SAFETY DATA SHEET
Brexil Multi

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : BREXIL MULTI

Product code : 1447

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

AGRITRADE
411 Blenheim Rd
Sockburn
Christchurch 8140
Ph 03 341 4587
Fax 03 341 4584
Free Phone 0800 333 855
agritrade@nzagritrade.co.nz

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency Contact: 0800 CHEMCALL (0800 243622)

NZ POISON CENTRE CONTACT : 111 Police, Ambulance and Fire Brigade (available in New Zealand only)
0800 764 766 (National Poisons Information Centre)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as Hazardous according to the Hazardous Substances (Classification) Notice 2020, New Zealand.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

HSNO Classification:
8.3A – Substances that are corrosive to ocular tissue
6.3A – Substances that are irritating to the skin
6.9A – Target organ or systemic toxicant
9.1B – Substances that are ecotoxic in the aquatic environment

Hazard statement codes:
H318 - Causes serious eye damage
H315 - Causes skin irritation
H373 - May cause damage to the brain through prolonged or repeated exposure per inhalation.
H411 - Toxic to aquatic life with long lasting effects

Precautionary statement codes – Prevention:
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children.
P103 - Read label before use
P280 - Wear protective gloves/safety goggle and face shield
P260 - Do not breathe dust/spray.

P321 - Specific treatment (see ... On this label)
P332 + P313 – If Skin irritation occurs: get medical advice/attention
P362 – Take off contaminated clothing and wash before reuse
P314 - Get medical advice/attention if you feel unwell.
P273 - Avoid release to the environment

Precautionary statement codes – Response:
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P391 - Collect spillage

Precautionary statement codes – Disposal:
P501 - Dispose of contents/container to comply with applicable local, national and international regulation

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

Signal word (CLP) : Danger

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Cas No.	%	Approval Status (NZIoC)
Iron (II) sulfate	7720-78-7	>= 10 - < 12.5	HSNO Approval Code HSR003420
Manganese(II) sulfate	7785-87-7	>= 12.5 - < 15	HSNO Approval Code HSR003945
Zinc sulphate	7733-02-0	>= 3 - < 5	HSNO Approval Code HSR003279
Other ingredients not subject to the provisions of the Hazardous Substances (identification) Regulations 2020, make up the product concentration to 100%			

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.

First-aid measures after skin contact	:	Remove contaminated clothing immediately and dispose of safely. Wash skin thoroughly with mild soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	:	In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.
First-aid measures after ingestion	:	If swallowed, rinse mouth with water (only if the person is conscious). Give water to drink if victim completely conscious/alert. Do not induce vomiting without medical advice. Immediately call a POISON CENTER or doctor/ physician.
Other information	:	For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	:	Inhalation may cause irritation, cough, shortness of breath.
Symptoms/injuries after skin contact	:	Frequent or prolonged contact with skin may cause dermal irritation. Symptoms include redness, itching, and burning of the skin.
Symptoms/injuries after eye contact	:	Causes serious eye irritation. Pain. redness,
Symptoms/injuries after ingestion	:	May cause gastric irritation. Vomiting. stomach pain.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Carbon dioxide (CO_2). Water spray. Foam. Powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Do not breathe fumes.
Explosion hazard	:	Explosive dust-air mixtures may form.
Hazardous decomposition products in case of fire	:	Sulfur oxides. carbon oxides (CO and CO_2). Nitrogen oxides. Metal oxides.

5.3. Advice for firefighters

Precautionary measures fire	:	Evacuate the personnel away from the fumes.
Firefighting instructions	:	Move undamaged containers from immediate hazard area if it can be done safely.
Protective equipment for firefighters	:	Extra personal protection: complete protective clothing including self-contained breathing apparatus.
Other information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Do not allow run-off from fire fighting to enter drains or water courses.
Hazchem Code	:	2Z

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye/face protection.
Emergency procedures	:	Alert emergency personnel. Eliminate all ignition sources if safe to do so. Provide adequate ventilation.
Measures in case of dust release	:	Dust production: dust mask with filter type P2.

6.1.2. For emergency responders

Protective equipment	:	Wear suitable protective clothing, gloves and eye/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Dust production: dust mask with filter type P2.
Emergency procedures	:	Evacuate unnecessary personnel. Avoid generation of dust. Dust may form explosive mixture in air. Eliminate all ignition sources if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so.
Methods for cleaning up : Ventilate affected area. Wear personal protection equipment. Minimize generation of dust. Wash with plenty of soap and water. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Consult the appropriate authorities about waste disposal.
Other information : Do not allow uncontrolled discharge of product into the environment.

6.4. Reference to other sections

For disposal of residues refer to section 13 : Disposal considerations. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust, fume, mist, vapours. Minimize generation of dust. Keep away from sources of ignition - No smoking. Do not re-use empty containers without proper cleaning or reconditioning.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep in original containers. Store tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight. Use care during processing to minimize generation of dust. Explosive dust-air mixtures may form.
Incompatible products : Strong bases. Strong acids. Oxidising agents. reducing agents.
Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.
Prohibitions on mixed storage : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

New Zealand Workplace Exposure Standard:
No value assigned for any of the ingredients by the New Zealand Department of Labour (Health & Safety).

Iron (II) sulfate (7720-78-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1.6 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.5 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.4 mg/m³
Long-term - systemic effects, dermal	0.8 mg/kg bodyweight/day
PNEC (Sediment)	
PNEC sediment (freshwater)	49.5 mg/kg dwt referred to Iron concentration
PNEC (Soil)	
PNEC soil	55 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	500 mg/l referred to Iron concentration

Manganese(II) sulfate (7785-87-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.00414 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.2 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	0.043 mg/m³
Long-term - systemic effects, dermal	0.0021 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0128 mg/l
PNEC aqua (marine water)	0.0004 mg/l
PNEC aqua (intermittent, freshwater)	0.03 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.0114 mg/kg dwt
PNEC sediment (marine water)	0.00114 mg/kg dwt
PNEC (Soil)	
PNEC soil	25.1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	56 mg/l

Zinc sulphate (7733-02-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	500 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	50 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1,3 mg/m³
Long-term - systemic effects, dermal	500 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,0206 mg/l
PNEC aqua (marine water)	0,0061 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	235,6 mg/kg dwt
PNEC sediment (marine water)	113 mg/kg dwt
PNEC (Soil)	
PNEC soil	106,8 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	0,052 mg/l

8.2. Exposure controls

Appropriate engineering controls: Provide adequate ventilation.

Personal protective equipment: Safety glasses. Gloves. Protective clothing.

Hand protection: Chemical resistant nitrile gloves (to European standard EN 374 or equivalent). Breakthrough time : > 480 min. Thickness of glove material: > 0,13 mm

Eye protection: Use eye protection according to EN 166, designed to protect dusts. Tightly fitting safety goggles

Skin and body protection: Use chemically protective clothing. EN 14605

Respiratory protection: Dust production: dust mask with filter type P2. EN 149

Environmental exposure controls: Do not allow into drains or water courses. Do not allow to enter into soil/subsoil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Granular solid.
Colour	:	brown.
Odour	:	coffee.
Odour threshold	:	No data available
pH	:	No data available
pH solution 1% (t = 20°C)	:	3,2
Relative evaporation rate (butyl acetate=1)	:	not applicable, solid
Melting point	:	No data available
Freezing point	:	not applicable, solid
Boiling point	:	not applicable, solid
Flash point	:	not applicable, solid
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	not applicable, solid
Relative vapour density at 20 °C	:	not applicable, solid
Relative density	:	No data available
Density	:	0,67 kg/l
Solubility	:	Water: 300 g/l @ 20 °C
Log Pow	:	No data available
Viscosity, kinematic	:	not applicable, solid
Viscosity, dynamic	:	not applicable, solid
Explosive properties	:	Not expected to be explosive as none of the components is classified as explosive.
Oxidising properties	:	None of the components are classified for oxidizing properties.
Explosive limits	:	No data available

9.2. Other information

Specific conductivity : Not available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions. No polymerization. May react with alkalis such as lime to generate ammonia vapours.

10.4. Conditions to avoid

Overheating. Avoid generation of dust. Accumulation of airborne dusts may present an explosion hazard in the presence of an ignition source.

10.5. Incompatible materials

Oxidising agents. reducing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

During a fire: Sulfur oxides. Carbon oxides (CO, CO2). Nitrogen oxides (NOx). Metal oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Iron (II) sulfate (7720-78-7)	
LD50 dermal	> 2000 mg/kg

Manganese(II) sulfate (7785-87-7)	
LC50 inhalation rat (mg/l)	> 4,98 mg/l Griffiths DR (2010)

Zinc sulphate (7733-02-0)	
LD50 dermal rat	> 2000 µl/kg Van Huygevoort (1999a)

Skin corrosion/irritation : Irritant

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : STOT cat.2

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Brexil Multi	
LC50 fish 96h	>100mg/l (OECD 203)
IC50 Daphnia 48h	>100mg/l (OECD 202)
EyC50 72h algae	= 9.3 mg/L (OECD 201)

Brexil Multi	
ErC 50 72 h	= 52.46 mg/L (OECD 201)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Brexil Multi	
Bioaccumulative potential	Bioaccumulative potential

12.4. Mobility in soil

Brexil Multi	
Mobility in soil	In general, the mobility in the soil of the microelements in the mixture is influenced by several factors such as pH, CO2 concentration, redox conditions, and availability of organic and inorganic complexing agents.

12.5. Results of PBT and vPvB assessment

Brexil Multi	
Results of PBT assessment	The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects : None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Reuse or recycle following decontamination. External recovery and recycling of waste should comply with applicable local and/or national regulations.

SECTION 14: Transport information

In accordance with IATA / IMDG / NZS 5433:2012 Transport of Dangerous Goods on Land.

14.1. UN number

UN-No. (NZS5433) : 3077

UN-No. (IMDG) : 3077

UN-No. (IATA) : 3077

14.2. UN proper shipping name

Proper Shipping Name (NZS5433) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.
Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, (E)

Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

Transport document description (IATA) : UN 3077 Environmentally hazardous substance, solid, n.o.s. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

Transport of Dangerous Goods on Land
Transport hazard class(es) (NZS5433) : 9

Danger labels (NZS5433) : 9

:

IMDG

Transport hazard class(es) (IMDG) : 9
Danger labels (IMDG) : 9

:

IATA

Transport hazard class(es) (IATA) : 9
Hazard labels (IATA) : 9

:

14.4. Packing group

Packing group (NZS5433) : III
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Hazchem Code : 2Z
Other information : No supplementary information available

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

New Zealand

Classification: : Classified as hazardous to the Hazardous Substances (Classification) Notice 2020, New Zealand.

National Chemical Inventories (NZIoC)	: All components are listed on the New Zealand Inventory of Chemicals
HSNO Approval Number (Group Standard)	: HSR002571. Fertiliser (Subsidiary Hazard) Group Standard 2006

Germany

VwVwS Annex reference	: Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: Manganese(II) sulfate is listed
SZW-lijst van mutagene stoffen	: Manganese(II) sulfate is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: copper sulphate is listed

Denmark

Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out
Iron (II) sulfate
Manganese(II) sulfate
Zinc sulphate

SECTION 16: Other information

Issue date:17/09/2021
Abbreviations and acronyms:

SDS	Safety Data Sheet
CAS	Chemical Abstracts Service
GHS	Globally Harmonised System
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rai
PNEC	Predicted No-Effect Concentration

PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

Other information : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects