¹
DISEASES CONTROLLED	Seed rots caused by <i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Penicillium</i> and <i>Aspergillus</i> spp. 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. Common bunt (<i>Tilletia tritici</i>) ² Loose smut (<i>Ustilago tritici</i>)
DISEASES SUPPRESSED³	Common root rot (<i>Cochliobolus sativus</i>) Fusarium crown and foot rot (<i>Fusarium</i> spp.) Take-all (<i>Gaeumannomyces graminis</i>)
RATE	325 mL/100 kg seed
NOTES	¹ For control of European chafer activity on wheat and barley, mix CRUISER VIBRANCE QUATTRO with CRUISER 5FS Seed Treatment to achieve a total use rate of 30 g of thiamethoxam per 100 kg seed. 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. ² Controls both seed- and soil-borne bunts (common, dwarf). ³ Suppression means consistent control at a level that is not optimal but is still of commercial benefit.

TANK MIXES

When wireworm activity is high, CRUISER VIBRANCE QUATTRO can be tank mixed with CRUISER[®] 5FS Seed Treatment to achieve a total use rate of 30 g of thiamethoxam per 100 kg seed. 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 CRUISER VIBRANCE QUATTRO contains Groups 3, 4, 7 and 12 and a Group 4 insecticide. Any fungal and (or) insect population may contain individuals naturally resistant to CRUISER VIBRANCE QUATTRO and other Groups 3, 4, 7 or 12 fungicides and Group 4 insecticides. A gradual or total loss of pest control may occur over time if these fungicides/insecticides 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 insecticide and fungicide resistance:

Where possible, rotate the use of CRUISER VIBRANCE QUATTRO or other Groups 3, 4, 7 and 12 fungicides, Group 4 insecticides with different groups that control the same pathogens/insect pests.

Fungicide and insecticide 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 and insecticide 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 and insecticide 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[®], CRUISER MAXX[®], QUATTRO[™] and VIBRANCE[®] are trademarks of a Syngenta Group Company.

GROUP	4	INSECTICIDE
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FLAGSHIP™ Insecticide

INSECTICIDE

WETTABLE GRANULES

COMMERCIAL

For control of insect pests on outdoor ornamentals, greenhouse peppers and Viburnum in outdoor nurseries and landscapes.

GUARANTEE:

Thiamethoxam 25%

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

CAUTION - EYE IRRITANT

REGISTRATION NO.: 30723
PEST CONTROL PRODUCTS ACT

NET CONTENT: **450g – 3.4kg**

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

Label

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, call a doctor or poison control centre **IMMEDIATELY**. 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Hazard to Humans and Domestic Animals.

May irritate eyes. Avoid contact with eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash hands and face after handling and before eating or smoking.

Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots during mixing, loading, clean-up and repair; wear long-sleeved shirt, long pants, socks and boots during application. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Avoid contamination of feed and foodstuffs.

DO NOT APPLY BY AIR

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

Greenhouse uses: Toxic to bees and other beneficial insects. Avoid application when bees or other beneficial insects are actively visiting the treatment area. Residues in/on plants or soil may harm bees and other beneficial insects used in greenhouse production.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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.

STORAGE

Store in a cool, dry place.

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 cleanup 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, this 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 (1-800-FASTMED)***

FLAGSHIP™ is a trademark of a Syngenta Group Company.

GROUP	4	INSECTICIDE
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FLAGSHIP™ Insecticide

INSECTICIDE

WETTABLE GRANULES

COMMERCIAL

For control of insect pests on outdoor ornamentals, greenhouse peppers and Viburnum in outdoor nurseries and landscapes.

GUARANTEE:

Thiamethoxam 25%

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

CAUTION - EYE IRRITANT

REGISTRATION NO.: **30723**
PEST CONTROL PRODUCTS ACT

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

Pamphlet

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, call a doctor or poison control centre **IMMEDIATELY**. 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. 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.

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 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.

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product if ingested. Treat symptomatically.

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN and domestic animals. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Hazard to Humans and Domestic Animals.

May irritate eyes. Avoid contact with eyes. Avoid contact with skin. Avoid inhalation of vapours and spray mist. Wash hands and face after handling and before eating or smoking.

Wear long-sleeved shirt, long pants, chemical resistant gloves, socks and boots during mixing, loading, clean-up and repair; wear long-sleeved shirt, long pants, socks and boots during application. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Avoid contamination of feed and foodstuffs.

DO NOT APPLY BY AIR.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to bees. This product is systemic and residues from soil may be transported through plants into leaves, pollen and nectar. Bees may be exposed directly, through spray drift, or to residues on/in leaves, pollen and nectar in flowering crops and weeds. To minimize exposure to bees from foliar application, DO NOT apply this product to flowering crops or weeds if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

Greenhouse uses: Toxic to bees and other beneficial insects. Avoid application when bees or other beneficial insects are actively visiting the treatment area. Residues in/on plants or soil may harm bees and other beneficial insects used in greenhouse production.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

This product is toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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CALL 1-800-327-8633 (1-800-FASTMED)***

GENERAL INFORMATION

FLAGSHIP™ Insecticide controls chewing insects through contact and ingestion.

FLAGSHIP Insecticide should be applied to plant foliage when insect pest populations begin to build, but before pest populations reach economically damaging levels. Economic thresholds for pests controlled by FLAGSHIP Insecticide may be available from your local agricultural authorities.

FLAGSHIP Insecticide is taken up into foliage after application. However, thorough spray coverage is essential for best performance. Apply FLAGSHIP Insecticide in sufficient water to ensure good coverage. See specific application information in the Directions for Use section of this label. The use of higher water volumes will generally result in better coverage, especially under adverse conditions (e.g. hot, dry weather) or where a dense plant canopy exists.

FLAGSHIP Insecticide is rainfast once the spray solution has dried on treated plants.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

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

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

Apply FLAGSHIP Insecticide using sufficient water volume to provide thorough and uniform coverage. Use a minimum of 100 L/ha unless otherwise indicated on this label. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. Avoid making applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid spray overlap.

Precautions:

- 1) When using water volumes of 100 L/ha, fine-sized droplets may be used to improve spray coverage.
- 2) Select nozzles that can produce the desired droplet sizes at the normal rated pressure range.
- 3) When spraying fine-sized droplets, carefully check all nozzles for flow and calibrate the sprayer.
- 4) The sprayer should travel at a uniform speed.
- 5) Monitor environmental conditions and follow **Recommendations to Avoid Spray Drift** carefully.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) fine classification. Boom height must be 60 cm or less above the crop or ground.

Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop	Buffer Zones (metres) Required for the Protection of		
		Freshwater Habitats of Depths:		Terrestrial Habitats:
		Less than 1 m	Greater than 1 m	
Field Sprayer	Outdoor ornamentals	1	0	1

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

MIXING PROCEDURES

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

1. Add 1/2 of the required amount of water to the mix tank.
2. With the agitator running, add the desired amount of FLAGSHIP Insecticide to the tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after FLAGSHIP Insecticide has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been applied.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Syngenta Canada Inc. harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

ORNAMENTALS	
CROPS	OUTDOOR ORNAMENTALS
PEST	Black vine weevil (<i>Otiorhynchus sulcatus</i>)
RATE	10.5-14 g/100 L water
SPRAY VOLUME	Apply using a sufficient water volume to ensure adequate coverage of the foliage, up to a maximum of 2000 L/ha
PESTS	Aphids Leafhoppers
RATE	105 g/100L water
PESTS	Tarnished plant bug (suppression)
RATE	210-280 g/100L water
SPRAY VOLUME	Sufficient water volume to ensure adequate coverage of the foliage, use at least 100 L/ha. Do not exceed 1000 L/ha.
APPLICATION INTERVAL (days)	7
NOTES	Foliar application only. DO NOT make more than 2 applications per season. Apply before pests reach damaging levels or when weevils or damage are first observed. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates for heavy infestations. DO NOT apply by air.
POLLINATOR PRECAUTIONS	This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. DO NOT apply FLAGSHIP Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After a FLAGSHIP Insecticide application, wait at least 5 days before placing the beehives in the treated field.
CROPS	OUTDOOR NURSERIES AND LANDSCAPE
PEST	Brown marmorated stink bug (suppression)
RATE	280 g/ha
SPRAY VOLUME	Adequate water volume to achieve thorough and uniform coverage without excessive runoff (to drip).
APPLICATION INTERVAL (days)	N/A
NOTES	Foliar application only Maximum 1 application per season. Apply before pests cause significant damage to the host plant. For use in residential or landscape settings, do not allow re-entry into treated areas until residues have dried. Before making large scale applications to any crop, a representative subset of material should be treated to determine plant safety under the cultural conditions. Growing conditions and cultural practices vary and may influence phytotoxicity. <u>It is strongly recommended that evaluations be conducted on a sample set of plant material to observe for phytotoxicity prior to treating an entire crop.</u>

POLLINATOR PRECAUTIONS	This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply FLAGSHIP Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After a FLAGSHIP Insecticide application, wait at least 5 days before placing the beehives in the treated field.
CROPS	VIBURNUM IN OUTDOOR NURSERIES AND LANDSCAPE
PEST	Viburnum leaf beetle (<i>Pyrrhalta viburni</i>)
RATE	280 g/ha
SPRAY VOLUME	Adequate water volume to achieve thorough and uniform coverage without excessive runoff (to drip).
NOTES	Foliar application only. Maximum 1 application per season. Apply before pests reach damaging levels on the host plant. For use in residential or landscape settings, DO NOT allow re-entry into treated areas until residues have dried.
POLLINATOR PRECAUTIONS	This product is highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. DO NOT apply FLAGSHIP Insecticide or allow it to drift onto blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide. After a FLAGSHIP Insecticide application, wait at least 5 days before placing the beehives in the treated field.

GREENHOUSE VEGETABLES	
CROPS	GREENHOUSE PEPPERS
PEST	Pepper weevil (<i>Anthonomus eugeni</i>) (suppression only)
RATE	14 g/100 L water
SPRAY VOLUME	Apply in sufficient water volume to ensure thorough coverage, up to a maximum of 2000 L/ha
APPLICATION INTERVAL (days)	7
PHI (days)	1
NOTES	Apply before pests reach damaging levels. Monitor greenhouse and reapply if the pest population rebuilds to potentially damaging levels. Maximum of 3 applications per crop cycle. FLAGSHIP Insecticide should be used in conjunction with a robust integrated pest management (IPM) program which includes monitoring with lures and sticky traps, regular (at least weekly) scouting of the crop for oviposition symptoms on young fruit, removal and proper disposal of suspected infested fruits and thorough sanitation at the end of each crop cycle.

ROTATIONAL RESTRICTIONS

Treated areas may be replanted immediately following harvest or as soon as practical following the last application with any crop listed on this label or to sorghum, wheat, barley, and canola. Any cover crop planted for erosion control or soil improvement may be planted as soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120 day plant-back interval must be observed.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, please note that FLAGSHIP Insecticide contains a Group 4 insecticide (neonicotinoid class of chemistry). Any insect population may contain individuals naturally resistant to FLAGSHIP Insecticide and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area.

To delay insecticide resistance:

Where possible, rotate the use of FLAGSHIP Insecticide or other Group 4 insecticides with different groups that control the same pests in a field.

Use tank mixtures with miticides/insecticides from a different group when such use is permitted. Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.

Monitor treated pest populations for resistance development.

Contact your local extension specialist or certified crop advisors for any additional pesticide

resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

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

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