

GROUP 9B INSECTICIDE

FULFILL® 50WG Insecticide

COMMERCIAL

INSECTICIDE

For control of aphids in leafy vegetables (Crop Group 4), aphids, including green peach, potato, buckthorn and foxglove aphids in potatoes and listed aphids in blueberries.

GUARANTEE:

Pymetrozine50%

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

CAUTION



POISON

POTENTIAL DERMAL SENSITIZER
Warning, contains the allergen sulfites.

REGISTRATION NO. **27274**
PEST CONTROL PRODUCTS ACT

Syngenta Canada Inc.
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Guelph, ON
N1G 4Z3
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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

IN CASE OF POISONING, contact a physician or a 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. 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 large amount has been ingested and emesis is inadequate, lavage stomach. Treat symptomatically.

PRECAUTIONS

- HAZARDS TO HUMANS AND DOMESTIC ANIMALS.
- KEEP OUT OF REACH OF CHILDREN. May cause dermal sensitization reaction. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.
- Do not enter or allow worker entry into treated areas during the restricted entry interval **(REI) of 12 hours**.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Applicators and other handlers must wear Personal Protective Equipment including: long-sleeved shirt, long pants, waterproof gloves and shoes plus socks.
- Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.

- Do not contaminate water when cleaning equipment or disposing of equipment wash water.
- Do not use, pour, spill, or store near heat or open flame.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms. Do not over spray aquatic systems including sloughs, coulees, ponds, prairie potholes, lakes, rivers, streams and wetlands. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

STORAGE

Store in a cool, dry, place away from food, drinks, and animal feeding stuffs. Keep in the original container tightly closed.

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:

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 (FASTMED)***

GENERAL INFORMATION

FULFILL® 50WG Insecticide is an insecticide for the control of aphids in potatoes. Apply FULFILL 50WG Insecticide to plant foliage when aphids first appear, before populations build to damaging levels. Consult Provincial guidelines and/or local extension experts. Thorough spray

coverage is essential for best performance. Apply FULFILL 50WG Insecticide in sufficient water to ensure good coverage of all plant surfaces. The use of greater water volumes will generally result in better coverage, especially under adverse conditions (e.g., hot, dry) or where a dense plant canopy exists. See the Recommended Applications section of this label for specific recommendation on spray volumes.

FULFILL 50WG Insecticide exhibits excellent translaminar movement (movement across the leaf surface and into plant tissue) and is rainfast as soon as the spray solution has dried.

Mode of Action

FULFILL 50WG Insecticide works primarily by ingestion, but also has some contact activity. Affected aphids stop feeding shortly after exposure, but may remain on the plant foliage until they die, which is usually within 2-4 days. FULFILL 50WG Insecticide has residual activity in the plant and will control aphids that move onto the plant after spraying.

Suitability for Integrated Pest Management Programs

FULFILL 50WG Insecticide is suitable for Integrated Pest Management (IPM) programs as it has a low toxicity to beneficial insects (including honeybees and bumblebees) and mites. However, do not apply FULFILL 50WG Insecticide directly to the bees that are actively foraging in the field. Do not apply when flowering weeds are present.

Phytotoxicity

FULFILL 50WG Insecticide has been tested for phytotoxicity at the label rates and has shown no effects on the varieties of potato tested.

DIRECTIONS FOR USE

GROUND APPLICATION

APPLICATION PROCEDURES

- Use sufficient water (a minimum of 100 L/ha) to provide thorough uniform coverage.
- Use sprayer nozzles that provide accurate, uniform application and medium-sized droplets.
- Calibrate sprayer from manufacturer's instructions or provincial recommendations to ensure delivery of adequate spray volume per unit area.
- Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective aphid pest control. Use a minimum of 100 L/ha unless otherwise indicated in the **Recommended Applications** section of this label. In situations where a dense canopy exists and/or aphid infestations are high, use greater water volumes (i.e., at least 200 L/ha).

Mixing Procedures

Prepare no more spray mixture than is needed for the immediate application. Thoroughly clean spray equipment before using this product. Agitate the spray solution before and during application. 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.

FULFILL 50WG Insecticide Alone

- Add 1/2 of the required amount of water to the mix tank.

- With the agitator running, add the FULFILL 50WG Insecticide to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the solution after the FULFILL 50WG Insecticide has completely and uniformly dispersed into the mix water.
- Maintain agitation until all of the mixture has been applied.

Note: Do not use liquid fertilizer as a carrier for FULFILL 50WG Insecticide.

- Do not allow spray to drift onto adjacent land or crops.
- Avoid application of this product when winds are gusty.
- Avoid spraying when conditions are favorable for drift (high temperatures, low relative humidity, and drought). Do not apply during temperature inversions. If an inversion condition is suspected, consult with local weather services before making an application.
- Use the largest droplet sizes consistent with good pest control. Small droplets are more prone to spray drift, and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Applications more than 3 m above the crop canopy should be avoided.

DO NOT apply during periods of dead calm.

Do not apply FULFILL 50WG Insecticide through chemigation.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.

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.

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 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 is 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 during periods of dead calm or 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) medium coarse classification. DO NOT allow nozzle spacing to exceed 65% of boom length. Aerial drift is increased under certain meteorological conditions. 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.

NOTE TO BUYER/USER:

The DIRECTIONS FOR USE for this product for the use described below were developed by persons other than Syngenta Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Registration 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.

RECOMMENDED APPLICATIONS (GROUND AND AERIAL APPLICATIONS):

Crop	Pest	Application Method	Use Rate (g product/ha)	Water volume	Remarks
Potatoes	Aphids including: Green peach aphid (<i>Myzus persicae</i>) Potato aphid (<i>Macrosiphum euphorbiae</i>) Foxglove aphid (<i>Aulcorthum solani</i>)	Ground	193 g/ha	Use a minimum of 100 L/ha. Where a dense canopy exists and/or aphid infestations are high use a minimum of 200 L/ha.	Apply when aphids first appear, before populations build to damaging levels. One additional application may be needed to control persistent aphid populations. Do not exceed 2 applications (386 g product/ha) per crop per season.
		Aerial	193 g/ha	20-50 L of water/ha	Allow a minimum of 7 days between applications and 14 days (PHI) between the last application and harvest. The minimum plantback restriction for FULFILL 50WG Insecticide is 30 days for all crops.

The use of a nonionic adjuvant such as AGRAL® 90 at a rate of 250 mL/100 L (0.25% v/v), Ag-Surf® at a rate of 250 mL/100 L (0.25% v/v), Li 700® at a rate of 500 mL/100 L (0.5% v/v) and Xiameter OFX-0309 Fluid at a rate of 250 mL/100 L of water (0.25% v/v) of spray mixture, is recommended to improve the performance of FULFILL 50WG Insecticide under drought stress conditions.

Notes:

Thorough spray coverage of plant foliage is essential for optimal control. Apply in sufficient water to ensure good coverage. Where a dense canopy exists and/or aphid infections are high, the higher water volume should be used.

Crop	Pest	Application Method	Use Rate (g product/ha)	Water volume	Remarks
Crop Group 4 - Amaranth; arugula; cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock; endive; fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard	Aphids	Apply as a foliar spray using ground application equipment.	193 g/ha	Apply in sufficient water to ensure good coverage. Use a minimum of 100 L of water per hectare.	Apply when aphids first appear, before populations build to damaging levels. Do not exceed 2 applications (386 g product/ha) per season. Allow 7 days between applications. Allow 14 days (PHI) between the last application and harvest. Do not apply FULFILL 50WG Insecticide through irrigation equipment. The minimum plant back restriction for FULFILL 50WG Insecticide is 30 days for all crops.

FULFILL 50WG Insecticide causes cessation of feeding shortly after application. However, aphids may remain on the plant for 2-4 days before they die.

Maximum Use Rates (Ground and Aerial Applications)

- Do not apply more than 193 g of FULFILL 50WG Insecticide per hectare per application. Do not apply more than 386 g of FULFILL 50WG Insecticide per hectare per year.
- Allow 7 days between applications and 14 days between last application and harvest (pre-harvest interval). Do not use FULFILL 50WG Insecticide in nurseries or in plant propagation houses, or on any plants grown for use as transplants.

The use of a nonionic adjuvant such as AGRAL 90 at a rate of 250 mL/100 L (0.25% v/v), Ag-Surf at a rate of 250 mL/100 L (0.25% v/v), Li 700 at a rate of 500 mL/100 L (0.5% v/v) and Xiameter OFX-0309 Fluid at a rate of 250 mL/100 L of water (0.25% v/v) of spray mixture, is recommended to improve the performance of FULFILL 50WG Insecticide under drought stress conditions.

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- Allow 7 days between applications and 14 days between last application and harvest (pre-harvest interval). Do not use FULFILL 50WG Insecticide in nurseries or in plant propagation houses, or on any plants grown for use as transplants.

Highbush Blueberries

Crop	Pest	Application Method	Use Rate (g product/ha)	Water volume	Remarks
Highbush Blueberries	Blueberry Aphid (<i>Ericaphis fimbriata</i>) and other known aphid vectors of Blueberry Scorch Virus	Ground application only	193	Apply in sufficient water to ensure good coverage (500-1000 L of water/ha). Use the lower water volume for pre-bloom application when canopy is light and use the higher water volume for post-harvest application when foliage canopy is dense.	Apply as a foliar spray for pre-bloom and post harvest application only. Apply FULFILL 50WG Insecticide in highbush blueberry fields infected with blueberry scorch virus and adjacent fields at risk of infection. For post-harvest application, monitor for aphids and apply only when aphid numbers warrant. Consult provincial guidelines and extension experts. Maximum 2 applications per crop per year with the first application pre-bloom and the second application post harvest. Do not apply within 85 days of harvest. DO NOT APPLY BY AIR.

The use of a nonionic adjuvant such as AGRAL 90 at a rate of 250 mL/100 L (0.25% v/v), Ag-Surf at a rate of 250 mL/100 L (0.25% v/v), Li 700 at a rate of 500 mL/100 L (0.5% v/v) and Xiameter OFX-0309 Fluid at a rate of 250 mL/100 L (0.25% v/v) of spray mixture, is recommended to improve the performance of FULFILL 50WG insecticide.

Crop	Pest	Application Method	Use Rate (g product/ha)	Water volume	Remarks
Tobacco	Aphids	Apply as a foliar spray using ground application equipment.	193 g/ha	Apply in sufficient water to ensure good coverage. Use a minimum of 100 L of water per hectare.	Apply when aphids first appear, before populations build to damaging levels. Do not exceed 2 applications (386 g product/ha) per season. Allow 7 days between applications. Allow 14 days (PHI) between the last application and harvest. Do not apply FULFILL 50WG Insecticide through irrigation equipment. The minimum plant back restriction for FULFILL 50WG Insecticide is 30 days for all crops. DO NOT APPLY BY AIR

The use of a nonionic adjuvant such as AGRAL 90 at a rate of 250 mL/100 L (0.25% v/v), Ag-Surf at a rate of 250 mL/100 L (0.25% v/v), Li 700 at a rate of 500 mL/100 L (0.5% v/v) and Xiameter OFX-0309 Fluid at a rate of 250 mL/100 L of water (0.25% v/v) of spray mixture, is recommended to improve the performance of FULFILL 50WG Insecticide under drought stress conditions.

Note: FULFILL 50WG Insecticide causes cessation of insect feeding shortly after application. However, aphids may remain on the plant for 2-4 days before they die.

Resistance Management Statement

For resistance management, please note that FULFILL 50WG Insecticide contains a Group 9B insecticide. Any insect population may contain individuals naturally resistant to FULFILL 50WG Insecticide and other Group 9B 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 FULFILL 50WG Insecticide or other Group 9B insecticides with different groups that control the same pests in a field.

Avoid application of more than the maximum number listed in the label and consecutive sprays of FULFILL 50WG Insecticide or other insecticides in the same group in a season.

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.

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