

POISON

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

Gem[®]

Fungicide



ADAMA

ESSENTIALS

ACTIVE CONSTITUENT: 500 g/L FLUAZINAM

GROUP 29 FUNGICIDE

For the control of club root of broccoli, brussels sprouts, cabbage, cauliflower and kohlrabi; the pre-bud burst suppression of phomopsis cane and leaf blight in grape vines and the control of white root rot in apples as specified in the Directions for Use table.

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CONTENTS: 1 L, 5 L

DIRECTIONS FOR USE

CROP	DISEASE	STATE	RATE	CRITICAL COMMENTS		
Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Kohlrabi	Club Root (<i>Plasmodiophora brassicae</i>)	All States	Seedling drench 25-50 mL per 1000 plants	Use the high rate in fields where severe club root has occurred previously. According to the dilution table shown below, apply the required amount of the diluted mixture immediately after transplanting around the base of each plant to ensure thorough wetting of the collar region.		
				Rate of GEM Fungicide per 1000 plants	Amount of GEM Fungicide per 100L of water	Volume of mixture to apply per 1000 plants
				25 mL	25 mL	100 L
				25 mL	12.5 mL	200 L
				50 mL	50 mL	100 L
50 mL	25 mL	200 L				
			OR Pre transplant soil incorporated band 3 L/ha	This method of application is most suitable for use in soils with low infiltration rates. Apply in a minimum band width of 23 cm along the planting row and incorporate to a soil depth of 15-20 cm with a precision incorporator in the same operation. Apply in a water volume of at least 500 L/ha.		
				Disease control depends on protection of the taproot from infection. Note: This product may delay the start of harvest by up to 8 days and shorten the harvest period, without adverse effects on final yield.		

CROP	DISEASE	STATE	RATE	CRITICAL COMMENTS
Grape vines	Phomopsis Cane, Leaf Blight (<i>Phomopsis viticola</i>)	All States	Dilute Application 100 mL/ 100 L	Apply one application at 1 to 4 weeks prior to budburst after pruning to dormant spurs and/or canes. Mixing with 2% summer or winter oil may assist in coverage and penetration of the spray onto diseased wood. Adjust spray application equipment to thoroughly wet all one year old wood on the vines after pruning. Apply by dilute application spray equipment that only directs spray solution to the dormant canes and spurs on the cordons. Use of a fixed wand or short boom with single or multiple nozzles directing a narrow band of spray solution onto dormant buds, spurs and canes along the cordon wire(s) is recommended. When using orchard sprayers, ensure that only nozzles directing spray solution onto the dormant canes and spurs along the cordon wire(s) are operational. Follow the pre-budburst application of GEM with post-budburst applications (where required) of other products (e.g. dithianon or mancozeb) registered for the control of phomopsis in grapevines. Application of these products must be in accordance with the directions stated on the registered label of the product used.
Apples	White Root Rot (<i>Rosellinia necatrix</i>)	Qld, NSW, Tas, WA only	50 mL/100 L	<p>Pre-Planting: Prepare planting holes with a 30 cm diameter to a depth of about 1 m. Remove all larger roots from the excavated soil. Apply 30 L of a prepared suspension of GEM and water per tree by mixing with the planting hole soil in the planting operation. Apply in 3 stages, adding 10 L of the prepared suspension to each third of the excavated soil. Form a barrier of treated soil around each tree to contain the GEM suspension and prevent other soil from contaminating the area around the tree.</p> <p>Established Trees: During following winter dormant periods each year, retreat with 30 L/tree of GEM water suspension by using a soil injector, comprised of a hollow metal rod approximately 2.5 metres in length attached to a pressure pump. Maintain liquid pressure at 10-15 psi during application. Insert the rod into the soil at 8-12 points around the base of the tree to a depth of 1-2 metres, removing the rod each time when the suspension appears on the surface.</p>

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.

TREATED CROPS ARE NOT TO BE GRAZED OR FED TO ANIMALS.

DO NOT GRAZE VINEYARDS AFTER APPLICATION.

GENERAL INSTRUCTIONS

FUNGICIDE RESISTANCE WARNING

For fungicide resistance management GEM® Fungicide is a Group 29 fungicide. Some naturally occurring fungi resistant to the product and other Group 29 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if GEM or other Group 29 fungicides are used repeatedly. These resistant fungi will not be controlled by this product or other Group 29 fungicides, thus resulting in a reduction in efficacy and possible yield loss.

Since occurrence of resistant fungi is difficult to detect prior to use, Adama Australia Pty. Ltd. accepts no liability for any losses that may result from the failure of this product to control resistant insects. GEM may be subject to specific resistance management strategies. For further information contact your local supplier, Adama Australia Pty. Ltd. or local agricultural department agronomist.

MIXING

Add the required amount of product to the partly-filled spray tank with the agitator in operation. Fill the tank with water, and continue agitation during spraying and after a stoppage.

APPLICATION

Dilute Spraying - Grapevines only

Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.

Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off. The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice. Add the amount of product specified in the Directions For Use table for each 100 L of water. Spray to the point of run-off. The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

PRECAUTIONS

Re-entry Periods

Brassicas:

DO NOT allow entry into treated areas until the spray has dried. When prior entry is necessary, wear impervious footwear and if handling the treated crop wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. Clothing must be laundered after each day's use.

Grapevines:

Persons re-entering treated vines for up to 32 days following application and who will be handling treated vines must wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. Clothing must be laundered after each day's use.

Apples:

DO NOT allow entry into treated areas until the solution has dried on the soil surface. If prior entry is necessary wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), chemical resistant gloves and impervious boots. Clothing must be laundered after each day's use.

PROTECTION OF LIVESTOCK

DO NOT graze or feed treated crops to animals.
DO NOT graze vineyards after application.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

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

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

GROUP 29 FUNGICIDE

STORAGE AND DISPOSAL (1 L)

Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

STORAGE AND DISPOSAL (5 L)

Store in the closed, original container in a well-ventilated area as cool as possible, out of direct sunlight. This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple or pressure rinse container for disposal. Add rinsings to spray tank. Dispose of the rinsate by adding it to the spray tank. DO NOT dispose of undiluted chemicals 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 bury empty containers in a local authority landfill. If no landfill is available, bury the container below 500 mm in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SAFETY DIRECTIONS

Harmful if swallowed. Poisonous if inhaled. Will irritate the eyes and skin. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. DO NOT inhale vapour. When opening the container and preparing the product for use, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and goggles and a disposable fume mask covering mouth and nose. When using the prepared product, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

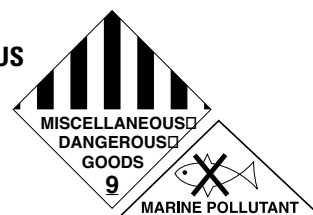
MSDS

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for GEM is available from Adama on request. Call Customer Service on (02) 9431 7800.

CONDITIONS OF SALE: The use of GEM® Fungicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia Pty. Ltd. 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 Pty. Ltd. accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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**UN NO. 3082
ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID N.O.S.
(CONTAINS FLUAZINAM)
MARINE POLLUTANT**



**PACKAGING GROUP III
HAZCHEM CODE 2X**

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Batch No.

Date of Manufacture