

**WARNING**  
**KEEP OUT OF REACH OF CHILDREN**



**ADAMA**

**GEM<sup>®</sup>**

GROUP **29** FUNGICIDE

**For the control of a wide range of diseases in grapes,  
field tomatoes, potatoes and vegetable brassicas**

**READ THE ATTACHED BOOKLET COMPLETELY BEFORE MIXING OR  
APPLYING**

**Active Ingredient:**

Contains 500 g/L FLUAZINAM in the form of a suspension concentrate

UN No:	3082
Class-primary	9
Packing group	III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Fluazinam)
Marine pollutant:	YES

Batch number:	
Date of Manufacture:	
<b>Barcode to be inserted</b>	NET CONTENTS: 1 L, 5 L, 10 L, 20 L, 200 L



**REFER TO BOOKLET FOR FULL LABEL INSTRUCTIONS.  
SHAKE WELL BEFORE USE.**



**WARNING**

Harmful if inhaled. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. May cause liver damage through prolonged or repeated oral exposure. Very toxic to aquatic life with long-lasting effects.

**HANDLING PRECAUTIONS**

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke while using this product. Do not breathe spray mist. Use only outdoors or in a well-ventilated area. Use personal protective equipment as specified in the personal protection section below. Do not allow protective equipment and clothing out of the workplace and wash after use. Wash hands thoroughly after handling. Avoid unintended release into the environment. Collect spillages.

**PCBU RESPONSIBILITIES**

A PCBU with management or control of work using this substance must ensure that every worker who uses, handles, manufactures, or stores this hazardous substance (including hazardous waste) is, before the worker is allowed to carry out or supervise work involving those substances, provided with adequate information, training and instruction. This includes the use of personal protective equipment to be used to minimise risks to the health and safety of workers when carrying out work using this substance.

**QUALIFICATIONS REQUIRED FOR APPLICATION OF ECOTOXIC SUBSTANCES**

Anyone who mixes, loads, or applies this product, either by air or ground based methods, is required to be suitably qualified, or must receive guidance and, if required, assistance from a suitably qualified person. Refer to Schedule 10 of the Hazardous Substances (Hazardous Property Controls) Notice 2017 for a list of suitable qualifications.

**RECORD KEEPING**

Where 3 kg or more of the substance is applied within 24 hours, in a place where the substance is likely to enter air or water and leave the application area, a PCBU with management or control of the substance must ensure that a written record is kept of each application of the substance. Refer to Part 4 Clause 48 of the Hazardous Substances (Hazardous Property Controls) Notice 2017 for details of information that must be recorded.

**EQUIPMENT**

A PCBU with management or control of work using this substance must ensure that equipment used to handle this substance retains the substance, without leakage, at all of the temperatures and pressures at which the equipment is to be used; and dispenses or applies the substance, without leakage, at a rate and in a manner that the equipment is designed for. The PCBU must ensure that the equipment is accompanied by documentation that is readily available and readily understandable about the use and maintenance of the equipment.

**STORAGE**

Store locked up in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs. Store in accordance with NZS 8409 Management of Agrichemicals. Secondary containment and emergency response plans are required where 100 L or more of this product are stored.

**SHELF LIFE**

When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

**PERSONAL PROTECTION**

When mixing or applying wear full protective clothing such as impervious, elbow-length gloves, waterproof hat, coat and trousers (worn outside rubber boots), and suitable eye and respiratory protection. Remove protective clothing and wash hands, arms and face thoroughly with soap and water before meals and after work.

**SPILLAGE**

Exclude all bystanders from the vicinity of the spill and prevent material from entering waterways. Wear appropriate protective clothing as in the personal protection section of this label to clean up spills. Absorb spills with an inert material (such as vermiculite, earth, sand or synthetic absorbent substance) and place in waste containers. Wash area with water and alkaline detergent. Then absorb any remaining liquid with further inert material. Dispose of the waste safely in an approved landfill.



## DISPOSAL

**Container Disposal** - Triple rinse empty container and add rinsate to spray tank. Submit clean empty container to an Agrecovery® depot for recycling. Alternatively, puncture and bury in a suitable landfill. Avoid contamination of any water supply with product or empty container.

**Product Disposal** - Dispose of this product only by using according to the label or through the Agrecovery® Chemical Recovery service or other approved facility.

**Do not burn product or container.**

## SAFETY DATA SHEET

A safety data sheet for this product is available at [www.adama.com](http://www.adama.com).

## FIRST AID

**If medical advice is needed, have product container or label at hand.**

**For advice, or if you feel unwell or are exposed or concerned, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.**

**IF INHALED:** Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice.

**IF ON SKIN:** Remove contaminated clothing and wash with soap and running water. If irritation or rash occurs, get medical advice.

## CONDITIONS OF SALE

ADAMA New Zealand Limited will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than the responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by the Statutes applicable to the sale and supply of these goods. To the extent allowed by such Statutes the liability of ADAMA New Zealand Limited is limited to the replacement of the goods or (at the option of ADAMA New Zealand Limited) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the goods to enable proper examination being returned to ADAMA New Zealand Limited within thirty days of delivery.



ADAMA

Registered to and distributed by:  
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Registered pursuant to the ACVM Act 1997, No. P010146  
See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions

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See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls

Gem is a registered trademark of an ADAMA Group Company.



**EMERGENCY RESPONSE**  
(All hours)  
Ring from anywhere in New Zealand  
**0800 734 607**

In a Transport  
Emergency  
Phone 111  
Police or Fire



A handwritten signature in blue ink, appearing to be "Mark Gillingham".

**GENERAL INFORMATION**

GEM is a protectant fungicide for use as a preventative treatment against botrytis, downy mildew and phomopsis (dead arm) in grapes, botrytis, sclerotinia and late blight in field tomatoes and early blight, late blight and sclerotinia in potatoes. GEM also controls powdery scab on potatoes and clubroot in vegetable brassicas when applied to the soil surface and incorporated prior to planting.

**DIRECTIONS FOR USE**

**TAKE ALL REASONABLE STEPS TO ENSURE THAT THE SUBSTANCE DOES NOT CAUSE ANY SIGNIFICANT ADVERSE EFFECTS TO THE ENVIRONMENT BEYOND THE APPLICATION AREA.**

**EPA Controls:**

- Do not apply onto or into water.

**It is an offence to use this product on animals.**

CROP	DISEASES	RATE	COMMENTS
<b>Grapes</b>	Botrytis Downy mildew Phomopsis (dead arm)	100 mL/100 L (or not less than 1 L/ha)	Apply at early and late flowering, just prior to bunch closure and again in the period from the beginning of berry ripening up until 28 days before harvest. Use alternative fungicides, particularly for phomopsis control, in the critical pre-flower period. Add Contact Low Foam surfactant at a rate of 25 mL/100 L. The rate expressed is for high volume spraying to run-off. For concentrate spraying adjust dilution rate accordingly.
<b>Field tomatoes</b>	Botrytis Sclerotinia Late blight	750 mL/ha	Apply at early flowering and again approximately 14 days later, towards the end of flowering. Apply in a minimum of 500 L water/ha and increase if necessary to ensure complete coverage. The period of sclerotinia control is 4-8 weeks. After the second application of GEM alternative approved fungicides may be required in high risk situations. For the control of late blight after flowering use alternative approved fungicides for the remaining duration of the crop. Add Contact Low Foam surfactant at a rate of 25 mL/100 L.
<b>Potatoes</b>	Early blight Late blight Sclerotinia	250 mL/ha (for late blight and sclerotinia) or 200 mL/ha plus 1kg Mancozeb (80% ai)/ha if early blight is also likely	Apply at 7-10 day intervals. Use the shorter interval under severe pressure conditions. Apply when the crop has fully emerged, but before any sign of disease. Use sufficient water/ha to obtain complete coverage. Add Contact Low Foam surfactant at a rate of 25 mL/100 L.
<b>Potatoes</b>	Powdery scab	4 L/ha	Apply in 500 L of water to cultivated ground prior to planting. Within 2 hours of application incorporate thoroughly into the soil to a depth of 15 cm, using either a rotary hoe or power harrow.
<b>Vegetable brassicas</b>	Clubroot	4 L/ha	Apply in 500 L of water to cultivated ground prior to transplanting. Ensure thorough incorporation to transplant root depth (not more than 10 cm) within 2 hours of applying, using a rotary hoe or power harrow. Soil should be moist at application and the crop transplanted within 2 days. At least 20 mm of overhead irrigation should be applied soon after planting to further assist the distribution of GEM throughout the upper soil profile. Disease control may be reduced if longer transplant or irrigation intervals occur.



**It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.**

**WITHHOLDING PERIODS:**

<b>Grapes:</b>	<b>28 days</b>
<b>Field tomatoes:</b>	<b>42 days</b>
<b>Potatoes:</b>	<b>14 days</b>
<b>Vegetable brassicas:</b>	<b>Do not apply after planting</b>

**RAINFALL**

DO NOT apply if rainfall is likely within 6 hours following application. Heavy rain following treatment will remove much of the fungicide from treated plant tissue and, if disease pressure remains high, earlier re-treatment will be necessary.

**MIXING**

**Invert container and shake well before use.** Add the required amount of GEM to the partly filled spray tank with agitator running and complete filling the tank with water.

**COMPATIBILITY**

Compatible with other commonly used fungicides and insecticides with the exception of alkaline materials.

**RESISTANCE MANAGEMENT**

GEM contains the GROUP 29 dinitro-aniline fungicide, fluazinam. The mode of action is uncoupling of oxidative phosphorylation. It has a low risk of resistance. Some naturally occurring individual fungi resistant to GEM may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatably. These resistant fungi will not be controlled by GEM, thus resulting in a reduction in efficacy. To minimise this risk use strictly in accordance with label directions. For current advice on resistance management “Consult <http://resistance.nzpps.org/index.php> for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label or contact your ADAMA representative for advice.

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A handwritten signature in blue ink, appearing to be "Timothy J. King".