

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.

ACTIVE INGREDIENT:

Thiamethoxam 240 g/L

Contains 1,2-benzisothiazolin-3-one at 0.03% OR 1,2-benzisothiazolin-3-one at 0.03% and 2-bromo-2-nitropropane-1,3-diol at 0.03% OR 5-chloro-2-methyl-4-isothiazolin-3-one at 0.00100% and 2-methyl-4-isothiazolin-3-one at 0.00033% 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

Label

1.0 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.

2.0 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.

3.0 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.

4.0 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.
5. Avoid contamination of feed and foodstuffs.
6. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
7. For aerial application on potatoes. Do not use human flaggers with this product.

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

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.

5.0 PERSONAL PROTECTIVE EQUIPMENT

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.

DO NOT use open treating equipment when treating potato seed pieces. Use only closed system treatment equipment.

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.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash splashes from skin IMMEDIATELY with plenty of water. Remove PPE immediately after handling this product. Wash the outside of gloves with soap and water before removing. As soon as possible, wash thoroughly and change into clean clothing. After spraying, wash hands and shower thoroughly with soap and water.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Wear freshly laundered clothes daily.

6.0 ENVIRONMENTAL PRECAUTIONS

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. When used according to label directions, minimal exposure or risk is expected. 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 further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying- Best Management Practices" on the Health

Canada website (www.canada.ca/pollinators). Follow crop specific directions for application timing.

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.

7.0 STORAGE

To prevent contamination, store this product away from food or feed.

STORE IN A COOL, DRY PLACE.

8.0 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.

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)

ACTARA® is a trademark of a Syngenta Group Company

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Pamphlet

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Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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Canada website (www.canada.ca/pollinators). Follow crop specific directions for application timing.

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.

7.0 STORAGE

To prevent contamination, store this product away from food or feed.

STORE IN A COOL, DRY PLACE.

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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)

9.0 PRODUCT 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.

10.0 DIRECTIONS FOR USE

10.1. General Information

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.

10.2. Ground Application

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.

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.

10.2.1. 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.

10.2.2. Equipment Clean-Up

Before Spraying:

- Prior to using ACTARA 240SC Insecticide, ensure that the spray tank, lines and filter are thoroughly clean.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. **DO NOT** allow ACTARA 240SC Insecticide residue to dry within the spray tank
- When using tank mixes, consult the tank-mix partner label for additional clean-up instructions.
- The following recommendations are provided:

1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean the sprayer near desirable vegetation, wells or other water sources.
2. Remove all nozzles and screens and wash separately.
3. Dispose of all rinsate in accordance with provincial regulations.

10.3. Aerial Application

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.

10.3.1. General Information

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.

10.3.2. 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.

10.3.3. 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.

10.3.4. 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.

10.4. 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.

10.5. 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.

11.0 CROP USE DIRECTIONS

11.1. Potatoes

CROP	POTATOES – IN FURROW APPLICATION
PESTS	Colorado potato beetle, Aphids (including green peach, potato, buckthorn, and foxglove aphid), Potato leafhopper
PRODUCT RATE	3.4 – 4.4 mL/ 100 m row
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	109 mL/ha
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>Do not apply treatment between 50% row closure and petal fall. Do not make more than one application per year prior to 50% row closure.</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	ACTARA 240SC Insecticide: 3.4 - 4.4 mL/100 m row QUADRIS Flowable Fungicide: 4 - 6 mL/100 m row RIDOMIL GOLD 480SL Fungicide (RIDOMIL GOLD 480EC Fungicide): 4
APPLICATION METHOD	<p>Apply once as in-furrow spray in sufficient water to ensure good coverage.</p> <p>Use the higher rate of ACTARA 240SC Insecticide for extended residual control.</p> <p>Use the higher rate of QUADRIS Flowable Fungicide when the risk of disease is high.</p> <p>Mount spray nozzle so the spray is directed into the furrow as a 15-20 cm band just before the seed is covered.</p> <p><u>MIXING INSTRUCTIONS:</u></p> <ol style="list-style-type: none"> 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	<p><u>PRECAUTIONS:</u></p> <p>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.</p> <p>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.</p> <p>Provide sufficient jet or mechanical agitation during filling and application to keep the tank mix uniformly suspended.</p> <p>DO NOT leave tank mix combinations in the spray tank for prolonged periods without agitation. Mix and apply in the same day.</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>A plant back interval of 30 days for potatoes (root crops) is required.</p> <p>Do not apply more than one application per season.</p> <p>DO NOT apply by air.</p>

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	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><u>MIXING INSTRUCTIONS:</u> Shake or mix well before using.</p> <p>Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust.</p> <p>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.</p> <p>Store cut seed at or below 7 °C. Temperatures above 10 °C promote soft rot in seed.</p> <p>Apply only in areas with adequate ventilation or in areas that are equipped to remove mist or dust.</p> <p>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.</p> <p>Calibrate the output to the actual flow rate. If calibrated properly, there will be no liquid material dripping off of the roller table.</p> <p>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.</p> <p>When treating cut seed, ACTARA 240SC Insecticide should be followed with a dust/talc treatment to improve suberization.</p> <p>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.</p> <p>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.

11.2. Leafy Vegetables – Crop Group 4

CROPS	LEAFY VEGETABLES – CROP GROUP 4 (including 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 (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	375 – 625 mL/ha
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	<p>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.</p> <p>Water Volume: Apply in sufficient water volume to ensure uniform application and incorporation into the soil.</p> <p>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.</p>

11.3. Brassica Vegetables – Crop Group 5

CROPS	BRASSICA VEGETABLES – CROP GROUP 5 (including broccoli, Chinese broccoli (gai lon), 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	375 – 625 mL/ha
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.

12.0 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 integrated pest management 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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