



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **GEM**
Chemical name of active: Fluazinam
Product Use: Fungicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, 7011, Nelson
Telephone: +64 3 543 8275
Email: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 28 November 2023

Section 2. Hazards Identification

This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020

HSNO Approval No: HSR100383

Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement
Acute inhalation toxicity Category 4	H332	Harmful if inhaled.
Eye irritation Category 2	H320	Causes eye irritation.
Skin sensitisation Category 1	H317	May cause an allergic skin reaction.
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Category 1	H410	Very toxic to aquatic life with long-lasting effects.
Hazardous to the aquatic environment chronic Category 1		

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, vapours and spray.

P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid unintended release into the environment.
P281	Use personal protective equipment as specified in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P302 + P313 + P333 + P352	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs, get medical advice/attention.
P304 + P312 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P313 + P337 + P338 + P351	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/attention.
P308 + P313	IF otherwise exposed or concerned: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.

Storage Code	Storage Statement
P405	Store locked up. Keep only in the original container. Keep in a cool, dry, well-ventilated place away from direct sunlight.

Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Fluazinam	500g/l	79622-59-6
Other ingredients not contributing to the overall classification of the substance or non-hazardous	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. If eye irritation occurs: Get medical advice/attention.
If on Skin	If skin irritation or rash occurs: Get medical advice/attention.
If Swallowed	Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Skin: May cause an allergic skin reaction.

Inhalation: Harmful if inhaled.

Eyes: Causes eye irritation.

Chronic: May cause damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.

Notes to physician: There is no specific antidote. Treat symptomatically and give supportive therapy.

Section 5. Fire Fighting Measures

Hazard Type	Non-Flammable.
Hazardous thermal (de)composition products	Thermal decomposition may generate: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen chloride, fluorine compounds.
Suitable Extinguishing media	Dry chemical, carbon dioxide, water fog, water spray, foam.
Precautions for firefighters and special protective clothing	Wear suitable protective equipment. Use Self-contained breathing apparatus.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Minor spillage: Absorb in sand or other inert material. Use appropriate container to avoid environmental contamination.

Major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal.

Dispose of according to Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, vapours and spray. Avoid all unnecessary exposure.
- Wash hands thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Avoid unintended release into the environment.
- Use personal protective equipment as specified in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Keep only in the original container.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs. As a substance with Aquatic Ecotoxicity Classifications, storage of Gem must be carried out in such a manner as to prevent

contamination of waterways. Stores containing more than 100 L of Gem require bunding and are subject to signage. Storage must generally be in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409).

- Suitable packaging: HDPE drums

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

Ensure adequate ventilation.

Personal Protection Equipment



Eyes	Safety goggles or face shield.
Hands and Skin	Wear suitable protective clothing, PVC gloves and chemical resistant boots.
Respiratory	During spraying wear suitable respiratory equipment.
General	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash clothing before re-using.

Section 9 Physical and Chemical Properties

Appearance	Yellow-brown liquid (Suspension concentrate)
Odour	Odourless
Odour Threshold	Not applicable
pH	7 - 9
Boiling Point	> 100°C
Melting Point	Not applicable
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Specific Gravity	1.26 g/mL
Bulk Density	Not applicable
Relative Density	Not applicable
Solubility in water	Miscible
Auto-ignition Temperature	Not applicable
Log P Octanol	3.56

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Protect from (sun) light, open flame, sources of heat.
Incompatible Materials	Oxidizing agents, acids and alkali.
Hazardous Decomposition Products	Thermal decomposition generates: carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride, and fluorine compounds.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable
Dermal	Not applicable
Inhalation	Harmful if inhaled
Eye	Causes eye irritation
Skin	May cause an allergic skin reaction

Chronic Effects:

Carcinogenicity	Not applicable
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable
Aspiration	Not applicable
STOT/SE	Not applicable
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Preparation

Fluazinam

Acute toxicity - Oral: LD50 (rat) = >2000 mg/kg

Acute toxicity - Dermal: LD50 (rat) >2,000 mg/kg

Section 12. Ecotoxicological Information

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Aquatic Toxicity- Product

Common name: Fluazinam

Ecological effects information

96 H-LC50 – Rainbow trout [mg/ml] 0.036

48 H-LC50 – Daphnia magna [μ g/l] 0.22

LD50 Birds [mg/kg] 1782 (Bobwhite quail)
4190 (Mallard Duck)

Bees LD50 [μ g/Bee] >100

Persistence and degradability: Half life time ($t_{1/2}$) = 4 days (soil)

Section 13. Disposal Considerations

Disposal Method: Dispose of this product only by using according to the label or at an approved landfill. Container Disposal: Triple rinse container and add rinsate to spray tank. Empty containers and product should not be burnt. Dispose of container in a suitable landfill or take to an Agrecovery collection site. Do not use container for any other purpose.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not burn product or container.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433



Road and Rail Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (500G/L FLUAZINAM)

Air Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (500G/L FLUAZINAM)

Marine Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (500G/L FLUAZINAM)
Marine Pollutant: Yes

Special Provisions:

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020

HSNO Approval Code: HSR100383

HSNO Classification: Acute inhalation toxicity Category 4, Eye irritation Category 2, Skin sensitisation Category 1, Reproductive toxicity Category 2, Specific target organ toxicity (repeated exposure) Category 2, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1.

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L
Hazardous Property Controls Notice 2017	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Substances that are hazardous to the environment: Site and storage controls
HPC Notice Part 4 Subpart B	Use of substances that are hazardous to the environment
HPC Notice Part 4 Clause 47	Equipment for environmentally hazardous substances must be appropriate
HPC Notice Part 4 Clause 48	Record of application of agrichemicals
HPC Notice Part 4 Clause 52	Agrichemicals that are hazardous to the aquatic environment must not be applied to water
HPC Notice Part 4 Subpart C	Qualifications required for the application of substances that are hazardous to the environment
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P010146

Section 16 Other Information**Glossary**

ACVM	Agricultural Compounds and Veterinary Medicines Act 1997.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms Act 1996.
HSW	Health and Safety at Work Act 2015.
HSW (HS) Regulations	Health and Safety at Work (Hazardous Substances) Regulations 2017.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.

TEL Tolerable Exposure Limit.
TLV Threshold Limit Value-an exposure limit set by responsible authority.
UEL Upper Explosive Level.
WES Workplace Exposure Limit.

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

This document has been issued by Adama New Zealand Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which is held by Adama New Zealand Ltd or has been obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. While Adama New Zealand Ltd have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Adama New Zealand Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS. The information herein is given in good faith, but no warranty, express or implied is made.

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