

2024-0859
2024-12-04

****container label****



GROUP	BM02	FUNGICIDE
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MINUET™

Biological Fungicide
Live Organism
Liquid

COMMERCIAL

ACTIVE INGREDIENT:

QST 713 strain of *Bacillus subtilis*, contains a minimum of 2.7×10^{10} CFU/g

KEEP OUT OF REACH OF CHILDREN

**READ THE LABEL AND ATTACHED BOOKLET
BEFORE USING**

POTENTIAL SENSITIZER

REGISTRATION NO.: 33651 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 1L - bulk

Product Information: 1-888-283-6847

www.cropscience.bayer.ca

Bayer CropScience Inc.
Suite 200, 160 Quarry Park Blvd. S.E.
Calgary, Alberta T2C 3G3

In case of spills, poisoning or fire, telephone emergency response number
1-800-334-7577 (24 hours a day).

Date of Manufacture:

Made in Mexico

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.

PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. May cause sensitization. Avoid contact with eyes, skin or clothing. Avoid inhaling/breathing spray mist. Wear a long-sleeved shirt, long pants, waterproof gloves, socks and shoes, and a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter when handling, mixing/loading or applying the product and during all clean-up/repair activities. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Apply only to agricultural crops when the potential for drift to areas of human habitation and 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.

FIRST AID:

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/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.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

STORAGE: Store this product away from food or feed. Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. This product should be used within 3 years from the date of manufacture when stored at room temperature.

DISPOSAL:

Recyclable Container

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/territorial requirements.

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

Returnable-Refillable Container: For disposal, this empty 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 non-recyclable Container

1. Thoroughly rinse the emptied plastic bag, or triple-rinse the empty container, and add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instructions for any required additional cleaning of the plastic bag/container prior to its disposal.
3. Make the empty plastic bag/container unsuitable for further use.
4. Dispose of the plastic bag/container in accordance with provincial/territorial requirements.

Disposal of Unused, Unwanted Product: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for cleanup of spills.

MINUET is a trademark of Bayer.

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****booklet label****



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ENVIRONMENTAL PRECAUTIONS:

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

Avoid application when heavy rain is forecast.

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

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DIRECTIONS FOR USE:

MINUET contains bacteria that, when applied to the soil, will germinate to colonize the developing root system and provide suppression of listed diseases on the label. It may be applied as a soil application by various methods either alone, or in an alternating program of applications with other registered crop protection products. When conditions are conducive to heavy disease pressure, use MINUET in a rotational program with other registered fungicides. Do not use in crops that are not specifically listed on the label.

Tank Mixes:

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones

are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Bayer CropScience Inc. at 1-888-283-6847 or www.cropscience.bayer.ca for information before applying any tank mix that is not specifically recommended on this label.

Bayer CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank-mixes under all environmental conditions or for all crop varieties. Tank-mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank-mix is suitable for widespread application.

To determine the physical compatibility of this product with other products, use a jar test.

RESTRICTED ENTRY INTERVAL: DO NOT enter or allow worker entry into treated areas for 4 hours or until sprays have settled unless wearing long-sleeved shirt, long pants, socks with shoes and waterproof gloves.

Exception: If the product is soil-injected, soil-incorporated, or applied in-furrow, workers may enter the treated area without restrictions if there will be no contact with anything that has been treated.

USE RESTRICTIONS:

DO NOT apply by air.

DO NOT apply this product through any other type of irrigation system.

DO NOT apply in greenhouses.

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

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

INTEGRATED PEST MANAGEMENT (IPM):

For disease resistance management, MINUET can be integrated into an overall disease and pest management strategy whenever fungicide use is necessary. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

PREHARVEST INTERVAL (PHI): MINUET has a 0 day PHI, and can be applied up to, and including, the day of harvest.

APPLICATION INSTRUCTIONS:

GENERAL: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions. Where provinces/territories have more stringent regulations, they should be observed.

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

GROUND APPLICATION:

Carefully read and follow all label directions, use rates and restrictions. Apply MINUET prior to or in the early stages of disease development. Use maximum label rates and shortened application intervals for conditions conducive to rapid disease development, moderate to high disease pressure and in fields with a history of disease problems.

For proper application, determine the number of hectares to be treated, the recommended label use rate and select appropriate application volume for the method of application to be used. Prepare only the amount of solution required to treat the measured hectareage.

MINUET can be applied in commonly used ground application equipment. Use the appropriate spray pressure, water volume per hectare, nozzles, nozzle spacing and ground speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration. Accurate equipment calibration is essential prior to use.

Be sure to maintain agitation during mixing and application to assure uniform product suspension.

MINUET suppresses the diseases specified for the listed crops. Apply MINUET in a manner that will concentrate the product in the seed, root, or transplant zone. Delivery of MINUET to the seed, root, or transplant zone can be accomplished by in-furrow application, transplant drench, broadcast or banded applications on the soil surface, or by surface drip irrigation. These application methods facilitate the colonization of crop roots with the active ingredient and optimize efficacy.

For in-furrow applications spray MINUET in a narrow band with the spray directed at the seed and surrounding soil before covering the seed or seed piece. For broadcast or banded application to the soil surface, MINUET must be incorporated into the seed zone by rainfall or overhead irrigation within 24 hours. MINUET may also be applied via overhead irrigation. Drip irrigation applications should be made with the first irrigation after seeding or transplanting. MINUET may be injected or shanked into the soil, at the seed zone, prior to planting a crop. With transplanted crops, optimum performance is achieved when MINUET is applied in the drench water at the time of transplanting.

After crop germination or transplanting, additional applications of MINUET may be made. Such applications may include drip irrigation (surface or subsurface), soil directed sprays or shanking in.

CROPS, DISEASES, APPLICATION RATES AND METHODS

Crop Group 1: Root and Tuber Vegetables Arrowroot, artichoke (Chinese and Jerusalem), garden beet, sugar beet, edible burdock, edible canna, carrot, celeriac (celery root), turnip-rooted chervil, chicory, chufa, dasheen (taro), ginger, ginseng, horseradish, turnip-rooted parsley, parsnip, potato, radish, oriental radish (daikon), rutabaga, salsify, skirret, sweet potato, turnip, and true yam.		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia root rot, black scurf and stem canker (<i>Rhizoctonia solani</i>) Phytophthora root rot and pink rot (<i>Phytophthora erythroseptica</i>) Pythium root rot and cavity spot (<i>Pythium</i> spp.) Fusarium root rot (<i>Fusarium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Crop Group 3-07: Bulb Vegetables Chive, bulb daylily, elegans hosta, fritillaria, garlic, kurrat, leek, lily, onion, shallot and wild leek.		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping-off and root rot (<i>Rhizoctonia solani</i>) Pink root (<i>Phoma terrestris</i>) Pythium root rot (<i>Pythium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Crop Group 4-13: Leafy Vegetables

Amaranth, arugula, Indian aster, blackjack, broccoli raab, Chinese broccoli, Abyssinian cabbage, seakale cabbage, cat's whiskers, cham-chwi, cham-na-mul, chervil, Chinese cabbage (bok choy), chipilin, garland chrysanthemum, cilantro, collards, cosmos, cress, dandelion, dang-gwi, dillweed, dock, dol-nam-mul, ebolo, endive, escarole, fameflower, feather cockscomb, good King henry, hanover salad, huauzontle, Jute leaves, kale, lettuce, maca, mizuna, mustard greens, orach, parsley, buckhorn plantain, English primrose, purslane, radicchio (red chicory), radish, rape greens, wild rocket, shepherd's purse, spinach, Swiss chard, turnip greens, Chinese violet and watercress.

Crop Group 5-13: Brassica Head and Stem Vegetables

Broccoli, Brussels sprouts, cabbage, Chinese cabbage (napa) and cauliflower.

Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping-off and root rot (<i>Rhizoctonia solani</i>) Phytophthora root rot (<i>Phytophthora erythroseptica</i>) Pythium root rot (<i>Pythium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Crop Group 6: Legume Vegetables

Bean (*Lupinus* spp., *Phaseolus* spp., *Vigna* spp.), broad bean, chickpea, guar, jackbean, lablab bean, lentil, pea (*Pisum* spp.), pigeon pea, soybean and sword bean.

Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Fusarium root rot (<i>Fusarium</i> spp.) Pythium root rot (<i>Pythium</i> spp.) Rhizoctonia root rot (<i>Rhizoctonia solani</i>)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Crop Group 8-09: Fruiting Vegetables African eggplant, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, okra, pea eggplant, pepino, pepper, scarlet eggplant, sunberry, tomatillo and tomato.		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Phytophthora blight (<i>Phytophthora capsici</i>) Pythium root rot (<i>Pythium</i> spp.) Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>) Fusarium wilt, crown and root rot (<i>Fusarium oxysporum lycopersici</i>)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Crop Group 9: Cucurbit Vegetables Chayote (fruit), Chinese waxgourd, citron melon, cucumber, gherkin, edible gourd (<i>Lagenaria</i> spp., <i>Luffa acutangula</i>, <i>L. cylindrica</i>), <i>Momordica</i> spp., muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i>), pumpkin, squash (summer and winter) and watermelon.		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>) Fusarium root rot (<i>Fusarium</i> spp.) Phytophthora blight (<i>Phytophthora capsici</i> , <i>Phytophthora richardiae</i>) Pythium root rot (<i>Pythium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Asparagus		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Phytophthora root rot (<i>Phytophthora</i> spp.) -	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shank-In and Injected Applications 5. Post planting applications at any crop stage

Celery, rhubarb, kohlrabi		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping- off and root rot (<i>Rhizoctonia solani</i>) Phytophthora root rot (<i>Phytophthora erythroseptica</i>) Pythium root rot (<i>Pythium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shanked-In and Injected Applications 5. Post planting applications at any crop stage

Peanut		
Disease Suppressed	Rate (litre/hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shanked-In and Injected Applications 5. Post planting applications at any crop stage

Strawberry		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shanked-In and Injected Applications 5. Post planting applications at any crop stage

Tobacco		
Disease Suppressed	Rate (litre/hectare)	Soil Application Methods and Instructions*
Rhizoctonia damping off and root rot (<i>Rhizoctonia solani</i>) Pythium root rot (<i>Pythium</i> spp.)	0.5 – 2.8	1. Surface applications 2. Transplant drench 3. In-Furrow Applications 4. Shanked-In and Injected Applications 5. Post planting applications at any crop stage

Corn (Field Corn, Sweet Corn, Popcorn, Seed Corn, Silage Corn)		
Disease Suppressed	Rate (litre/ hectare)	Soil Application Methods and Instructions*
Rhizoctonia root rot (<i>Rhizoctonia solani</i>) Pythium root rot (<i>Pythium</i> spp.) Fusarium root rot (<i>Fusarium</i> spp.)	0.5 – 2.8	1. Soil surface applications 2. In-Furrow Applications 3. Shank-In and Injected Applications 4. Post planting applications at any crop stage
Mix 0.5 - 2.8 L of MINUET in the appropriate amount of water per hectare. Use the higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place.		

*Specific Soil Application Methods and Instructions

1. Soil surface applications:

Broadcast or Band. Apply as a 15-cm band over the top of the seed row or as a broadcast spray after planting. Use higher rates for broadcast applications. Ensure incorporation into the seed zone within 24 hours of applications with rain or overhead irrigation.

Overhead irrigation. Apply with irrigation water, ensuring uniform coverage of the soil and incorporation of product into the seed zone.

Surface drip irrigation. Apply product with the first irrigation after planting. Instructions continued from above.

2. Transplant drench:

Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone or as a drench or directed spray using sufficient water to soak the root zone.

3. In-Furrow Applications:

Apply as an in-furrow spray in the appropriate amount of water per hectare for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered.

4. Shank-In and Injected Applications:

Product can be shank-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops.

5. Post planting applications at any crop stage:

Apply the finished spray mixture to the soil as a drench, spray, or drip irrigation, directing it towards the base of the plant to optimize efficacy. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate so as to move the product into the seed, root or transplant zone. Applications may be repeated at 21-28 day intervals to enhance preventive treatments. The shorter interval is recommended under moderate to high disease pressure.

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