

# POISON

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

# Radial<sup>®</sup>

## Fungicide

ACTIVE CONSTITUENTS:

**75 g/L AZOXYSTROBIN**

**75 g/L EPOXICONAZOLE**

SOLVENT: 200 g/L DIMETHYL SULFOXIDE

GROUP

**3 | 11**

FUNGICIDE

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

Formulation type

Emulsifiable  
Concentrate

**EC**



# ADAMA

adama.com

CONTENTS: 1 L - 1000 L

### DIRECTIONS FOR USE

#### RESTRAINTS

**DO NOT** apply more than two applications of RADIAL<sup>®</sup> 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](http://apvma.gov.au/spraydrift)

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

**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

Table 1 – Mandatory buffer zones for aerial applications

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

**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 areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
From 3 to 20 kilometres per hour	0 metres	5 metres	0 metres	0 metres	0 metres

CROP	DISEASE	RATE	CRITICAL COMMENTS
Barley	Eyespot ( <i>Oculimacula yallundae</i> ) Suppression only	840 mL/ha	Apply RADIAL® 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> )	420 to 840 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. DO NOT apply later than GS59 as yield responses are unlikely. Application of RADIAL® 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. DO NOT apply later than GS59 as yield responses are unlikely. Application of RADIAL® 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 f.sp. avenaria</i> ) Stem Rust ( <i>Puccinia graminis f. sp. avenae</i> )	420 mL/ha	Apply RADIAL® 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. DO NOT apply later than GS59 as yield responses are unlikely.
Wheat	Eyespot ( <i>Oculimacula yallundae</i> ) Suppression only	840 mL/ha	Apply RADIAL® 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</i> , <i>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> )	420 to 840 mL/ha	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. Regularly monitor the crop 3-4 weeks post-application. Repeat spraying may be required, particularly if infection occurs early. Application of RADIAL® 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 tritici</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. DO NOT apply later than GS59 as yield responses are unlikely. Use the higher rate when disease pressure is high.

**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 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® 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

The use of an adjuvant can improve the efficacy of RADIAL® Fungicide in cereals and is an optional addition when targeting certain diseases at the 420 mL/ha rate. Table 3 below summarises where the addition of adjuvant has been evaluated/improved performance in field trials.

**Table 3 – Adjuvants evaluated with RADIAL® in field trials**

Crop and disease	RADIAL® rate
	420 mL/ha
<b>Wheat</b>	
Septoria Tritici Blotch	Hasten <sup>†</sup> 1% v/v or Biopest <sup>†</sup> 1% v/v
<b>Barley</b>	
Net Form of Net Blotch	Hasten <sup>†</sup> 1% v/v or Biopest <sup>†</sup> 1% v/v
Powdery Mildew	
<b>Oats</b>	
Septoria Leaf Blotch	Not tested
Stem Rust	

\* The addition of Hasten<sup>†</sup> can result in some minor damage symptoms on foliage. In field trials effects were minor and did not negatively impact on disease control or grain yield and quality.

## Rainfastness

RADIAL® 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® if heavy rain or storms are forecast that may reduce the residual efficacy of RADIAL® 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® 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® Fungicide to control resistant fungi.

## PRECAUTION

### Re-entry period

DO NOT enter treated areas for low exposure activities, such as irrigation and scouting, until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

DO NOT enter treated areas for medium exposure activities, such as hand weeding and machine harvesting, until day 7, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) 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 damage the eyes. May irritate the skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container, mixing and loading and preparing the spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use wash gloves and face shield or goggles and contaminated clothing.

## FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, do NOT induce vomiting. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, wash out immediately with water.

## SAFETY DATA SHEET

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

**CONDITIONS OF SALE:** The use of RADIAL® 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)

06/2021 22730