

# **Curzate™ Fungicide**

GROUP 27 FUNGICIDE

**DRY FLOWABLE** 

FOR SALE FOR USE ON POTATOES IN CANADA ONLY

COMMERCIAL.-.AGRICULTURAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** Cymoxanil 60%

Do not handle more than 38 kg of Curzate Fungicide per day for groundboom application. Do not handle more than 50 kg of Curzate Fungicide per day for aerial application.

REGISTRATION NO. 26284 PEST CONTROL PRODUCTS ACT



**EYE IRRITANT** 

**NET CONTENTS:** 250 g - 10 kg

Corteva Agriscience Canada Company Suite 240, 115 Quarry Park Rd. SE Calgary, Alberta T2C 5G9 1-800-667-3852

™Trademark of Corteva Agriscience and its affiliated companies.

# **PRECAUTIONS**

- KEEP OUT OF REACH OF CHILDREN.
- · Causes eye irritation. DO NOT get in eyes.
- Fatal or poisonous if swallowed.
- Avoid contact with food, drink, and livestock feed.
- Avoid breathing dust or spray mist.
- Avoid contact with skin, eyes, and clothing.
- Keep away from fire or sparks.
- Toxic to aquatic organisms.

# For groundboom application

Wear chemical resistant coveralls over long-sleeved shirt and long pants, goggles or face shield and chemical resistant gloves during mixing, loading, application, cleanup and repair. Wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides during all mixing and loading activities.

# For aerial application

Wear chemical resistant coveralls over long-sleeved shirt and long pants, goggles or face shield and chemical resistant gloves during mixing, loading, cleanup and repair. Wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides during all mixing and loading activities.

# **FIRST AID**

Take container, label or product name and Pest Control Products 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.

TOXICOLOGICAL INFORMATION: No specific antidote is available. Treat symptomatically.

# **ENVIRONMENTAL PRECAUTIONS**

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

#### **STORAGE**

Store product in original container in a secure, dry area away from food or feed. Protect against humid air and water. Not for use or storage in or around the home. Keep container tightly closed.

# **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.

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.

#### **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.



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# For aerial application

Wear chemical resistant coveralls over long-sleeved shirt and long pants, goggles or face shield and chemical resistant gloves during mixing, loading, cleanup and repair. Wear a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides during all mixing and loading activities.

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- 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.

# **DIRECTIONS FOR USE**

- 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.

# **GENERAL INFORMATION**

Curzate<sup>™</sup> Fungicide is an agricultural fungicide and should only be used in accordance with the recommendations on this label or in separate Corteva Agriscience Canada Company Agricultural Bulletins. Curzate Fungicide is formulated as a dry flowable granule to be mixed in water and applied as a uniform broadcast spray.

Curzate Fungicide is a highly active, locally systemic fungicide recommended for the control of Late Blight (*Phytophthora infestans*) on potatoes.

#### **POTATOES**

For the control of Late Blight (*Phytophthora infestans*) in potatoes apply:

Curzate Fungicide	at 225 grams per hectare	
plus		
Dithane Rainshield Fungicide	at 1.35 kg to 1.6 kg* per hectare	
or		
Manzate Pro-Stick Fungicide	at 1.35 kg to 1.6 kg* per hectare	

<sup>\*</sup> The higher fungicide rate (1.6 kg/ha) is to be used under conditions of high disease pressures.

USE CURZATE FUNGICIDE ONLY IN A TANKMIX WITH DITHANE RAINSHIELD FUNGICIDE OR MANZATE PRO-STICK FUNGICIDE. Do not use Curzate Fungicide alone. Read and follow all precautions listed on the Dithane Rainshield Fungicide or Manzate Pro-Stick Fungicide label.

Initial applications should start when local conditions indicate that Late Blight is imminent: make additional applications at 5-7 day intervals, however at least **20 days** must pass between the 2nd and 3rd application. If disease conditions are present during this 20 day period, a fungicide other than Curzate Fungicide must be used to protect the crop during this period.

Apply no more than 4 applications per crop. Do not apply within 8 days of harvest.

Utilize sufficient water to obtain thorough coverage: 200 - 1000 L/ha by ground application

Do not mix and apply more than 38 kg of Curzate Fungicide per day for ground application (enough to treat 170 hectares).

# TANKMIX FOR AERIAL APPLICATION ON POTATOES

For control of late blight in potatoes use a tankmix of 225 g/ha Curzate Fungicide + 1.35-1.6 kg/ha of Dithane Rainshield or Manzate Pro-Stick. The higher Dithane Rainshield Fungicide or Manzate Pro-Stick fungicide rate (1.6 kg/ha) is to be used under conditions of high disease pressures. Apply by air with a minimum water volume of 50 L/ha

Initial applications should start when local conditions indicate that Late Blight is imminent: make additional applications at 5-7 day intervals, however at least **20 days** must pass between the 2nd and 3rd application. If disease conditions are present during this 20 day period, a fungicide other than Curzate Fungicide must be used to protect the crop during this period.

Apply no more than 4 applications per crop. Do not apply within 8 days of harvest.

Do not handle more than 50 kg of Curzate Fungicide per day for aerial applications (enough to treat 220 hectares).

Refer to other sections of this label for additional application instructions and/or use precautions.

# **AERIAL APPLICATION LABEL INSTRUCTIONS**

**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 rotor span.

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 for Aerial Application**

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.

# **Operator Precautions for Aerial Application**

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 for Aerial Application**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-667-3852 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 the recommended rate in a minimum spray volume of 50 L per hectare.

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.

It is recommended that this product be used within an Integrated Pest Management Program.

# MIXING INSTRUCTIONS

Wear coveralls over long-sleeved shirt and long pants, goggles or face shield, and chemical resistant gloves during mixing, loading, application and repair. Ensure the spraying equipment is clean.

- 1. Fill spray tank 1/4 to 1/3 full with clean water and engage agitation. Prepare mixture volume to apply a minimum of 200 litres spray volume per hectare.
- 2. With the agitator running, add the required amount of Curzate Fungicide to the spray tank. Then add the required amount of **Dithane Rainshield** Fungicide or Manzate Pro-Stick Fungicide to the spray tank while maintaining the spray solution agitation.

- 3. Continue to agitate until Curzate Fungicide and **Dithane Rainshield** Fungicide or Manzate Pro-Stick Fungicide are completely dispersed.
- 4. Completely fill the remainder of the spray tank with water.
- 5. On repeat tank loads, draw down the tank contents to less than 10% of the original volume, and repeat from step 1. If more than 10% of the spray volume remains, pre-slurry the Curzate Fungicide and **Dithane Rainshield** Fungicide or Manzate Pro-Stick Fungicide in a bucket of water before adding to the spray tank.

NOTE: Continuous agitation is required to keep Curzate Fungicide and Dithane Rainshield Fungicide or Manzate Pro-Stick Fungicide in suspension in the spray tank for a uniform application.

Use spray preparation of Curzate Fungicide and Dithane Rainshield Fungicide or Manzate Pro-Stick Fungicide within 48 hours or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate before spraying.

Do not mix, load or apply within 15 metres of all wells.

# **Tank Mixtures**

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 Corteva Agriscience Canada Company at 1-800-667-3852 or <a href="https://www.corteva.ca">www.corteva.ca</a> for information before applying any tank mix that is not specifically recommended on this label.

# **SPRAY TANK CLEANING**

Immediately after application, thoroughly remove all traces of Curzate Fungicide and **Dithane Rainshield** Fungicide or Manzate Pro-Stick Fungicide from mixing and spray equipment. Follow these instructions:

- Completely drain tank, then flush tank, boom and hoses with clean water for a minimum of ten minutes. Visually inspect tank to assure removal of all visible residues of Curzate Fungicide and Dithane Rainshield Fungicide or Manzate Pro-Stick Fungicide. If necessary, repeat step 1. DO NOT CLEAN SPRAYER NEAR WELL OR WATER SOURCE OR NEAR DESIRABLE VEGETATION.
- 2. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
- 3. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the hoses and boom.

# **USE PRECAUTIONS**

- For ground boom application: Do not apply during periods of dead calm or when winds are gusty.
- Overspray or drift to sensitive habitats must be avoided. Do not contaminate these habitats when cleaning and rinsing spray equipment and containers.
- 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.
- Do not use on hydroponically grown crops or on any container-grown crops.
- Do not use on ornamentals.
- Do not apply to a potato crop that is suffering from stress as a result of drought, water saturation, low temperatures, insect infestations, nutrient deficiency or any other factors contributing to a reduction in crop growth.
- Do not apply product during periods of intense rainfall, or to soils saturated with water. Do not apply

directly to standing or running water. Do not apply in areas where surface water from treatment site can run off to adjacent cropland, either planted or to be planted, or into streams, irrigation waters or wells. Do not contaminate any body of water, including irrigation water.

• Curzate Fungicide is rainfast within 2 hours after application. If a rain occurs less than 2 hours after treatment, product performance may be reduced.

**DO NOT** enter or allow worker entry into treated areas to perform post-application activities during the intervals specified in the following table:

Crop	Post-application activity	Restricted-entry interval
Potatoes	Hand set/hand line irrigation related activities	18 days
	involving foliar contact	
	Roguing	6 days
	All other activities	1 day

# RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Curzate Fungicide contains a Group 27 Fungicide. Any fungal population may contain individuals naturally resistant to Curzate Fungicide and other group 27 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 resistance:

- Where possible, rotate the use of Curzate Fungicide or other Group 27 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from different groups that are effective on the target pathogen, 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 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 applications.
- Monitor treated fungal populations for resistance development. Notify Corteva Agriscience Canada Company if reduced sensitivity of the pathogen to Curzate 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 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 Corteva Agriscience Canada Company representatives at 1-800-667-3852.

#### **STORAGE**

Store product in original container in a secure, dry area away from food or feed. Protect against humid air and water. Not for use or storage in or around the home. Keep container tightly closed.

# **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.
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