


Fortify

Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

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	18 February 2021

Section 2: HAZARD IDENTIFICATION

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval No:	HSR101056
Pictograms:	
Signal Word:	Warning

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.7B	H351	Suspected of causing cancer.	Carc. 2
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1C	H412	Harmful to aquatic life with long lasting effects.	Aquatic Acute 3

Prevention Code	Prevention Statement
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 or mists.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Storage Code	Storage Statement
P405	Store locked up.

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

Section 3: COMPOSITION INFORMATION

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

Section 4: FIRST AID MEASURES

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

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

Handling:	<p>Read label before use.</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.				
<p>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 2019 11TH EDITION.</p>				

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



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

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

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:

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/lt 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:

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

HSNO Classes: 9.1C= Harmful to aquatic life with long lasting effects.

Product:

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

Disposal Method:	Triple rinse container and add rinsate to spray tank.
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 disposal. Otherwise crush and bury in an approved landfill. Do not use container for any other purpose.
Precautions or methods to avoid:	Do not allow to enter waterways.

Section 14: TRANSPORT INFORMATION

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15: REGULATORY INFORMATION

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017	
EPA Approval Code:	HSR101056
HSNO Classification:	6.7B, 6.8B, 6.9B (oral), 9.1C
HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	1000L (9.1C)
Emergency Response Plan (Schedule 5)	1000L (9.1C)
Secondary Containment (Schedule 5)	1000L (9.1C)
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
HSNO Additional Controls (Restrictions of use)	
77A -	The substance must not be applied onto or into water.
Hazardous Property Controls Notice 2017	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 3	Hazardous substances in a place other than a workplace
ACVM Act and Regulations	
See www.foodsafety.govt.nz for registration conditions	P8309

Section 16: OTHER INFORMATION

Glossary

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 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 prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or 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. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) 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, TCC (NZ) 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

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Please contact Ravensdown, if further information is required.

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