

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY:

PRODUCT NAME: **APEX**
MANUFACTURER: Zelam Ltd
SUPPLIER NAME: Zelam Ltd
SUPPLIER ADDRESS: 13-15 Hudson Rd, Bell Block, New Plymouth, New Zealand
SUPPLIER PHONE: +64 6 7559234 SUPPLIER FAX: +64 6 7551174
EMERGENCY PHONE: 0800 243 622, 0800 CHEMCALL INTERNATIONAL EMERGENCY PHONE: +64 3 353 0199
CHEMICAL FAMILY: Anilinyrimidine USE: Fungicide

2. HAZARDS IDENTIFICATION:

6.1D; Harmful - may be harmful if swallowed, inhaled or absorbed through the skin.
6.5B; Harmful - may cause skin sensitization from prolonged skin contact. Avoid skin contact.
6.8B; Harmful - may cause reproductive/developmental damage from repeated oral exposure.
6.9B; Harmful - may cause organ damage from repeated oral exposure at high doses.
8.3A; Danger - this product is corrosive and may cause eye damage.
9.1B; Toxic to fish/aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container.

Refer to Section 15 for NZ EPA Requirements.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

| COMMON NAME: | CAS NUMBER: | CONCENTRATION %: | HAZARD CLASSIFICATIONS: |
|--------------|-------------|------------------|-------------------------|
| Pyrimethanil | 53112-28-0 | 30% | |
| Fluazinam | 79622-59-6 | 20% | |
| Inerts | | Balance | |

4. FIRST - AID MEASURES:

EYE CONTACT: Immediately flush with flowing water for at least 15 minutes. Seek medical attention if irritation persists.
SKIN CONTACT: Immediately flush with plenty of water while removing contaminated clothing. DO NOT scrub the skin. Continue for at least 15 minutes. Wash clothing before reuse.
INHALATION: If inhaled, move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped. Use mouth to nose rather than mouth to mouth. Obtain medical attention.
INGESTION: If swallowed, drink several glasses of water. DO NOT induce vomiting. Seek medical advice.
NOTES TO DOCTOR: No specific antidote. Treat symptomatically.

5. FIRE FIGHTING MEASURES:

FLASHPOINT: Not applicable HAZCHEM CODE: 2X
FLAMMABLE LIMITS: Not applicable
EXTINGUISHING MEDIA: Dry chemical, water spray (fog), foam or carbon dioxide.
THERMAL DECOMPOSITION PRODUCTS: Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen.
SPECIAL FIRE FIGHTING METHODS: Vapours may be toxic. Self contained breathing apparatus required. Do not allow contaminated run-off to enter drains.
UNUSUAL FIRE OR EXPLOSION HAZARDS:

6. ACCIDENTAL RELEASE MEASURES:

Use appropriate protective equipment. Clear area of unnecessary personnel.
Spills may be slippery and should be cleaned up immediately. Clear area of unnecessary personnel. Use appropriate protective equipment.
Large spill: Dike and pump as much as possible to a salvage container. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Minimise runoff into waterways or drains. It may be disposed of as an industrial waste in a manner acceptable to good waste management practice at an approved disposal facility and in compliance with all regulations.

7. HANDLING AND STORAGE:

Harmful - Keep out of reach of children.
Store in original container, tightly closed away from food, food related materials, animal feedstuffs, seed or fertilizer.
Wear eye protection. Impervious gloves should be worn at all times. Wear other personal protective equipment appropriate to the situation when handling product. Wash protective clothing daily after work.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE LIMITS: No exposure limits (WES, TEL, or EEL's) have been specifically assigned for this product.
EYE PROTECTION: Chemical goggles or face shield where splash may occur.
RESPIRATORY PROTECTION: Not normally required. Exceptions: during the formation of mists or aerosols or in the case of fire.
PROTECTIVE CLOTHING: If skin contact or contamination of clothing is likely, protective clothing [impervious gloves, waterproof hat, coat, trousers and boots] should be worn.
Wash protective clothing daily after work.
VENTILATION: General (mechanical) room ventilation is considered satisfactory.
HYGIENE PRECAUTIONS: Do not eat drink or smoke while working with this product. Remove clothing that becomes soaked or contaminated and wash before reuse. Wash hands before breaks and after work. The use of a skin barrier cream is useful to give additional skin protection.

Material Safety Data Sheet

9. PHYSICAL AND CHEMICAL PROPERTIES:

| | | | |
|--|------------------------------|--------------------|----------------|
| APPEARANCE / STATE / ODOUR: | White Suspension Concentrate | | |
| BOILING POINT: | Not available | pH: | 5 to 6.5 |
| DENSITY: | 1.15 | SETTING POINT: | Not available |
| DECOMPOSITION TEMP: | Not available | AUTOIGNITION TEMP: | Not applicable |
| FLASHPOINT: | Not applicable | VAPOUR DENSITY: | Not available |
| EXPLOSION PROPERTIES: | Not applicable | VAPOUR PRESSURE: | Not available |
| SOLUBILITY: | Miscible in water | | |
| OTHER DATA: | | | |
| OCTANOL / WATER PARTITION COEFFICIENT: | Not available | | |

10. STABILITY AND REACTIVITY:

| | |
|-------------------------|------|
| CONDITIONS TO AVOID: | None |
| MATERIALS TO AVOID: | None |
| HAZARDOUS DECOMPOSITION | None |

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: LD50 Rats: > 5000 mg/Kg (by calculation)

ACUTE DERMAL: LD50 Rats: > 5000 mg/Kg (by calculation)

ACUTE INHALATION: LD50 Rats: > 5 mg/Kg (by calculation)

OTHER TOXICITY INFORMATION:

Fluazinam: Low oral toxicity (LD50 Rats: >4100 mg/kg bw). Inhaled dust of the technical is toxic (LC50(4h) Rats: 0.463 mg/kg bw). Potential liver toxicant and skin sensitiser. May cause allergic contact dermatitis and occupational asthma

Pyrimethanil: Low oral toxicity (LD50 Rats: >4150 mg/kg bw). Considered non-irritant to skin & eyes, & non-sensitising to skin. In animals is rapidly absorbed, extensively metabolised & rapidly excreted in all species examined. No evidence of accumulation even on repeated dosing.

12. ECOLOGICAL INFORMATION:

| | |
|-----------------------------------|-------------------------|
| Aquatic Toxicity: | Toxic to fish |
| Soil Toxicity: | Not toxic to earthworms |
| Terrestrial Vertebrates - Birds: | Not toxic to birds |
| Terrestrial Invertebrates - Bees: | Not toxic to bees |

Fluazinam Tech: Birds Acute oral LD50 for bobwhite quail 1782, mallard ducks 4190 mg/kg. Fish LC50 (96 h) for rainbow trout 0.036 mg/l. Daphnia LC50 (48 h) 0.22 mg/l. Algae EC50 (96 h) for *Selenastrum capricornutum* 0.16 mg/l. Other aquatic spp. EC50 for oysters 0.0047, for mysid shrimp 0.039 ppm. Bees LD50 (oral) >100 mg/bee; (contact) >200 mg/bee. Worms LC50 (28 d) >1000 mg/kg.

Pyrimethanil tech: Oral Acute oral LD50 for rats 4150-5971, mice 4665-5359 mg/kg. Skin and eye Acute percutaneous LD50 for rats >5000 mg/kg. Non-irritating to skin and eyes (rabbits), and not a skin sensitiser (guinea pigs). Inhalation LC50 (4 h) for rats >>1.98 mg/l. NOEL (2 y) for rats 20 mg/kg b.w. daily. ADI 0.17-0.2 mg/kg. Other Negative in mutagenicity tests, and non-teratogenic in rats and rabbits.

13. DISPOSAL CONSIDERATIONS:

Triple rinse empty container and add rinsate to the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot. Alternatively crush and bury in an approved landfill.
Dispose of product only by using according to this label, or at an approved disposal facility.
Avoid contamination of any water supply or stream with product or empty container.

14. TRANSPORT INFORMATION:

| | | | |
|-------------------------|--|------------------|----|
| Proper Shipping Name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Pyrimethanil & Fluazinam) | | |
| UN Number: | 3082 | UN Hazard Class: | 9 |
| Packing Group: | III | Hazchem Code: | 2X |
| Additional Information: | Do not carry more than 1 litre of this product on a passenger service vehicle. | | |

15. REGULATORY INFORMATION:

This product DOES NOT have Approved Handler, Tracking, or Record Keeping Requirements.

This product shall only be used for the purpose of fungal disease management on grapes. it is an offence to use this product on animals.

Apex must NOT be applied onto or into water.

Approved pursuant to the HSNO Act 1996. NZ EPA Approval Code: HSR100838 See <www.epa.govt.nz> for controls.
Registered pursuant to the ACVM Act 1997. ACVM Pesticide No: P009012 See <www.nzfsa.govt.nz> for registration conditions.

16. OTHER INFORMATION:

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.