

2014-2165  
2014-08-21

GROUP	<b>M</b>	FUNGICIDE
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**MICROTHIOL<sup>®</sup> DISPERS<sup>®</sup>**  
**FUNGICIDE AND ACARICIDE**  
**MICRONIZED WETTABLE SULFUR**

COMMERCIAL

GUARANTEE: Sulfur..... 80.0 %

REGISTRATION NO. 29487

PEST CONTROL PRODUCTS ACT

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

NET CONTENTS: 2.5 - 25 kg

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406, USA

1-800-438-6071

**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 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.

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

**TOXICOLOGICAL INFORMATION:**

Treat symptomatically.

**TRANSPORTATION EMERGENCY**

For Chemical Emergency: spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300

**PRECAUTIONS****HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)****CAUTION**

KEEP OUT OF REACH OF CHILDREN.

- Do not take internally. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing dust or spray mist.
- Avoid contact with skin, eyes, or clothing.
- Wash thoroughly after handling and before eating, drinking or smoking.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.
- Clean spray equipment thoroughly after use.
- Do not contaminate domestic or irrigation water, lakes, streams, or ponds by the cleaning of equipment or the disposal of wastes.
- Do not apply this product in a way that will contact workers or other persons, either directly or through drift.
- Only protected handlers may be in the area during application.

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below.

During application, clean-up and repair activities, workers must wear:

1. long-sleeved shirt and long pants
2. chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
3. rubber boots plus socks
4. goggles or a face shield
5. hat
6. NIOSH-approved respirator when applying in greenhouses.

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

MICROTHIOL DISPERSS is for the control of fungal diseases and rust mites in apples, pears, peaches, sweet and sour cherries, grapes, and greenhouse cucumbers, grape erineum mites in grapes, powdery mildew on peas, and *Entomosporium* leaf and berry spot on Saskatoon berries. MICROTHIOL DISPERSS is a water-soluble granular fungicide and acaricide that can be used effectively on a variety of fruits, and as a protectant fungicide for the control of powdery mildew in peas. However, applications of MICROTHIOL DISPERSS after the onset of disease symptoms are less effective.

## **USER SAFETY RECOMMENDATIONS**

### **User should:**

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## **ENVIRONMENTAL HAZARDS**

Do not apply directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, coulees, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands), and estuarine/marine habitats. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposing of wastes.

## **APPLICATION INSTRUCTIONS**

**GROUND APPLICATION:** Apply through any type of handheld, knapsack, mechanical or pneumatic spraying equipment.

**MIXING:** Pour the required amount of MICROTHIOL DISPERSS into the indicated amount of water while stirring. MICROTHIOL DISPERSS disperses instantly. Clean spray equipment thoroughly after use.

## **COMPATIBILITY**

Do not mix with dinitro compounds, tetradifon or oils.

**DIRECTIONS FOR USE**

Some crops may be damaged by sulfur under certain climatic conditions, such as when temperature is high. United Phosphorus, Inc. does not recommend application if temperature will exceed 27°C (in shade) and high humidity prevails within the three days following spraying, due to the risk of crop injury. Crops grown in greenhouses may be more sensitive to sulfur injury, so the lowest labeled rate (or below labeled rates) should be tried initially. Do not use on any crop unless sulfur has been shown to be safe in your locality. Do not allow spray to drift onto sulfur-sensitive crops such as apricots, cranberries, spinach and d'Anjou pears. Do not apply during periods of dead calm or when winds are gusty. Do not apply under intense sunshine. Do not apply when rain or night frost is expected. Crops are most sensitive during the flowering period. Treat when conditions are such that spray will dry on plants.

This product should not be applied more than 8 applications per season.

Do not apply during periods of dead calm or when winds are gusty.

**For airblast application:** 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.

**Do not apply by air.**

Spreader/stickers are not required for use with MICROTHIOL DISPERSS. If spreader/stickers are used with MICROTHIOL DISPERSS, foliar injury may be enhanced under high temperatures. When growing crops for processing, consult the processor before applying sulfur.

NOTE: The application rates specified for each crop are the maximum that should be applied. These amounts may be reduced if experience or local practice indicates that lesser amounts may be effective. Consult your area specialist for rates recommended in your local area.

Follow provincial recommendations for proper timing and water volumes. The following tables are based upon a water volume application rate of 3000 L/ha. Adjust per hectare volume according to the water volume used.

**V VEGETABLE CROPS**

<b>Crop</b>	<b>Pest</b>	<b>Rate</b>	<b>Directions</b>
Peas	Powdery Mildew	1.5 kg/ha	Apply at first appearance of disease and repeat at 7-10 day intervals as necessary. Do not apply later than 1 day before harvest.
Cucumbers (greenhouse)	Powdery Mildew	120 g/100 L of water	Apply when disease first appears and repeat every 5 days as necessary. Do not apply more than 0.04 kg MICROTHIOL DISPERSS per

			hectare per application during periods of high temperatures. Do not apply later than 1 day before harvest.
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### FRUIT CROPS

Crop	Pest	Rate	Directions
Apples Pears	Powdery Mildew	750 g/100 L water (22.5 kg/ha)	Apply in regular protective schedule from green tip up and including first cover spray.
	Scab	400 to 500 g/100 L water (12 to 15 kg/ha)	Apply in later cover sprays, and adjust rate depending on mildew severity and temperature. So not apply later than 1 day before harvest.
	Rust Mites	200 g/100 L water (6.0 kg/ha)	Apply in summer sprays. Do not apply later than 1 day before harvest.
Peaches	Brown Rot Leaf Spot Scab	750 g/100 L water (22.5 kg/ha)	Apply in pink, bloom, shuck and cover sprays. Apply just before picking and in between pickings if weather is wet. Apply at husk fall and repeat in 10 to 14 days.
	Powdery Mildew	375 to 400 g/100 L water (11.3 to 12 kg/ha)	Apply in pink, bloom, shuck and cover sprays. Apply just before picking and in between pickings if weather is wet. Apply at husk fall and repeat in 10 to 14 days.
Plums	Brown Rot	750 g/100 L water (22.5 kg/ha)	Apply in pink, bloom, shuck, cover and pre-harvest sprays. Apply just before picking and in between pickings if the weather is wet.
	Leaf Spot	750 g/100 L water (22.5 kg/ha)	Apply in pink, bloom, shuck, cover and pre-harvest sprays. Apply just before picking and in between pickings if the weather is wet.
Sweet Cherries	Brown Rot	750 g/100 L water (22.5 kg/ha)	Apply in a regular spray program from bloom stage until just before harvest. Do not apply later than 1 day before harvest.
Sour Cherries	Brown Rot	750 g/100 L water (22.5 kg/ha)	Apply at bloom stage only at the recommended rate. Do not apply later than 1 day before harvest
	Powdery Mildew	400 g/100 L water (12 kg/ha)	Apply in first, second and third cover sprays. Do not apply later than 1 day before harvest.
	Rust Mites	200 g/100 L water (6.0 kg/ha)	Apply in summer sprays. Do not apply later than 1 day before harvest.
Grapes	Powdery Mildew	420 g/100 L water (12.6 kg/ha)	Apply to Agawan, Seneca and Seibel varieties at first sign of mildew and repeat after 10 days.

	Grape erineum mite	3.4 kg/ha	Apply at pre-bloom immediately after the first evidence of erineum development and again at mid-season.
Thorough coverage is required. Note: Do not use on Concord, Foch, de Chaunac and Van Buren varieties, and other sulfur sensitive grape cultivars as injury can occur after bloom. Table grapes: Do not apply later than 1 day before harvest. Wine grapes: Do not apply later than 21 days before harvest			

### SMALL FRUITS AND BERRIES

Crop	Pest	Rate	Directions
Saskatoon berry	<i>Entomosporium</i> leaf and berry spot	7.5 kg/ha	Apply at first flower bud break and at 10--14 day intervals while disease persists. Do not apply later than 1 day before harvest. Apply in 100 L water/ha by ground application, using a pressurized backpack sprayer.

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

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

#### DIRECTION FOR USE: For Control of Powdery Mildew on Sugar Beets

Apply 6 kg/ha of MICROTHIOL DISPERS in 200-1000 L water as a foliar spray using ground application equipment. Begin applications prior to the onset of disease or as soon as symptoms appear. Repeat if necessary at a 21-day interval. Apply a maximum of 3 applications per season. DO NOT apply within 1 day of harvest.

#### Buffer Zones Required for the Protection of Aquatic Habitats

The following table specifies the buffer zones that are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, slough, ponds, coulees, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Application Method	Crop	Buffer Zone (Metres) Required for Protection of Aquatic Habitats
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Field Sprayer	Pea	0
Airblast	Apple Berries, Saskatoon Cherry, sour Cherry, sweet Grape Peach Pear Plum	5

## DISPOSAL

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. 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.

## RESISTANCE MANGEMENT RECOMMENDATIONS

For resistance management, please note that MICROTHIOL DISPERSS contains a Group M fungicide. Any fungal population may contain individuals naturally resistant to MICROHIOL DISPERSS and other Group M 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 the 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 resistance:

- Where possible, rotate the use of MICROTHIOL DISPERSS or other Group M fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group when such use is permitted.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact United Phosphorus Inc. at 1-800-438-6071

**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.

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