

Fortify

Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

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| Product Name: | FORTIFY |
| Product Code: | 7906089 (10 Litres) |
| Recommended Use: | A systemic fungicide for disease control in cereal and ryegrass seed crops. |
| Restrictions of Use: | Refer to Section 15 |
| Company Identification: | Ravensdown Limited |
| Address: | 292 Main South Road, Hornby, Christchurch, 8042 PO Box 1049, Christchurch 8011 |
| Customer Centre: | 0800 100 123 |
| National Poisons Information Centre: | 0800 POISON (0800 764 766) |
| Emergency Phone Number: | 0800 CHEMCALL (0800 243 622) (24hr) (Emergencies Only) |
| Transport Emergency Phone Number: | 111 - tell operator what service is needed: Fire, Ambulance or Police |
| Date of SDS Preparation | 22 April 2024 v2 |

Section 2: HAZARD IDENTIFICATION

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

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| EPA Approval No: | HSR101056 |
| Pictograms: |  |
| Signal Word: | Warning |

| GHS Classification and Category | Hazard Code | Hazard Statement |
|---|-------------|--|
| Carcinogenicity Cat. 2 | H351 | Suspected of causing cancer. |
| Reproductive toxicity Cat. 2 | H361 | Suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity – repeated exposure Cat. 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |
| Hazardous to the aquatic environment chronic Cat. 3 | H412 | Harmful to aquatic life with long lasting effects. |

| Prevention Code | Prevention Statement |
|-----------------|---|
| P103 | Read carefully and follow all instructions. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P260 | Do not breathe vapours or mists. |
| P273 | Avoid release to the environment. |
| P281 | Use personal protective equipment as required. |

| Response Code | Response Statement |
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| P314 | Get medical advice/attention if you feel unwell. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |

| Storage Code | Storage Statement |
|--------------|-------------------|
| P405 | Store locked up. |

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| Disposal Code | Disposal Statement |
| P501 | Dispose of according to Local Regulations or Authorities |

Section 3: COMPOSITION INFORMATION

| INGREDIENT | CAS No. | CONTENT |
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| epoxiconazole | 133855-98-8 | 12.5% |
| Non hazardous materials | | To bal |

Section 4: FIRST AID MEASURES

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| Routes of Exposure: | |
| If in eyes: | Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. |
| If on skin: | Remove contaminated clothing and wash affected area thoroughly with soap and water. If a large area is affected seek medical assistance. |
| If ingested: | Never give anything by mouth to an unconscious person. If swallowed DO NOT induce vomiting. For advice, contact the National Poisons Centre on 0800 POISON (0800 764 766). Seek medical assistance immediately. |
| If inhaled: | Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately. |
| Most important symptoms and effects, both acute and delayed | |
| Symptoms: | |
| Eyes: | Not applicable. |
| Skin: | Not applicable. |
| Ingested: | Not applicable. |
| Inhaled: | Not applicable. |
| Chronic: | May cause damage to organs (oral) through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child. Suspected of causing cancer. |
| Notes to Doctor: | Treat symptomatically. |

Section 5: FIRE FIGHTING MEASURES

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| Hazard Type | Non Flammable |
| Hazards from combustion products | If involved in a fire, may evolve fumes of carbon monoxide, carbon dioxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, chlorine compounds. |
| Suitable Extinguishing media | Water fog, foam, carbon dioxide or dry chemical. |
| Precautions for firefighters and special protective clothing | Full protective clothing and self-contained breathing apparatus. |
| HAZCHEM CODE | None allocated |

Section 6: ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear appropriate protective clothing as detailed in Section 8. Exclude non-essential people from the area.

Environmental precautions:

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

Methods and material for containment and cleaning up:

Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container.

Dispose of according to Section 13.

Section 7: HANDLING AND STORAGE

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| Handling: | <p>Read carefully and follow all instructions.</p> <p>Avoid contact with skin and eyes.</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Do not breathe vapours or mist.</p> <p>Avoid release to the environment.</p> <p>Use personal protective equipment as required.</p> |
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| Storage: | <p>Keep out of reach of children.</p> <p>Store away from incompatible materials listed in Section 10.</p> <p>Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertiliser and seed. Store away from pets, poultry and livestock.</p> <p>Store in accordance with NZS 8409 Management of Agrichemicals</p> <p>This product is subject to signage and secondary containment when stored in quantities of 100 litres or more, either alone or in aggregate with substances of the same hazard classification. More than 100 litres require emergency response plans. For full details refer to NZS 8409 Management of Agrichemicals and HSNO Regulations (Emergency Management and Identification Regulations).</p> |
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Section 8: EXPOSURE CONTROL/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 2023 14TH EDITION.

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| Engineering Controls: | Handle in well ventilated area, natural ventilation is normally adequate. Avoid inhalation of spray mist. |
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Personal Protection Equipment:



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| Eyes: | When opening the container, preparing to measure, apply and when contact with granules is likely: wear safety goggles. |
| Skin/Hands: | When opening the container, preparing to measure, apply and when contact with granules is likely: wear chemically resistant gloves, cotton overalls buttoned to the neck and wrist, and boots. |
| Respiratory: | Respiratory protection should be used if exposed to the product in confined areas. |
| General: | 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. |

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance | Liquid |
| Colour | Off-white |
| Odour | Slight aromatic |
| Odour Threshold | Not available |
| pH in aqueous solution | 5 - 8 |
| Boiling Point | Not available |
| Melting Point | Not available |
| Freezing Point | Not available |
| Flash Point | Not available |
| Flammability | Not flammable |
| Upper and Lower Explosive Limits | Not available |
| Vapour Pressure | Not available |
| Vapour Density | Not available |
| Specific Gravity | 1.02 – 1.08 |
| Water Solubility | Disperses in water |
| Partition Coefficient: | Not available |
| Auto-ignition Temperature | Not available |
| Decomposition Temperature | Not available |
| Kinematic Viscosity | Not available |
| Other information | (SC) Suspension concentrate |

Section 10: STABILITY AND REACTIVITY

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| Stability of Substance | When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. |
| Possibility of hazardous reactions | Not available |
| Conditions to Avoid | None known. |
| Incompatible Materials | Avoid contact with strong acids and oxidising agents. |
| Hazardous Decomposition Products | None known. Refer to Section 5. |

Section 11: TOXICOLOGICAL INFORMATION

Acute Effects:

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| Swallowed | Not applicable. LD ₅₀ (rat) >2,200mg/kg Amounts swallowed incidental to normal handling are unlikely to cause injury. Large amounts swallowed may cause injury. |
| Dermal | Not applicable. LD ₅₀ (rat) >4000mg/kg. |
| Inhalation | LC ₅₀ (rat) (4hr) >3.25mg/lit Single exposure to vapours is unlikely to be hazardous. When applying this product avoid inhalation of spray mist. |
| Eye | Not triggered however dust may irritate the eye. |
| Skin | Not applicable. |

Chronic Effects:

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| Carcinogenicity | Suspected of causing cancer. Results of long term animal feeding studies on epoxiconazole have shown an increase in liver tumours. |
| Reproductive Toxicity | Suspected of damaging fertility or the unborn child. Animal feeding studies have shown possible risk of impaired fertility and possible risk of harm to the foetus. |
| Germ Cell Mutagenicity | Not applicable. |
| Aspiration | Not applicable. |
| STOT/SE | Not applicable. |
| STOT/RE | May causes damage to organs (oral) through repeated or prolonged exposure. |

Section 12: ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects.

Product:

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| Persistence and degradability/Mobility | Epoxiconazole is very persistent in the soil and is of low mobility. Degredation in the soil is by microbial activity, DT50 is 2-3 months. |
| Bioaccumulation | Bioaccumulation potential for epoxiconazole is low. Epoxiconazole is rapidly excreted by animals. |
| Other adverse effects | Avoid unintended release into streams and waterways. |

Ecotoxicity:

Acute Toxicity (fish)

LC₅₀ (rainbow trout) (96hr) 0.5mg/l

Acute Toxicity (daphnia)

LC₅₀ (48hr) 1.8mg/l

Very toxic to fish and other aquatic organisms

Section 13: DISPOSAL INFORMATION

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| Disposal Method: | Triple rinse container and add rinsate to the spray tank. Dispose of product only by using in accordance with label directions, or through Agrecovery Chemical Recovery Service or alternative approved programs. |
| Container Disposal: |  Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues and have an intact legible label may be taken to an Agrecovery collection site for free recycling. Otherwise crush and bury in an approved landfill. Do not burn. Do not use container for any other purpose. |
| Precautions or methods to avoid: | Do not allow product or empty container to contaminate any waterway. |

Section 14: TRANSPORT INFORMATION

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020

Section 15: REGULATORY INFORMATION

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

EPA Approval Code: HSR101056

| HSW (HS) Regulations 2017 | Trigger Quantity |
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| Signage Trigger Quantities (Schedule 3) | 1000L |
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| Emergency Response Plan (Schedule 5) | 1000L |
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| Secondary Containment (Schedule 5) | 1000L |
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| Tracking (Schedule 26) | Not required |
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| Certified Handlers | Not required |
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| HSNO Additional Controls (Restrictions of use) | |
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| 77A - | The substance must not be applied onto or into water. |
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| ACVM Act and Regulations |
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| See www.foodsafety.govt.nz for registration conditions | P8309 |
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Section 16: OTHER INFORMATION

Glossary

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| EC ₅₀ | Median effective concentration. |
| EEL | Environmental Exposure Limit. |
| EPA | Environmental Protection Authority |
| HSNO | Hazardous Substances and New Organisms. |
| HSW | Health and Safety at Work. |
| LC ₅₀ | Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it. |
| LD ₅₀ | Lethal dose to kill 50% of test animals/organisms. |
| LEL | Lower explosive level. |
| OSHA | American Occupational Safety and Health Administration. |
| 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 2023 14th edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact Ravensdown, if further information is required.

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