### **CAUTION** KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

# Radial<sup>®</sup> Opti

# Fungicide

ACTIVE CONSTITUENTS:

# 320 g/L AZOXYSTROBIN 250 g/L EPOXICONAZOLE

Crops: Barley, Oats, Wheat

Diseases: Eyespot, Leaf Rust, Leaf Scald, Net Blotch (Spot and Net Form), Powdery Mildew, Septoria Nodorum Blotch, Septoria Leaf Blotch, Septoria Tritici Blotch, Stem Rust, Stripe Rust and Yellow Spot as per the Directions for Use





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### DIRECTIONS FOR USE

### RESTRAINTS

**DO NOT** apply more than two applications of RADIAL® OPTI Fungicide per season. **DO NOT** apply if heavy rains or storms that are likely to cause runoff from treated fields are forecast within 48 hours of application.

### SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

**DO NOT** allow bystanders to come into contact with the spray cloud.

**DO NOT** apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone tables below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas. **DO NOT** apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application. **DO NOT** apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

### MANDATORY BUFFER ZONES

**DO NOT** apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a MEDIUM spray droplet size category
- For release heights 25% of wingspan or 25% of rotor diameter or lower above the target canopy, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section) are observed

Wind speed range at time of	Bystander	Natural aquatic areas		Pollinator	Vegetation areas		Livestock
application	areas	Fixed wing	Helicopter	areas	Fixed wing	Helicopter	areas
From 3 to 8 kilometres per hour		120 metres	80 metres				
From 8 to 14 kilometres per hour	0 metres	140 metres	0 metres	20 metres	20 metres	0 metres	
From 14 to 20 kilometres per hour	1	160 metres	120 metres				

Table 1 – Mandatory buffer zones for aerial applications

DO NOT apply by a boom sprayer unless the following requirements are met:

• Spray droplets not smaller than a MEDIUM spray droplet size category

• Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section) are observed



#### Table 2 – Mandatory buffer zones for ground applications

Wind speed range at time of application	Bystander	Natural	Pollinator	Vegetation	Livestock
	areas	aquatic areas	areas	areas	areas
From 3 to 20 kilometres per hour	0 metres	5 metres	0 metres	0 metres	0 metres

1101110100	20 kilometres per nour 0 metres	5 5	metres 0 metres 0 metres 0 metres
CROP	DISEASE	RATE	CRITICAL COMMENTS
Barley	Eyespot ( <i>Oculimacula yallundae</i> ) Suppression only	250 mL/ha	Apply RADIAL® OPTI when conditions favour disease development and prior to establishment of disease in the crop. Apply from mid- tillering (GS25) to flag leaf emergence (GS39). For best results target applications at GS30-32. Application prior to canopy closure may improve coverage, enhance efficacy and reduce lodging from eyespot infections. Applications beyond flag leaf emergence (GS39) may not provide any yield benefit from eyespot control.
	Leaf Rust ( <i>Puccinia hordei</i> ) Leaf Scald ( <i>Rhynchosporium secalis</i> ) Net form of Net Blotch ( <i>Pyrenophora teres f. sp. teres</i> ) Spot form of Net Blotch ( <i>Pyrenophora teres f. maculata</i> )	125 to 250 mL/ha	Apply when conditions favour disease development and prior to the development of high levels of disease in the crop. Aim to apply from jointing (GS30) if disease is present and/or if conditions favour disease development. Repeat spraying may be required, particularly if infection pressure persists. Regularly monitor the crop from 3-4 weeks after application for signs of re-infection. Use the higher rate when disease pressure is high. D0 NOT apply later than GS59 as yield responses are unlikely. Application of RADIAL® OPTI with an adjuvant can improve control of some diseases. Refer to the <i>Use of Adjuvant</i> section for more information.
	Powdery mildew ( <i>Blumeria graminis f. sp. hordei</i> )		Apply at the first sign of the disease during the tillering stage (from GS21-22). Regularly monitor the crop 3-4 weeks post-application. Apply a second spray if infection pressure persists. Use the higher rate when disease pressure is high. D0 NOT apply later than GS59 as yield responses are unlikely. Application of RADIAL <sup>®</sup> OPTI with an adjuvant can improve control of some diseases. Refer to the <i>Use of Adjuvant</i> section for more information.
Oats and Oaten Hay	Septoria Leaf Blotch ( <i>Parastagonospora avenaria</i> f.sp. <i>avenaria</i> ) Stem Rust ( <i>Puccinia graminis</i> f. sp. <i>avenae</i> ) Leaf Rust ( <i>Puccinia coronata var. avenae</i> )	125 mL/ha	Apply RADIAL <sup>®</sup> OPTI from the tillering stage (GS21-22) to GS59 when conditions favour infection and prior to the development of high levels of disease in the canopy. After application, continue to monitor crops and apply an additional spray if required. D0 NOT apply later than GS59 as yield responses are unlikely.
Wheat	Eyespot ( <i>Oculimacula yallundae</i> ) Suppression only	250 mL/ha	Apply RADIAL® OPTI when conditions favour disease development and prior to establishment of disease in the crop. Apply from mid- tillering (GS25) to flag leaf emergence (GS39). For best results target applications at GS30-32. Application prior to canopy closure may improve coverage, enhance efficacy and reduce lodging from eyespot infections. Applications beyond flag leaf emergence (GS39) may not provide any yield benefit from eyespot control.
	Leaf Rust ( <i>Puccinia recondita, Puccinia triticina</i> ) Septoria Nodorum Blotch ( <i>Phaeosphaeria nodorum</i> ) Septoria Tritici Blotch ( <i>Mycosphaerella graminicola</i> ) Stem Rust ( <i>Puccinia graminis</i> ) Stripe Rust ( <i>Puccinia striiformis</i> ) Yellow Spot ( <i>Pyrenophora tritici-repentis</i> ) Powdery Mildew ( <i>Blumeria graminis tritici</i> )	125 to 250 mL/ha	<ul> <li>Apply when conditions favour disease development and prior to development of high levels of disease in the crop. Aim to apply between stem elongation and complete ear emergence (GS32-59). Use the higher rate when disease is present on the top leaf or conditions are favourable for development during these stages of crop development.</li> <li>Regularly monitor the crop 3-4 weeks post-application. Repeat spraying may be required, particularly if infection occurs early.</li> <li>Application of RADIAL® OPTI with an adjuvant can improve control of some diseases. Refer to the <i>Use of Adjuvant</i> section for more information.</li> <li>Apply at the first sign of the disease during the tillering stage (from GS21-22). Regularly monitor the crop 3-4 weeks post-application. Apply a second spray if infection pressure persists.</li> <li>D0 NOT apply later than GS59 as yield responses are unlikely. Use the higher rate when disease pressure is high.</li> </ul>

# NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

#### WITHHOLDING PERIODS

Harvest: NOT REQUIRED WHEN USED AS DIRECTED.

Grazing: DO NOT GRAZE OR CUT FOR STOCK FEED FOR 3 WEEKS AFTER APPLICATION.



#### **TRADE ADVICE**

The grazing withholding period only applies to stock slaughtered for the domestic market and some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, the Export Slaughter Interval is observed before stock are sold or slaughtered.

#### **EXPORT OF TREATED PRODUCE**

MRLs or import tolerances for azoxystrobin and epoxiconazole may not be established in all markets. If you are growing cereals for export, please check with Adama Australia for the latest information.

#### **EXPORT SLAUGHTER INTERVAL**

After observing the withholding period for grazing or cutting for stock food, livestock that have been grazed on or fed treated crops should be placed on clean feed for 3 days prior to slaughter.

#### **GENERAL INSTRUCTIONS**

Check the crop regularly for any symptoms of disease infection. Apply prior to or as soon as disease is present as indicated in the Directions for Use. The objective of spraying is to keep the upper 2-3 leaves, ear and stem green and functioning through grain filling. Economic responses may not be gained by spraying crops past flowering stage. Thorough coverage of the crop is necessary for best results.

#### APPLICATION

**Mixing:** Add the required quantity of RADIAL® OPTI Fungicide to water in the spray vat while stirring or with agitators in motion. Rinse the empty container with water and add rinsings to spray tank.

**Ground Application:** Apply in a water volume of between 50 and 100 L/ha using a medium quality spray. Use the higher water volume in crops with heavier canopies.

Aerial Application: Apply with suitable aircraft, set up and operated to apply fungicides to cereal crops in a water volume of between 20 and 30 L/ha using a medium quality spray. Use the higher water volume in crops with heavier canopies. Aircraft should fly as low as possible under the prevailing conditions to minimise drift.

#### Use of Adjuvant

Field trials have confirmed applying a higher rate of RADIAL® OPTI and/or adding an esterified seed oil such as Hasten may improve overall disease control.

Cereal type	Disease(s)	RADIAL® OPTI rate	Adjuvant and rate <sup>#</sup>
Barley	Net form net blotch	125 to 250	
Wheat	Leaf rust, Septoria tritici blotch	mL/ha	Hasten™ 0.25 to 1% or Non-ionic Surfactant 0.25%
Oats	Septoria leaf blotch, Leaf rust	125 mL/ha	0.2370

# % rate is on v/v basis

The addition of an esterified seed oil such as Hasten in cereals can result in some minor damage symptoms on foliage. In field trials, effects were minor and did not negatively impact disease control or grain yield and quality.

#### Rainfastness

RADIAL<sup>®</sup> OPTI is rainfast two hours after application for light rainfall events i.e. ≤10 mm rain; providing the spray has dried. Under slow drying conditions, the rainfastness period may significantly increase and a longer interval may be required for the spray to dry on foliage. DO NOT apply RADIAL<sup>®</sup> OPTI if heavy rain or storms are forecast that may reduce the residual efficacy of RADIAL<sup>®</sup> OPTI i.e. >10 mm rain before four hours and spray drying on foliage; or cause runoff from treated fields within 48 hours of application.

#### COMPATIBILITY

For information on compatibility, please contact Adama Australia.

#### FUNGICIDE RESISTANCE WARNING

RADIAL® OPTI Fungicide is a combination of a DMI and Quinone



outside Inhibitors (QoIs) group of fungicides. For fungicide resistance management the product is both a Group 3 and a Group 11 fungicide. Some naturally occurring individual fungi resistant to the product and other Group 3 and/or Group 11 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by this product or other Group 3 and/ or Group 11 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of RADIAL® OPTI Fungicide to control resistant fungi.

#### PRECAUTION

DO NOT use human flaggers/markers unless they are protected by engineering controls such as controlled cabs.

**Re-entry period:** D0 NOT allow entry into treated areas until the spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and a washable hat and chemical resistant gloves. Clothing must be laundered after each day's use.

### PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

# PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

VERY TOXIC TO AQUATIC LIFE. DO NOT contaminate wetlands or watercourses with this product or used containers.

#### **STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

**DrumMuster Eligible Containers:** This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple-rinse container for disposal. Dispose of rinsate by adding it to the spray tank. Do not dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any *drumMUSTER* collection or similar container management program site. The cap should not be replaced, but may be taken separately.

If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

**Returnable Containers with Micro Matic Valve:** Do not tamper with the Micro Matic valve or the security seal. Do not contaminate the container with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the container have been used, please return the container to the point of purchase. The container remains the property of Adama Australia.

**Refillable Containers:** Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.



#### **SAFETY DIRECTIONS**

Will irritate the eyes. May irritate the skin. Avoid contact with eyes and skin. When opening the container and preparing product for use and using the product wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. When using the prepared product wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves and contaminated clothing.

#### **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

#### **SAFETY DATA SHEET**

Additional information is listed in the safety data sheet (SDS). A safety data sheet for RADIAL® OPTI Fungicide is available at adama.com or call Customer Service on 1800 423 262.

**CONDITIONS OF SALE:** The use of RADIAL® OPTI Fungicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia, regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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## NOT A DANGEROUS GOOD ACCORDING TO THE AUSTRALIAN DANGEROUS GOODS (ADG)

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