

2023-3678

2023-07-31

Last approved 2021-0495 2021-10-29

This label has been updated according to the re-evaluation/special review decision of Mancozeb RVD2020-12. While users are encouraged to follow this updated label immediately, the previously approved label is valid until 2022-11-19 in accordance with the phase out period set out in the re-evaluation/special review decision of Mancozeb RVD2020-12. This previously approved label will be provided upon request by emailing [hc.pma.info-arla.sc@canada.ca](mailto:hc.pma.info-arla.sc@canada.ca). In your email please include the product name and Registration number of the label you are requesting.

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<b>GROUP</b>	<b>M3</b>	<b>FUNGICIDE</b>
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**AGROSOLAN™ LIQUID FUNGICIDE**

Contains: Mancozeb

**AGRICULTURAL - COMMERCIAL**

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

ACTIVE INGREDIENT: MANCOZEB 37.0%  
Contains hexamethylene tetramine and disodium hydrogen phosphate as preservatives, both at 1.4% each

REGISTRATION NO. 31181 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 9.5 Litre - Bulk

Belchim Crop Protection Canada Inc.  
104 Cooper Drive, Unit 3  
Guelph ON N1C 0A4  
1-866-613-3336

In case of emergency involving a poisoning or major spill call 1-866-336-2983.

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN**

May cause irritation of nose, throat, eyes and skin. Do not breathe spray mist. Keep away from fire and sparks. Keep from freezing.

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab or cockpit. In addition, wear chemical-resistant headgear during open cab airblast application. Chemical-resistant headgear includes Sou'Wester hat, chemical-resistant rain hat or large brimmed waterproof hat and hood with sufficient neck protection. Gloves and chemical-resistant hat are not required during application within a closed cab.

### **FIRST AID**

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

#### **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 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 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 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.

### **TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on judgement of the physician in response to reactions of the patient.

### **AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

This product is not to be used in or around homes or other residential areas such as parks, school grounds and/or playing fields. Residential areas are defined as any use site where the general public, including children, could be exposed during or after application. It is not for use by homeowners.

## RESTRICTED-ENTRY INTERVALS (REI)

Crop	Postapplication Activity	REI and/or PHI (Days)
Potatoes	Harvesting	3
	All other activities	0.5
Apples	Harvesting	77
	Hand thinning of fruit	35
	All other activities	0.5
Onions (foliar)	Harvesting	14
	Hand weeding	1
	All other activities	0.5
Ginseng	Harvesting	30
	Hand set/Hand line irrigation related activities involving foliar contact	1
	All other activities	0.5
Cucumbers	Harvesting	14
	All other activities	0.5
Tomatoes	Harvesting	30
	All other activities	0.5
Pumpkin, Squash, Melons including Cantaloupe, excluding watermelon	Harvesting	14
	All other activities	0.5

## ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms. Observe spray buffer zones specified under DIRECTIONS FOR USE.

TOXIC to small wild mammals.

TOXIC to birds

May be toxic to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. 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](http://www.canada.ca/pollinators)).

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

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 strip between the treated area and the edge of the water body.

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

## **STORAGE**

Keep away from fire and sparks. Keep from freezing. Store in cool, dry, well ventilated place. Do not allow to become overheated in storage: decomposition or impaired activity may result. Keep container closed when not in use. Do not contaminate food or feed by storage or disposal.

## **DISPOSAL**

### **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.

### **Returnable Containers:**

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

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.

## **GENERAL INFORMATION**

### **GENERAL USE PRECAUTIONS**

- DO NOT apply using handheld equipment.
- DO NOT apply in greenhouses.
- When applied as a tank-mix combination, read and observe all label directions, including rates, personal protective equipment, restrictions and precautions for each product used in the tank-mix. Always use in accordance with the most restrictive label restrictions and precautions.

- As this pesticide 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.
- To protect pollinators, follow the instructions regarding bees in the Environmental Precautions section.

## **DIRECTIONS FOR USE**

READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC FUNGICIDE CONTROL OR CROP DAMAGE.

When applied as directed, AGROSOLAN LIQUID FUNGICIDE will control the listed diseases, unless otherwise indicated as suppression.

## **VEGETABLES**

**POTATOES:** For early blight (*Alternaria solani*) and late blight (*Phytophthora infestans*). Begin applications early, apply 1.8 litres Agrosolan Liquid Fungicide per hectare when plants are 10-15 cm high. Increase rate to 3.0 litres per hectare as plants increase in size, and to 3.8 litres per hectare at row closure. Apply every 7-10 days throughout the season.

### **Reduced Spray Interval Schedule**

During periods of wet weather favoring late blight and/or vigorous crop growth, spray intervals may be reduced to 5-6 days. Apply 1.8 litres per hectare until row closure then increase the rate to 3.0 litres per hectare until conditions allow the return to the regular spray schedule.

Thorough uniform coverage is essential for good disease control. Do not apply within 3 days of harvest.

DO NOT apply more than 8 applications per season. The total seasonal application of mancozeb and metiram combined cannot exceed the maximum number of applications on potatoes of either chemical per year with no more than 3 applications being metiram.

**TOMATOES:** For control of early blight (*Alternaria solani*) and late blight (*Phytophthora infestans*), Anthracnose (*Colletotrichum* spp.), Stemphyllium (grey leaf spot, *Stemphyllium solani*, *S. lycopersici*). Use Agrosolan Liquid Fungicide at 1.8 to 5.5 litres per hectare in sufficient water to provide adequate coverage. Start applications when disease is first reported in the area and repeat every 7 to 10 days. Do not apply within 30 days of harvest.

DO NOT apply more than 2 applications per season.

**ONIONS (foliar):** For control of Botrytis leaf blight (*Botrytis squamosa*, leaf spot or blast). Apply 3.8 to 4.55 litres per hectare when disease first appears and repeat every 7 days. Do not use on green bunching onions. Do not use later than 14 days before harvest.

DO NOT apply more than 6 applications per season.

**CANTALOUPE, CUCUMBERS, PUMPKIN, SQUASH AND MELON (EXCLUDING**

**WATERMELON):** For control of Downy mildew (*Pseudoperonospora cubensis*), Anthracnose (*Colletotrichum obiculare*), Scab (*Cladosporium cucumerinum*), Gummy Stem Blight (*Didymella bryoniae*) and Alternaria leaf spot (*Alternaria cucumerina*). Use Agrosolan Liquid Fungicide at 1.8 to 5.5 litres per hectare in sufficient water to provide adequate coverage. Start applications when runners begin to form or at first sign of disease and repeat every 7 days. Direct spray for thorough coverage of both upper and lower leaf surfaces. Do not apply within 14 days of harvest.

DO NOT apply more than 3 applications per season.

**FRUIT**

**APPLES:** For the control of scab (*Venturia inaequalis*) and cedar apple rust (*Gymnosporangium juniperi-virginianae*) and quince rust (*Gymnosporangium clavipes*). For a protective schedule begin application of Agrosolan Liquid Fungicide in the green tip up to half inch green sprays. Repeat any subsequent pre-bloom, bloom, and cover sprays in accordance with the timing in your local schedule for a protective program. Repeat every 7 days. Use 3.3 litres of Agrosolan Liquid Fungicide per 1000 litres of water in single strength sprays or the equivalent in concentrate sprays. If moderate disease conditions prevail, the dosage can be reduced to 2.5 litres in the cover sprays. Fruit colour and finish on most apple varieties sprayed with Agrosolan Liquid Fungicide have frequently been outstanding. Do not apply within 77 days of harvest. DO NOT apply more than 4 applications per season.

**CAUTION: DO NOT FEED TREATED APPLE POMACE TO LIVESTOCK.**

**HERBS**

**GINSENG:** For control of Alternaria leaf blight (*Alternaria panax*). Use Agrosolan Liquid Fungicide at 7.3 litres per hectare in 2000 litres of water. Apply when disease first appears and follow with five subsequent sprays at 14 day intervals as part of a regular spray program. Do not apply within 30 days of harvest. Do not feed treated ginseng (roots or foliage) to livestock. DO NOT apply more than 6 applications per season.

**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 S572.1) medium 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**

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 for that use/crop.**

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.

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. 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 S572.1) medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

### **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 at 519-826-7878 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:

Volume: Apply the recommended rate in a minimum spray volume of 40 litres of water per hectare.



## Mixing

Slowly place into spray tank as it is being filled, or thoroughly premix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants after Agrosolan Liquid Fungicide has been placed into suspension.

When preparing spray solutions for use in a hand sprayer, premix as a slurry in a small container, and then add to sprayer containing 1/3 to 1/2 the desired final water volume.

Thorough, uniform coverage is essential for good disease control. For low volume airblast sprayers adjust the mixing rate accordingly.

## Spray buffer zones

Spot treatments using hand-held equipment do not require a spray buffer zone. Use of low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage, and soil drench or soil incorporation do not require a spray buffer zone.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of 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		Spray Buffer Zones (metres) Required for the Protection of:			
			Freshwater Habitat of Depths		Estuarine/Marine Habitat of Depths	
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m
Field Sprayer	Onions (foliar), potatoes		5	1	2	1
	Field tomato, cantaloupe, cucumbers, melons, pumpkins, squash		5	1	3	1
	Ginseng		10	2	4	2
Airblast	Apples	Early Growth Stage	45	25	35	25
		Late Growth Stage	35	20	25	20
Aerial	Potatoes	Fixed-wing	225	20	80	20
		Rotary-wing	150	15	50	15

For tank mixes, 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.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

## **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, AGROSOLAN LIQUID FUNGICIDE contains a Group M3 fungicide. Any fungal population may contain individuals naturally resistant to AGROSOLAN LIQUID FUNGICIDE and other Group M3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed..

To delay fungicide/bactericide resistance:

- Where possible, rotate the use of AGROSOLAN LIQUID FUNGICIDE or other Group M3 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicide/bactericides from a different group that is effective on the target pathogen when such use is permitted.
- Fungicide/bactericide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide/bactericide applications.
- Monitor treated fungal/bacterial populations for resistance development. Notify Belchim Crop Protection Canada Inc. if reduced sensitivity of the pathogen to AGROSOLAN LIQUID FUNGICIDE is suspected.

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/bactericide with a different 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 pathogens.

For further information and to report suspected resistance, contact Belchim Crop Protection Canada Inc. at 1-866-613-3336 or at [www.belchimcanada.com](http://www.belchimcanada.com).

## **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.