



GROUP	<b>3</b>	FUNGICIDE
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**NET CONTENTS:  
2 - 101 LITRES and BULK**

## **PROLINE® 480 SC Foliar Fungicide** Suspension

**For Control or Suppression of Listed Diseases in Barley, Borage, *Brassica carinata*, Bushberries, Canola, Chickpeas, Crambe, Low Growing Berries - except strawberries, Corn, Cucurbits, Flax (Linseed), Lentils, Oats, Oriental Mustard, Peanut, Rapeseed, Safflower, Soybean, Sugar Beet, Sunflower, Wheat and Certain Other Small Grains.**

### **AGRICULTURAL**

SYMBOL – Triple Rinse

### **CAUTION – POISON**

REGISTRATION NUMBER: **28359**  
PEST CONTROL PRODUCTS ACT

GUARANTEE:  
**Prothioconazole**                      480 g/L

Contains 1,2-benzisothiazolin-3-one at 0.04% and 5-chloro-2-methyl-4-isothiazolin-3-one at 0.001% and 2-methyl-4-isothiazolin-3-one at 0.0004% as preservatives.

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

**Bayer CropScience Inc.  
Suite 200, 160 Quarry Park Blvd. SE  
Calgary, AB  
T2C 3G3**

**For product information, call: 1-888-283-6847**

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

# PROLINE 480 SC Foliar Fungicide

Table of Contents:

Section Number:

## GENERAL INFORMATION

The Product 1

## SAFETY AND HANDLING

Precautions, Protective Clothing & Equipment, and Re-entry Restriction 2

First Aid and Toxicological Information 3

Environmental Hazards 4

Storage 5

Disposal 6

## DIRECTIONS FOR USE

Crop, Disease, Rate, Timing 7

Resistance Management 8

Application Precautions 9

Mixing Instructions 10

Pre-harvest Intervals 11

Notices 12

For more information, contact:

**Bayer CropScience Inc.**  
**Suite 200, 160 Quarry Park Blvd. SE**  
**Calgary, AB**  
**T2C 3G3**

## GENERAL INFORMATION

### Section 1: The Product

PROLINE 480 SC Foliar Fungicide is a broad-spectrum systemic fungicide for the control or suppression of listed *Ascomycetes*, *Basidiomycetes* and *Deuteromycetes* diseases on barley, bushberries, *Brassica carinata*, borage, canola, chickpeas, crambe, low growing berries - except strawberries, corn, cucurbits, flax (linseed), lentils, oats, Oriental mustard, peanut, rapeseed, safflower, soybean, sugar beet, sunflower, wheat and certain other small grains.

## SAFETY AND HANDLING

### Section 2: Precautions, Protective Clothing & Equipment, and Re-entry Restriction.

#### PRECAUTIONS:

**KEEP OUT OF REACH OF CHILDREN.** Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking. If product comes in contact with clothing, remove all contaminated clothing, wash skin with soap and water and dress in clean clothing. Launder applicator clothing separate from other laundry. Apply only when the potential for drift to areas of human habitation or areas of 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. A restricted entry interval (REI) of 20 days is required for hand-harvesting sweet corn and for detasseling seed corn. An REI of 3 days is required for hand-line irrigation in cucurbits and bushberries. For all other activities do not re-enter treated fields until 24 hours after application. If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact Bayer CropScience Canada Inc. at 1-888-283-6847 or [www.bayercropscience.ca](http://www.bayercropscience.ca).

#### PROTECTIVE CLOTHING AND EQUIPMENT:

- Workers must wear long pants, long-sleeved shirts, boots and chemical resistant gloves during mixing, loading, application, clean-up and repair activities. In addition, workers must wear safety goggles or a face shield during mixing, loading, clean-up and repair.
- Gloves are not required during application within closed cabs or cockpits.

### Section 3: First Aid and Toxicological Information

#### FIRST AID:

**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 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 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.

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

#### **TOXICOLOGICAL INFORMATION:**

- Treat symptomatically.
- Medical Personnel should contact Bayer's Medical Information Services, Toll-Free: 1-800-334-7577.

#### **Section 4: ENVIRONMENTAL HAZARDS**

TOXIC to aquatic organisms and non-target terrestrial plants. Observe 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.

#### **Section 5: STORAGE**

##### **Storage:**

- To prevent contamination, store this product away from food and feed.
- Keep away from fire or open flame or other sources of heat.
- Do not store at temperatures below freezing.
- If stored for 1 year or longer, shake well before using.
- Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs.
- Do not use or store in or around the home.
- Keep in original container during storage.
- In case of fire, leaking or damaged containers, call toll free 1-800-334-7577.

#### **Section 6: DISPOSAL**

##### **Recyclable 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.

##### **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).

**Disposal of Unused, Unwanted Product:**

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 cleanup of spills.

**Disposal of Unused Spray Solution:**

If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, NOT ON THE CROP, away from water supplies, ditches, and irrigation canals. Buffer zones indicated in the DIRECTIONS FOR USE must also be respected.

## DIRECTIONS FOR USE

### Section 7: Crop, Disease, Rate, Timing

CEREALS (Barley, Wheat and Oats)			
CROP	DISEASE	RATE	TIMING
Barley	For suppression of Fusarium Head Blight ( <i>Fusarium</i> spp.), or Scab	Apply PROLINE 480 SC Foliar Fungicide once, at 315 to 420 mL/ha (150-200 g a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Fusarium head blight outbreaks in barley occur when the weather is warm and wet at ear emergence. The application of PROLINE 480 SC Foliar Fungicide for protection against Fusarium head blight (scab) should be considered when these environmental conditions are forecasted for this stage of barley development.  <b>Timing of application is critical:</b> For optimum suppression of Fusarium head blight, apply PROLINE 480 SC Foliar Fungicide as a preventative spray within the time period when 70 to 100% of the barley main stem heads are fully emerged, to 3 days after full head emergence.  Application of the 420 mL/ha rate is suggested in situations where disease pressure is expected to be high. Such situations may occur when prolonged periods of warm wet weather are forecast during barley ear emergence, when barley is grown in a crop rotation that has contained corn or when susceptible cultivars are grown.  Use of the 420 mL/ha rate will typically provide highest levels of mycotoxin reduction.  <b>Spray Coverage is essential for optimum efficacy:</b> Spray equipment must be set up to provide good coverage to barley heads. To achieve thorough barley head coverage using ground application equipment, it is recommended to use forward and backward mounted nozzles or nozzles that have a two-directional spray. Nozzles should be operated within the spray pressure recommendations suggested by the manufacturer.
	For control of:  Net Blotch ( <i>Pyrenophora teres</i> );  Scald ( <i>Rhynchosporium secalis</i> )  Spot Blotch ( <i>Cochliobolus sativus</i> )	Apply PROLINE 480 SC Foliar Fungicide once, at 210 to 315 mL/ha (100 -150 g a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Barley fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development.
Note: A maximum of 2 applications (735 mL/ha) of PROLINE 480 SC Foliar Fungicide, with a minimum 7 day application interval, may be applied per barley crop, per year. Do not apply within 30 days of harvest. Applications may be made by ground or aerial spray equipment.			

CROP	DISEASE	RATE	TIMING
Wheat (spring, durum and winter)	For suppression of Fusarium Head Blight ( <i>Fusarium</i> spp.), or Scab	Apply PROLINE 480 SC Foliar Fungicide once, at 315 to 420 mL/ha (150-200 g a.i./ha)	Fusarium head blight outbreaks in wheat occur when the weather is warm and wet at head emergence and flowering. The application of PROLINE 480 SC Foliar Fungicide for protection against Fusarium head blight (scab) should be considered when these environmental conditions are forecasted for this stage of wheat development.
	For control of Glume blotch ( <i>Stagonosora nodorum</i> )	Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	<p><b>Timing of application is critical:</b> For optimum suppression of Fusarium head blight or control of Glume blotch, apply PROLINE 480 SC Foliar Fungicide within the time period from when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower.</p> <p>Application of the 420 mL/ha rate is suggested in situations where disease pressure is expected to be high. Such situations may occur when prolonged periods of warm, wet weather are forecast during anthesis, when wheat is grown in a crop rotation that has contained corn or when more susceptible cultivars or wheat types (i.e. durum) are grown.</p> <p>Use of the 420 mL/ha rate will typically provide highest levels of mycotoxin reduction.</p> <p><b>Spray Coverage is essential for optimum efficacy:</b> Spray equipment must be set up to provide good coverage to wheat heads. To achieve thorough wheat head coverage using ground application equipment, it is recommended to use forward and backward mounted nozzles or nozzles that have a two-directional spray. Nozzles should be operated within the spray pressure recommendations suggested by the manufacturer.</p>
	For control of : Speckled Leaf Blotch ( <i>Septoria tritici</i> ) ; Tan spot ( <i>Pyrenophora tritici-repentis</i> ) ; Leaf Rust ( <i>Puccinia recondata</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 mL/ha (150 g a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Wheat fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development.
Note: A maximum of 2 applications (735 mL/ha) of PROLINE 480 SC Foliar Fungicide, with a minimum 7 day application interval, may be applied per wheat crop per year. Do not apply within 30 days of harvest. Applications may be made by ground or aerial spray equipment.			

CROP	DISEASE	RATE	TIMING
Oats	For control of Crown Rust ( <i>Puccinia coronata</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 mL/ha (150 g a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development.

Note: A maximum of 2 applications (630 mL/ha) of PROLINE 480 SC Foliar Fungicide, with a minimum 7 day application interval, may be applied per oat crop per year. Do not apply within 30 days of harvest. Applications may be made by ground or aerial spray equipment.

CROP	DISEASE	RATE	TIMING
Pearl millet, Proso millet, Rye, Triticale, Teosinte, Buckwheat	For suppression of: Fusarium Head Blight ( <i>Fusarium</i> spp.), or Scab – except buckwheat  For control of : Rust ( <i>Puccinia</i> spp.)	Apply PROLINE 480 SC Foliar Fungicide at 315-420 mL/ha (150-200 g a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development.

Note: A maximum of 2 applications (735 mL/ha) of PROLINE 480 SC Foliar Fungicide, with a minimum 7 day application interval, may be applied per year. Do not apply within 30 days of harvest. Applications may be made by ground equipment only.



<b>OILSEED CROPS (Canola, Rapeseed, Oriental Mustard, <i>Brassica carinata</i>)</b>			
<b>CROP</b>	<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
Canola, Rapeseed, Oriental mustard, <i>Brassica carinata</i>	For control of Sclerotinia stem rot ( <i>Sclerotinia sclerotiorum</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 – 368 mL/ha (150-175 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide when the crop is in the 20 - 50% bloom stage. Best protection will be achieved when the fungicide is applied prior to petals beginning to fall, and will allow for the maximum number of petals to be protected. The 315 mL/ha rate is the recommended rate for most oilseed crops, however, the higher rate is recommended for fields with a history of heavy disease pressure or for dense crop stands. Good spray coverage of the plants is essential.  A second application at a rate of 315 mL/ha may be applied 7-10 days later, up to full bloom, if disease persists or weather conditions are favourable for disease development. When conditions favouring disease are severe, use the shorter interval.
Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial spray equipment. A maximum of two applications (683 mL/ha of PROLINE 480 SC Foliar Fungicide) may be applied per crop year. Do not apply within 36 days of harvest.			

<b>PULSE CROPS (Chickpeas, Lentils)</b>			
<b>CROPS</b>	<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
Chickpeas	For control of Ascochyta blight ( <i>Ascochyta rabiei</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 – 420 mL/ha (150-200 g a.i./ha)  After the initial application, repeat applications may be made on 10-14 day intervals. Apply the higher rate when conditions favour disease development, or when growing less disease resistant varieties.	Apply PROLINE 480 SC Foliar Fungicide at the first sign of disease.  A maximum of 1260 mL/ha of PROLINE 480 SC Foliar Fungicide may be applied per crop year for chickpeas.  Maximum of three applications per year.
Lentils	For control of Ascochyta blight ( <i>Ascochyta spp.</i> )  White mold ( <i>Sclerotinia sclerotiorum</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 – 420 mL/ha (150-200 g a.i./ha)  After the initial application, one additional application may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development. Apply the higher rate when conditions favour disease development, or when growing less disease resistant varieties.	Apply PROLINE 480 SC Foliar Fungicide at the beginning of flowering or at first sign of disease.  A maximum of 840 mL/ha of PROLINE 480 SC Foliar Fungicide may be applied per crop year for lentils.  Maximum of two applications per year.
Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. Applications may be made by ground or aerial spray equipment. Do not apply within 7 days of cutting or swathing of the crop.			

<b>Soybean</b>			
<b>CROP</b>	<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
Soybean	For control of:  Asian soybean rust ( <i>Phakopsora pachyrhizi</i> )  Frogeye leaf spot ( <i>Cercospora sojina</i> )	Apply PROLINE 480 SC Foliar Fungicide at 210 mL/ha (100 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide when first symptoms of disease can be found or that the risk of infection is imminent.  Do not apply more than one application per season.
Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial spray equipment. Do not apply within 20 days of harvest.			

Corn (field, sweet and popcorn)			
CROP	DISEASE	RATE	TIMING
Corn (field, sweet and popcorn, including seed production)	For the control of Rusts ( <i>Puccinia sorghi</i> , <i>Puccinia polysora</i> ), Eyespot ( <i>Kabatiella zea</i> or <i>Aureobasidium zea</i> ), and Northern Blight ( <i>Setosphaeria turcica</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 mL/ha (150 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Fields should be observed closely for early disease symptoms, particularly under prolonged conditions favorable for disease development.  Under high disease pressure, it is recommended to use a non-ionic surfactant with Proline 480 SC Foliar Fungicide (do not apply a non-ionic surfactant prior to tassel emergence as crop injury may occur). Refer to the section "Note" of this table for directions.
	Provides control of all diseases listed above, plus the following:  For the control of Grey Leaf Spot ( <i>Cercospora zea-maydis</i> )  For the suppression of Fusarium and Gibberella ear rots ( <i>Fusarium</i> spp. and <i>Gibberella</i> spp.)  For suppression of the stalk rot pathogens <i>Fusarium</i> spp., <i>Gibberella</i> spp. and <i>Colletotrichum</i> spp. which may cause stalk lodging.	Apply PROLINE 480 SC Foliar Fungicide at 420 mL/ha (200 g a.i./ha)	Fusarium Ear Rot outbreaks in corn occur when the weather is warm and wet during silking. It is also driven by hybrid selection and field history of severe fusarium outbreaks. The application of PROLINE 480 SC Foliar Fungicide for protection against Fusarium Ear Rot should be considered when these conditions are forecasted for a specific corn field. Applications of Proline 480 SC timed for suppression of fusarium ear rot may also reduce lodging caused by stalk rot pathogens.  <b>Timing of application is critical:</b> For optimum suppression of Fusarium Ear Rot apply PROLINE 480 SC Foliar Fungicide from the development stage of corn between the tip of stigmata visible (silking, BBCH 63) to the stigmata drying (silk browning, BBCH 67). PROLINE 480 SC will reduce both disease symptoms and levels of mycotoxin in the grain.  <b>Spray Coverage is essential for optimum efficacy:</b> Spray equipment must be set up to provide good coverage to the cobs. To achieve thorough cob coverage using ground application equipment, it is recommended to use drop-nozzles. Nozzles should be operated within the spray pressure recommendations suggested by the manufacturer.
Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. Do not apply a non-ionic surfactant prior to tassel emergence. The application may be made by ground or aerial spray equipment. Do not apply within 14 days of harvest. Do not apply more than one application per season.			

<b>Peanut</b>		
<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
<u>Soil-Borne:</u>  Suppression of <i>Rhizoctonia</i> pod rot ( <i>Rhizoctonia solani</i> )	420 mL per hectare (200 g a.i./ha)	For Soil-Borne Diseases  Applications of fungicides with a different mode of action should be made prior to and following applications of PROLINE 480 SC Foliar Fungicide to discourage development of resistant strains of fungi.  In fields with a history of pod rot or in situations where conditions favour disease development apply PROLINE 480 SC Foliar Fungicide at about mid-season and continue PROLINE 480 SC Foliar Fungicide applications at 14-day intervals.  PROLINE 480 SC Foliar Fungicide must be carried by rainfall or irrigation into the root and pod zone for control of pod rot caused by <i>Rhizoctonia solani</i> . Drought conditions will decrease the effectiveness of PROLINE 480 SC Foliar Fungicide against pod rot.
<u>Foliar:</u>  Early Leaf Spot ( <i>Cercospora arachidicola</i> )  Suppression of Leaf Rust ( <i>Puccinia arachidis</i> )	365 - 420 mL per hectare (175 -200 g a.i./ha)	Foliar Disease Spray Program  Apply the specified rate in a preventive spray schedule. Apply up to 4 sprays using a 14-day interval  Use the higher use rate when conditions are favourable for severe disease pressure and/or when growing less disease resistant varieties.
Note: Apply up to four (4) applications of PROLINE 480 SC Foliar Fungicide per year. When planting varieties with good to excellent levels of resistance to foliar diseases, the application interval may be extended up to 21 days in the absence of soil borne diseases. A maximum of 1.7 L per hectare of PROLINE 480 SC Foliar Fungicide may be applied per year. PROLINE 480 SC Foliar Fungicide may be applied up to 14 days before harvest. Do not feed hay or threshings or allow livestock to graze in treated areas. Applications may be made by ground spray equipment only.		

## Cucurbit Vegetables

CROP	DISEASE	RATE	TIMING
Cucurbit vegetables: Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon (includes cantaloupe); pumpkin; squash, summer; squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon	Fusarium wilt Fusarium blight ( <i>Fusarium</i> spp.)	Apply PROLINE 480 SC Foliar Fungicide at 420 mL/ha (0.2 kg a.i./ha) (soil)	Apply PROLINE 480 SC at planting via drip / drench equipment. Follow with foliar treatments during the season.
	Gummy stem blight ( <i>Didymella</i> spp.)	Apply PROLINE 480 SC Foliar Fungicide at 420 mL/ha (0.2 kg a.i./ha) (foliar)	
	Powdery mildew ( <i>Sphaerotheca</i> <i>fuliginea</i> )	Apply PROLINE 480 SC Foliar Fungicide at 210-420 mL/ha (0.1-0.2 kg a.i./ha)	For Powdery Mildew Control apply PROLINE 480 SC Foliar Fungicide as a preventive foliar spray when the earliest sign of disease is first noticed., repeat at 5 – 10 day intervals with PROLINE or another approved fungicide from a different chemical group
<p><b>General Comments:</b> Apply up to one (1) soil application and two (2) foliar applications of PROLINE 480 SC at the high rate, or one soil application and four (4) foliar applications per year at the low rate. Repeat foliar applications as needed using a 5- to 10-day spray interval if conditions remain favorable for continued or increasing disease development. Foliar applications may be applied by ground application equipment only. Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v.</p> <p>A maximum of 1.26 L/ha of PROLINE 480 SC may be applied per crop year. Do not apply within 7 days of harvest.</p>			

<b>Bushberry</b>			
<b>CROP</b>	<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
Bushberry subgroup: Aronia berry; blueberry, highbush; blueberry, lowbush; buffalo currant; cranberry, highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); lingonberry; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these.	Suppression of Septoria leaf spot ( <i>Septoria</i> spp.)	Apply PROLINE 480 SC Foliar Fungicide at 315 mL/ha (150 g a.i./ha).	Apply PROLINE 480 SC Foliar Fungicide at the first sign of disease. After the initial application, one additional application may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development.
	Suppression of Leaf rust ( <i>Thekopsora minima</i> ) and Valdensinia leaf spot ( <i>Valdensinia heterodoxa</i> ) - blueberry only	Apply PROLINE 480 SC Foliar Fungicide at 400 mL/ha (190 g a.i./ha)	
	Monilinia blight ( <i>Monilinia vaccinii-corymbosi</i> ) – blueberry only	Apply PROLINE 480 SC Foliar Fungicide at 315-420 mL/ha (0.15 – 0.2 kg a.i./ha)	Begin applications at early bloom for fruit rot. Make a second application of PROLINE 480 SC or another approved fungicide 5-10 days later.
<b>General Comments:</b> Apply up to two (2) applications of PROLINE 480 SC per year. Applications may be made by ground application equipment only. Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v.			
A maximum of 840 mL/ha of PROLINE 480 SC may be applied per crop year. Do not apply within 7 days of harvest.			

<b>Low-Growing Berry, except strawberry</b>			
<b>CROP</b>	<b>DISEASE</b>	<b>RATE</b>	<b>TIMING</b>
Low growing berry subgroup, except strawberry; Bearberry; bilberry; cloudberry; cranberry; partridgeberry; cultivars, varieties, and/or hybrids of these	Fruit rot: <i>Coleophoma empetri</i> , <i>Glomerella cingulata</i> , <i>Phyllosticta vaccinii</i> , <i>Physalospora vaccinii</i> <i>Allantophomopsis lycopodina</i> , <i>Allantophomopsis cytispora</i> , <i>Fusicoccum putrefaciens</i> , <i>Penicillium</i> spp., <i>Phomopsis vaccinii</i> , <i>Colletotrichum acutatum</i> , <i>Colletotrichum coccodes</i>  Suppression of Septoria leaf spot ( <i>Septoria</i> spp.)	Apply PROLINE 480 SC Foliar Fungicide at 365 mL/ha (0.175 kg a.i./ha)  Adjuvant: Apply with a non-ionic surfactant, AgSurf or Agral 90 at 0.125% v/v	Begin applications at early bloom for fruit rot. Make a second application of PROLINE 480 SC or another approved fungicide 5-10 days later.
<p><b>General Comments:</b> Apply up to two (2) applications of PROLINE 480 SC per year. Repeat applications as needed using a 5- to 10-day spray interval if conditions remain favorable for continued or increasing disease development. Applications may be made by ground spray equipment only.</p> <p>A maximum of 730 mL/ha of PROLINE 480 SC may be applied per crop year. Do not apply within 45 days of harvest.</p>			

## Sunflower, Safflower

DISEASE	RATE	TIMING
Sunflower rust ( <i>Puccinia helianthi</i> )	Apply PROLINE 480 SC Foliar Fungicide at 420 mL/ha (200 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide when average rust severity reaches 1% on the upper 4, fully expanded leaves prior to or during bloom.
Safflower rust ( <i>Puccinia carthami</i> )		

Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial spray equipment. A maximum of one application (420 mL/ha of PROLINE 480 SC Foliar Fungicide) may be applied to sunflower or safflower per crop year. Do not apply within 45 days of harvest. If applying PROLINE 480 SC Foliar Fungicide to greater than 310 ha per day of sunflower and/or safflower using open cab groundboom equipment, applicators must also wear a NIOSH/MSHA-approved respirator.

### 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 Bayer CropScience and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Bayer CropScience 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 Bayer CropScience harmless from any claims based on efficacy or phytotoxicity in connection with the uses described below.

CROP	DISEASE	RATE	TIMING
Sunflower, Safflower	For suppression of Sclerotinia head rot ( <i>Sclerotinia sclerotiorum</i> )	Apply PROLINE 480 SC Foliar Fungicide at 420 mL/ha (200 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide when the crop is in the 10 - 50% disk flower bloom stage.

Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial spray equipment. A maximum of one application (420 mL/ha of PROLINE 480 SC Foliar Fungicide) may be applied to sunflower or safflower per crop year. Do not apply within 45 days of harvest. If applying PROLINE 480 SC Foliar Fungicide to greater than 310 ha per day of sunflower and/or safflower using open cab groundboom equipment, applicators must also wear a NIOSH/MSHA-approved respirator.



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CROP	DISEASE	RATE	TIMING
Flax (linseed), Crambe, Borage	For control of Sclerotinia stem rot ( <i>Sclerotinia sclerotiorum</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 – 368 mL/ha (150-175 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide when the crop is in the 20 - 50% bloom stage. Best protection will be achieved when the fungicide is applied prior to petals beginning to fall, and will allow for the maximum number of petals to be protected. The higher rate is recommended for fields with a history of heavy disease pressure or for dense crop stands. Good spray coverage of the plants is essential.

Note: The lowest labelled rate of a non-ionic surfactant, AgSurf or Agral 90, may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial spray equipment. A maximum of one application (368 mL/ha of PROLINE 480 SC Foliar Fungicide) may be applied per crop year. Do not apply within 36 days of harvest.

CROP	DISEASE	RATE	TIMING
Sugar beets	For control of foliar diseases:  Cercospora Leaf Spot ( <i>Cercospora beticola</i> )	Apply PROLINE 480 SC Foliar Fungicide at 315 – 415 mL/ha (150 – 200 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide at the first sign of disease. Use the higher rate and shorter intervals when conditions are favourable for severe disease pressure and/or when growing less disease-resistant varieties. Apply the specified rate of PROLINE 480 SC Foliar Fungicide in 100 – 200 L of water per hectare when using ground application equipment. Repeat applications as needed using a 14 to 21-day spray interval depending on disease pressure. Use a 14-day spray interval under normal to heavy disease pressure and a 21-day spray interval under light disease pressure.
	For control of soil-borne diseases:  Rhizoctonia Crown Rot ( <i>Rhizoctonia solani</i> )	Apply PROLINE 480 SC Foliar Fungicide at 415 mL/ha (200 g a.i./ha)	Apply PROLINE 480 SC Foliar Fungicide at the 4-leaf to row closure growth stage. Apply the specified rate of PROLINE 480 SC Foliar Fungicide in 50 – 100 L of water per hectare. Repeat applications as needed using a 21-day spray interval.

Note: A maximum of 3 applications (1245 mL/ha of PROLINE 480 SC Foliar Fungicide) may be applied per crop year. Do not apply within 7 days of harvest. The lowest labelled rate of a non-ionic surfactant (AgSurf or Agral 90 at 0.125% v/v) may be tank-mixed with PROLINE 480 SC Foliar Fungicide. The application may be made by ground or aerial application equipment. PROLINE 480 SC Foliar Fungicide is a Group 3 fungicide. To limit the potential for development of disease resistance, alternate every application of PROLINE 480 SC Foliar Fungicide with a non-Group 3 fungicide.

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.

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) 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: **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) medium 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 rotorspan.

### **Buffer zones:**

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), 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		Buffer Zones (metres) Required for the Protection of:			
			Aquatic Habitat of Depths:			Terrestrial Habitat
			Less than 1 m	1-3 m	Greater than 3 m	
Field sprayer	All listed crops		2	1	0	0
Airblast sprayer	Bushberries	Early growth stage	25	15	4	1
		Late growth stage	15	5	2	1
Aerial (fixed and rotary wing)	Flax (linseed), crambe, borage, soybeans		10	0	0	0
	Corn, safflower, sunflower		15	5	0	0
	Oats		20	10	0	0
	Canola, Oriental mustard, rapeseed, <i>Brassica carinata</i>		20	10	1	10
	Wheat, barley		25	10	0	10
	Lentils		30	10	0	15
	Sugarbeets		45	15	4	15
	Chickpeas		50	15	5	15

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) 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.

### Rotation restrictions:

Treated areas may be replanted with any crop specified on this label as soon as practical after the last application. For crops not listed on this label, do not plant back within 30 days of last application.

## Section 8: Resistance Management

### Resistance Management Recommendations:

For resistance management, please note that **PROLINE 480 SC Foliar Fungicide** contains a Group 3 fungicide. Any fungal population may contain individuals naturally resistant to PROLINE 480 SC Foliar Fungicide and other Group 3 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:

- Alternate with fungicides having a different mode of action other than Group 3 every 7 to 10 days after each application of **PROLINE 480 SC Foliar Fungicide**.
- Do not apply more than the indicated maximum number of applications per year specified for each crop in the DIRECTIONS FOR USE, Section 7 table.
- Use tank mixtures with fungicides from a different group that is effective on the target pathogen when such use is permitted.
- Fungicide 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 applications.
- Monitor treated fungal populations for resistance development. Notify Bayer CropScience if reduced sensitivity of the pathogen to PROLINE 480 SC Foliar 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 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 a Bayer CropScience representative at 1-888-283-6847 or at [www.bayercropscience.ca](http://www.bayercropscience.ca).

## **Section 9: Application Precautions**

### **GROUND APPLICATION:**

1. Use well-maintained and calibrated conventional spray equipment, which provides adequate and uniform coverage.
2. Apply PROLINE 480 SC Foliar Fungicide in a minimum of 100 L water/ha, unless otherwise specified in DIRECTIONS FOR USE, Section 7.
3. Spray screens should be no finer than 50 mesh.
4. Ensure that the by-pass line discharges at the bottom of the tank to minimize foaming.
5. Maintain pressure at no less than 275 kPa to ensure good foliage penetration and coverage.
6. Provincial buffer zones that are greater than the buffer zones indicated in the DIRECTIONS FOR USE, Section 7, should be respected.
7. If spray mixture remains in the tank overnight, or for long periods during the day, agitate thoroughly prior to application.

### **AERIAL APPLICATION-GENERAL INFORMATION:**

1. 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.
2. 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. If you have questions, call 1-888-283-6847 or obtain technical advice from the distributor or your provincial agricultural representative.
3. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.
  4. Apply PROLINE 480 SC Foliar Fungicide in a minimum of 50 L of water/ha.
  5. To ensure proper coverage and distribution and to minimize drift, check to see that swath width and droplet size are adequate, and that wind velocities are low.
  6. Use mechanical flaggers only.

### **AERIAL APPLICATION-USE PRECAUTIONS:**

1. Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage.
2. 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.

### **AERIAL APPLICATION- OPERATOR PRECAUTIONS:**

1. **DO NOT** allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.
2. It is desirable that the pilot has communication capabilities at each treatment site at the time of application.
3. 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.
4. All personnel on the job site must wash hands and face thoroughly before eating and drinking.
5. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.
6. Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-888-283-6847 or obtain technical advice from the distributor or your provincial agricultural representative.

## **Section 10: Mixing Instructions**

### Mixing Instructions:

PROLINE 480 SC Foliar Fungicide must be applied with properly calibrated, clean equipment. Prior to adding PROLINE 480 SC Foliar Fungicide to the spray tank, ensure that the spray tank is thoroughly clean.

### **PROLINE 480 SC Foliar Fungicide** applied alone:

- Add one-half of the required amount of water to the spray or mixing tank and start agitation.
- Add the required quantity of **PROLINE 480 SC Foliar Fungicide** to the water and complete filling with water to the required total volume.
- Maintain agitation throughout mixing and spraying.
- PROLINE 480 SC Foliar Fungicide should be thoroughly dispersed prior to the addition of a non-ionic surfactant. PROLINE 480 SC Foliar Fungicide is recommended to be used with a registered non-ionic surfactant, such as Agral 90 or AgSurf, at 0.125% vol/vol.

## Section 11: Pre-harvest Intervals

<b>Crop</b>	<b>PHI (days)</b>
Wheat (spring, durum and winter), Barley, Oats, Pearl Millet, Proso Millet, Rye, Triticale, Teosinte, Buckwheat	30
Canola, Rapeseed, Oriental Mustard, <i>Brassica carinata</i> , Flax (Linseed), Crambe, borage	36
Corn (field, sweet, popcorn)	14
Chickpea, Lentils	7
Soybean	20
Sugar Beet	7
Bushberry	7
Peanut	14
Cucurbits	7
Low-Growing Berries (except strawberries), Safflower, Sunflower	45

## Section 12: Notices

### 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.

For more information contact:

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**Calgary, AB**  
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