

SAFETY DATA SHEET

FORTUNA®

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

PRODUCT NAME:	Fortuna®
OTHER NAME:	Suspension concentrate containing 500 g/L fluazinam
PRODUCT USE:	Fungicide for control of a range of diseases in fruit and vegetable crops.
SUPPLIER NAME:	Grosafe Chemicals Ltd
SUPPLIER ADDRESS:	20 Jean Batten Drive, Mt Maunganui 3116
SUPPLIER PHONE:	0800 220 002
SUPPLIER EMAIL:	info@grosafe.co.nz
EMERGENCY NUMBER:	0800 CHEMCALL (0800 243 622)

2. HAZARDS IDENTIFICATION

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996.
HSNO Approval Number: HSR100383

HAZARD CLASSIFICATIONS:

Acute inhalation toxicity Category 4, Eye irritation Category 2, Skin sensitization 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.

PICTOGRAMS:



SIGNAL WORD: **WARNING**

HAZARD STATEMENTS:

- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H361 Suspected of damaging fertility or the unborn child.
- H373 May cause damage to the liver, kidneys, nervous and reproductive systems through prolonged or repeated oral exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

PREVENTION:

- P102 Keep out of reach of children.
- P103 Read label before use.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe vapours/mist/spray.
- P264 Wash hands and exposed skin 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.
- P280 Wear protective gloves/protective clothing and /eye protection or face protection.

**RESPONSE:**

- P101 If medical advice is needed, have product container or label at hand.
- P308 + P313 If exposed or concerned: Get medical advice.
- P314 Get medical advice if you feel unwell.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P333 + P313 If skin irritation or rash occurs: Get medical advice.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTRE or doctor if you feel unwell.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash before reuse.
- P391 Collect spillage.

STORAGE:

- P405 Store locked up.

DISPOSAL:

- P501 Dispose of unwanted product and used packaging in compliance with local regulations.

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017:

Do not apply directly into or onto water.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%w/w
Fluazinam	79622-59-6	39.0 – 41.0*
Ethylene glycol	107-21-1	1.0 > < 10.0
Other ingredients	Trade secret	balance

* equivalent to 500 g/L fluazinam

4. FIRST - AID MEASURES

If you feel unwell, or are exposed or concerned, contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor for advice. product container or label at hand.

IF SWALLOWED: If swallowed do NOT induce vomiting. Rinse mouth with water. Get medical advice if you feel unwell.

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 ON SKIN: Take off contaminated clothing and wash before reuse. Wash skin with plenty of soap and water. If skin irritation or rash occurs: Get medical advice.

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

Medical Treatment: No specific antidote. Treat symptomatically.

Symptoms: Symptoms of allergic reaction include dermatitis on hands, forearms and face.

5. FIRE FIGHTING MEASURES

Flammability	Non-flammable.
Hazardous Combustion Products	If involved in a fire, may evolve toxic/harmful substances, e.g. carbon oxides and other unspecified compounds.
Extinguishing media	Water fog, carbon dioxide or dry chemical as appropriate to surrounding materials.
Protective Equipment	Full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear appropriate protective equipment. Exclude non-essential people from the area. Contain spillage. For small liquid spills absorb spillage with sand, sawdust or other inert material, and place in a sealable labelled waste container. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid and transfer to drums for disposal. Clean area with water and detergent. Dispose of waste safely in an approved landfill or hazardous waste facility.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If spill does enter waterways immediately contact local authority.

7. HANDLING AND STORAGE

Handling:

Keep out of reach of children. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/overalls and eye protection. Avoid contact with skin and eyes. Do not breathe vapours/mist/spray. Use only outdoors or in well-ventilated area. Wash hands and exposed skin thoroughly after handling. Keep container tightly closed when not in use.

Specific controls apply to the use of this product. Qualified handler required in workplace for mixing, loading and applying.

Storage:

Signage, emergency response plan and secondary containment required when more than 100 L on site.

Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertiliser and seed. Keep out of direct sunlight and protect from frost.

For guidance refer to current version of NZS 8409 Management of Agrichemicals and Health and Safety at Work (Hazardous Substances) Regulations 2017.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:	Workplace exposure limits have been assigned to ingredients in this product. Ethylene glycol (vapour and mist), ceiling 50 ppm (127 mg/m ³)
Protective Equipment:	When opening the container, preparing to measure or applying, and when contact is likely: wear respiratory protection (mask with cartridge for particulates), safety goggles, waterproof gloves, cotton overalls buttoned to the neck and wrist, and boots. The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715 , Protective Gloves: AS 2161 , Occupational Protective Clothing: AS/NZS 4501 , Industrial Eye Protection: AS1336 and AS/NZS 1337 , Occupational Protective Footwear: AS/NZS2210 .
Engineering Controls:	Handle outdoors or in a well-ventilated area. Use local exhaust ventilation, or other engineering controls as appropriate to conditions.

Hygiene Precautions: Do not eat, drink or smoke while using this product. Remove protective clothing and wash hands and face before meals and after work. Wash protective clothing daily after work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow brown suspension liquid
Odour:	Odorless
Odour threshold:	No information available.
pH	7.0 -9.0
Melting point/freezing point:	No information available.
Initial boiling point/range:	>100 °C

Flashpoint:	Non-flammable
Flammability (solid, gas):	No information available.
Upper/lower flammability limits:	No information available.
Vapour pressure:	No information available.
Vapour density:	No information available.
Relative density:	c.a 1.26
Solubilities:	Forms suspension in water.
Partition coefficient: n-octanol/water:	No information available.
Auto-ignition temperature:	No information available.
Decomposition temperature:	No information available.
Kinematic viscosity:	No information available.
Particle characteristics:	No information available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal storage conditions in original container for at least two years.
Conditions to avoid:	Keep out of direct sunlight and protect from frost.
Incompatible substances or materials:	Explosives (class 1), oxidising gases, oxidising liquids, oxidising solids, organic peroxides
Hazardous polymerization:	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Classified as being harmful if inhaled.
Aspiration hazard:	No components identified with aspirant hazard.
Respiratory irritation:	Not classified.
Skin corrosion/irritation:	Not classified as skin irritant.
Serious eye damage/irritation:	Classified as mildly irritating to eyes.
Respiratory or skin sensitization:	Fluazinam is classified as being a contact sensitizer.
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified.
Reproductive toxicity:	Fluazinam is classified as may cause reproductive or developmental effects.
Specific organ toxicity:	Fluazinam is classified as causing damage to organs through prolonged or repeated oral exposure: Primary Organ Effected: Hepatotoxicity (liver) Secondary Organ(s) Effected: Neurotoxicity (nervous system) Reproductive system. Ethylene glycol causes damage to kidneys through prolonged or repeated oral exposure.
Narcotic effects:	No components identified with narcotic effects.
Toxicological information:	<u>Fluazinam (active ingredient)</u> Oral, rat LD50 >4100 mg/kg bw Dermal, rat LD50 >2000 mg/kg bw <u>Formulated product</u> Oral, rat LD50 >2000 mg/kg bw (OECD 423) Non-irritant to skin (OECD 404) Mildly irritating to eyes (OECD 405)

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Product is classified as being very toxic to aquatic life with long-lasting effects.
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Ecotoxicological information:	<u>Fluazinam (active ingredient)</u> <i>Oncorhynchus mykiss</i> LC50 (96 h) 0.036 mg/L <i>Lemna gibba</i> , biomass EC50 (7 d) biomass 53.6 mg/L <i>Daphnia magna</i> EC50 (48 h) 0.18 mg/L <i>Pseudokirchneriella subcapitata</i> EC50 (72 h) growth 0.16 mg/L Bobwhite quail LD50 1782 mg/kg bw
Persistence and degradability:	Persistent; DT ₅₀ >30 days.
Potential to be bioaccumulative:	Not expected to be bioaccumulative.
Mobility in soil:	No specific information for formulated product. Fluazinam has low solubility and low leachability.
Other adverse effects:	No information available.

13. DISPOSAL CONSIDERATIONS

Product disposal:	Dispose of this product only by using according to the label, or through a Chemical Recovery service or other licensed hazardous waste disposal facility.
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 dispose of at an approved landfill..

14. TRANSPORT INFORMATION

UN Number:	3082
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (CONTAINS 50% FLUAZINAM)
DG Class:	9
Packing Group:	III
Marine Pollutant:	Yes
HAZCHEM	3Z

15. REGULATORY INFORMATION

Hazardous substance according to Hazardous Substances (Hazard Classification) Notice 2020.

Approval Number:	HSR100383
Hazard Classifications:	Acute inhalation toxicity Category 4, Eye irritation Category 2, Skin sensitization 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.

Record of application: If 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 48(3) of Hazardous Substances (Hazardous Property Controls) Notice 2017 for details of records to be kept.

Qualifications Required for mixing, loading and application

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Signage Trigger Quantity (Schedule 3)	100 L
Emergency Response Plan (Schedule 5)	100 L
Secondary Containment (Schedule 16)	100 L
Tracking (Schedule 26)	Not required
Tolerable Exposure Level (TEL)	None set



Environmental Exposure Level (EEL)	None set
International Agreements	Not applicable
Other Information:	Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)
ACVM Registration:	Registered pursuant to the Agricultural Compounds and Veterinary Medicines Act 1997; registration number P010234

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS issued	08 August 2024
SDS supersedes	N/A
Reason issued	First SDS issued

Abbreviations:

ACVM	Agricultural Chemicals and Veterinary Medicines Group
ADI	Acceptable Daily Intakes
CAS Number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HSNO	Hazardous Substances and New Organisms
HS	Health and Safety
HSR	Hazardous Substances Register
IARC	International Agency for Research on Cancer
LC50	Median Lethal Concentration
LD50	Median Lethal Dose (50% population)
SDS	Safety Data Sheet
NOAEL	No Observable Adverse Effect Level
NOEL	No Observable Effect Level
NOS	Not otherwise specified
STEL	Short Term Exposure Limit
TWA	Time-Weighted Average
UN Number	United Nations Number
WES-STEL	Workplace exposure standards – Short-term exposure limit
WES-TWA	Workplace exposure standards – Time-weighted average

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End of Safety Data Sheet