

VALAGRO SDS according to to HSNO Regulations – NZ EPA

Revision date: 17/09/2021      version number: 1.2

Product: Brexil Duo

Code: 2496

Print Date: September 17, 2021

## SAFETY DATA SHEET

### Brexil Duo

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

##### 1.1. Product identifier

Product form : Mixture  
Trade name : Brexil Duo  
Product code : 2496

##### 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  
1 Robin Mann Place  
Christchurch Airport  
Christchurch 8053  
New Zealand  
Ph 03 341 4587  
Fax 03 341 4584  
Free Phone 0800 333 855  
[agritrade@nzagritrade.co.nz](mailto: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

9.1B - Substances that are ecotoxic in the aquatic environment (Chronic)

##### Hazard statement codes

H318 - Causes serious eye damage

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

P273 - Avoid release to the environment

P280 - Wear protective gloves, eye protection, face shield

##### Precautionary statement codes – Response:

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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 a doctor/physician

**Precautionary statement codes – Disposal:**

P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

**2.2. Label elements**

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. Substances**

Not applicable

**3.2. Mixtures**

| Name   | Product identifier | %            | Approval Status (NZIoC)         |
|--|--------------------|--------------|---------------------------------|
| Calcium formate  | (CAS No) 544-17-2  | >= 40 - < 50 | HSNO Approval Code<br>HSR002800 |
| Manganese(II) sulfate  | (CAS No) 7785-87-7 | < 1          | HSNO Approval Code<br>HSR003945 |
| Zinc sulphate  | (CAS No) 7733-02-0 | < 1          | HSNO Approval Code<br>HSR003279 |
| copper sulphate  | (CAS No) 7758-98-7 | < 1          | HSNO Approval Code<br>HSR003117 |
| Other ingredients not subject to the provisions of the Hazardous Substances (identification) Regulations 2020, make up the product concentration to 100% |                    |              |                                 |

Full text of H-statements: see section 16

**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.

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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. Obtain medical attention or call a POISON CENTER (Ph: Australia 131 126; New Zealand 0800 764 766).

#### 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 damage. 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

No additional information available

### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>). Water. 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 : Carbon oxides (CO and CO<sub>2</sub>).

#### 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 : Do not allow run-off from fire fighting to enter drains or water courses.  
 Hazchem Code : ZZ

### 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.

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#### 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.
- Information 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).

| Manganese(II) sulfate (7785-87-7) |   |  |
|-----------------------------------|---|--|
| EU                                | IOELV TWA (mg/m <sup>3</sup> )                                  | 0.2 mg/m <sup>3</sup> Inhalable fraction     |
| Belgium                           | Limit value (mg/m <sup>3</sup> )                                | 0.2 mg/m <sup>3</sup>                        |
| Bulgaria                          | OEL TWA (mg/m <sup>3</sup> )                                    | 0.3 mg/m <sup>3</sup>                        |
| Bulgaria                          | OEL STEL (mg/m <sup>3</sup> )                                   | 3 mg/m <sup>3</sup>                          |
| Croatia                           | GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )      | 0.5 mg/m <sup>3</sup>                        |
| Cyprus                            | OEL TWA (mg/m <sup>3</sup> )                                    | 0.5 mg/m <sup>3</sup>                        |
| Czech Republic                    | Expoziční limity (PEL) (mg/m <sup>3</sup> )                     | 1 mg/m <sup>3</sup>                          |
| Czech Republic                    | Expoziční limity (NPK-P) (mg/m <sup>3</sup> )                   | 2 mg/m <sup>3</sup>                          |
| Estonia                           | OEL TWA (mg/m <sup>3</sup> )                                    | 0.2 mg/m <sup>3</sup>                        |
| Finland                           | HTP-arvo (8h) (mg/m <sup>3</sup> )                              | 0.02 mg/m <sup>3</sup> (inhalable dust)      |
| Germany                           | TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> ) | 0.02 mg/m <sup>3</sup>                       |
| Germany                           | TRGS 900 Limitation of exposure peaks (mg/m <sup>3</sup> )      | 1 mg/m <sup>3</sup>                          |
| Greece                            | OEL TWA (mg/m <sup>3</sup> )                                    | 5 mg/m <sup>3</sup>                          |
| Ireland                           | OEL (8 hours ref) (mg/m <sup>3</sup> )                          | 0.2 mg/m <sup>3</sup>                        |
| Lithuania                         | IPRV (mg/m <sup>3</sup> )                                       | 1 mg/m <sup>3</sup> Inhalable fraction       |
| Lithuania                         | TPRV (mg/m <sup>3</sup> )                                       | 0.5 mg/m <sup>3</sup> E: respirable fraction |
| Poland                            | NDS (mg/m <sup>3</sup> )  | 0.2 mg/m <sup>3</sup> Inhalable fraction     |
| Portugal                          | OEL TWA (mg/m <sup>3</sup> )                                    | 0.2 mg/m <sup>3</sup>                        |
| Slovakia                          | NPHV (priemerná) (mg/m <sup>3</sup> )                           | 0.5 mg/m <sup>3</sup>                        |



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| <b>Manganese(II) sulfate (7785-87-7)</b> |   |                                       |
|--|---|---------------------------------------|
| Slovenia                                 | OEL TWA (mg/m <sup>3</sup> )              | 0.5 mg/m <sup>3</sup>                 |
| Spain                                    | VLA-ED (mg/m <sup>3</sup> )               | 0.2 mg/m <sup>3</sup>                 |
| Sweden                                   | nivågränsvärde (NVG) (mg/m <sup>3</sup> ) | 0.1 mg/m <sup>3</sup> respirable dust |
| USA - ACGIH                              | ACGIH TWA (mg/m <sup>3</sup> )            | 0.1 mg/m <sup>3</sup>                 |
| USA - ACGIH                              | ACGIH STEL (mg/m <sup>3</sup> )           | 0.02 mg/m <sup>3</sup>                |

| <b>copper sulphate (7758-98-7)</b> |   |                       |
|------------------------------------|---|-----------------------|
| Austria                            | MAK (mg/m <sup>3</sup> )                  | 1 mg/m <sup>3</sup>   |
| Austria                            | MAK Short time value (mg/m <sup>3</sup> ) | 4 mg/m <sup>3</sup>   |
| Finland                            | OEL Ceiling (mg/m <sup>3</sup> )          | 1 mg/m <sup>3</sup>   |
| Netherlands                        | Grenswaarde TGG 8H (mg/m <sup>3</sup> )   | 0.1 mg/m <sup>3</sup> |
| Sweden                             | nivågränsvärde (NVG) (mg/m <sup>3</sup> ) | 1 mg/m <sup>3</sup>   |
| Switzerland                        | VME (mg/m <sup>3</sup> )                  | 0.1 mg/m <sup>3</sup> |
| Switzerland                        | VLE (mg/m <sup>3</sup> )                  | 0.2 mg/m <sup>3</sup> |

| <b>Calcium formate- (544-17-2)</b>       |                           |
|--|---------------------------|
| DNEL/DMEL (Workers)                      |                           |
| Acute - systemic effects, dermal         | 4780 mg/kg bodyweight/day |
| Acute - systemic effects, inhalation     | 337 mg/m <sup>3</sup>     |
| Acute - local effects, dermal            | 16.7                      |
| Long-term - systemic effects, dermal     | 4780 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 337 mg/m <sup>3</sup>     |
| DNEL/DMEL (General population)           |                           |
| Acute - systemic effects, dermal         | 2390 mg/kg bodyweight     |
| Acute - systemic effects, inhalation     | 83.2 mg/m <sup>3</sup>    |
| Acute - systemic effects, oral           | 23.9 mg/kg bodyweight     |
| Acute - local effects, dermal            | 8.3 mg/cm <sup>2</sup>    |
| Long-term - systemic effects, inhalation | 83.2 mg/m <sup>3</sup>    |
| Long-term - systemic effects, dermal     | 2390 mg/kg bodyweight/day |
| Long-term - local effects, dermal        | 8.3 mg/cm <sup>2</sup>    |
| PNEC (Water)                             |                           |
| PNEC aqua (freshwater)                   | 2 mg/l                    |
| PNEC aqua (marine water)                 | 0.2 mg/l                  |
| PNEC aqua (intermittent, freshwater)     | 10 mg/l                   |
| PNEC (Sediment)                          |                           |
| PNEC sediment (freshwater)               | 13.4 mg/kg dwt            |
| PNEC sediment (marine water)             | 1.34 mg/kg dwt            |

| <b>Manganese(II) sulfate (7785-87-7)</b> |                              |
|--|------------------------------|
| DNEL/DMEL (Workers)                      |                              |
| Long-term - systemic effects, dermal     | 0.00414 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 0.2 mg/m <sup>3</sup>        |
| DNEL/DMEL (General population)           |                              |
| Long-term - systemic effects, inhalation | 0.043 mg/m <sup>3</sup>      |
| 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                    |

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| <b>Manganese(II) sulfate (7785-87-7)</b> |                   |
|--|-------------------|
| 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           |

| <b>Zinc sulphate (7733-02-0)</b>         |                          |
|--|--------------------------|
| DNEL/DMEL (Workers)                      |                          |
| Long-term - systemic effects, dermal     | 500 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 1 mg/m <sup>3</sup>      |
| DNEL/DMEL (General population)           |                          |
| Long-term - systemic effects, oral       | 50 mg/kg bodyweight/day  |
| Long-term - systemic effects, inhalation | 1,3 mg/m <sup>3</sup>    |
| 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               |

| <b>copper sulphate (7758-98-7)</b>   |                            |
|--------------------------------------|----------------------------|
| DNEL/DMEL (Workers)                  |                            |
| Long-term - systemic effects, dermal | 137 mg/kg bodyweight/day   |
| DNEL/DMEL (General population)       |                            |
| Long-term - systemic effects, oral   | 0.041 mg/kg bodyweight/day |
| PNEC (Water)                         |                            |
| PNEC aqua (freshwater)               | 0.0078 mg/l                |
| PNEC aqua (marine water)             | 0.0052 mg/l                |
| PNEC (Sediment)                      |                            |
| PNEC sediment (freshwater)           | 87 mg/kg dwt               |
| PNEC sediment (marine water)         | 676 mg/kg dwt              |
| PNEC (Soil)                          |                            |
| PNEC soil                            | 65 mg/kg dwt               |
| PNEC (STP)                           |                            |
| PNEC sewage treatment plant          | 0.23 mg/l                  |

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## 8.2. Exposure controls

### Appropriate engineering controls:

Provide adequate ventilation.

### Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Dust production: dust mask with filter type P2.

### Materials for protective clothing:

Rubbers. PVC (Polyvinyl chloride). Natural fibres (e.g. cotton)

### Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Protective gloves made of rubber or PVC. Break through time:  $\geq 480$  min. Thickness of glove material: 0.7 mm

### Eye protection:

Wear eye glasses with side protection according to EN 166

### Skin and body protection:

Chemical resistant protective apron/clothing (tested to EN 14605 or equivalent)

### Respiratory protection:

Wear a respirator conforming to EN140 with Type A/P2 filter or better. particle filter device (DIN EN 143)



## 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                                | : 7.4 1% (t = 20°C)     |
| Relative evaporation rate (butylacetate=1) | : No data available     |
| Melting point                              | : No data available     |
| Freezing point                             | : No data available     |
| 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     |

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|                                  |  |
|----------------------------------|--|
| Vapour pressure                  | : not applicable, solid  |
| Vapour pressure at 50 °C         | : not applicable, solid  |
| Relative vapour density at 20 °C | : not applicable, solid  |
| Relative density                 | : No data available  |
| Density                          | : 0.7 kg/l   |
| Solubility                       | : Water: 1 g/l @ 20 °C   |
| Log Pow                          | : No data available  |
| Viscosity, kinematic             | : not applicable, solid  |
| Viscosity, dynamic               | : No data available  |
| Explosive properties             | : Not expected to be explosive as none of the components is classified as explosive. |
| Oxidising properties             | : None of the components is classified for oxidizing properties.                     |
| Explosive limits                 | : No data available  |

## 9.2. Other information

No additional information 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.

### 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, CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Metal oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

|               |  |
|---------------|--|
| <b>12496</b>  |  |
| LD50 oral rat | > 2000 mg/kg (OECD guidelines TEST No 423) |



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| <b>Manganese(II) sulfate (7785-87-7)</b> |                                 |
|--|---------------------------------|
| LC50 inhalation rat (mg/l)               | > 4.98 mg/l Griffiths DR (2010) |

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

| <b>Calcium formate- (544-17-2)</b> |                                 |
|------------------------------------|---------------------------------|
| LD50 oral rat                      | 3050 mg/kg (OECD 401 method)    |
| LD50 dermal rat                    | > 2000 mg/kg (OECD 402 method)  |
| LC50 inhalation rat (mg/l)         | 0.67 mg/l/4h (EPA OTS 798.1150) |

|                                   |   |
|-----------------------------------|---|
| Skin corrosion/irritation         | : Not classified (Conclusive but not sufficient for classification) |
| Additional information            | : (OECD 439)  |
| Serious eye damage/irritation     | : Causes serious eye damage.  |
| Additional information            | : (OECD 437 method)   |
| Respiratory or skin sensitisation | : Not classified  |
| Germ cell mutagenicity            | : Not classified  |
| Carcinogenicity                   | : Not classified  |

| <b>Calcium formate- (544-17-2)</b>          |   |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 2000 mg/kg bodyweight (OECD 453 method) |

|                        |                  |
|------------------------|------------------|
| Reproductive toxicity  | : Not classified |
| STOT-single exposure   | : Not classified |
| STOT-repeated exposure | : Not classified |

| <b>Calcium formate- (544-17-2)</b>           |   |
|--|---|
| NOAEL (oral, rat, 90 days)                   | 3000 mg/kg bodyweight/day (OECD 408 method) |
| NOAEL (subacute, oral, animal/male, 28 days) | 1000 mg/kg bodyweight (OECD 407 method)     |

|                   |                  |
|-------------------|------------------|
| Aspiration hazard | : Not classified |
|-------------------|------------------|

## SECTION 12: Ecological information

### 12.1. Toxicity

| <b>BREXIL DUO</b>         |   |
|---------------------------|---|
| LC50 fish 1               | > 100 mg/l Zebra fish 96h (OECD 203)    |
| EC50 Daphnia 1            | 18.37 mg/l Daphnia Magna 48h (OECD 202) |
| EC50 72h Algae [mg/l] (1) | 12.5 mg/l Green Algae 72h (OECD 201)    |
| LOEC (acute)              | 6.3 mg/l Green Algae 72h (OECD 201)     |
| NOEC (acute)              | 3.6 Green Algae 72h (OECD 201)          |

| <b>Manganese(II) sulfate (7785-87-7)</b> |   |
|--|---|
| NOEC chronic crustacea                   | 5700 ng/l (3 week - Daphnia magna - Biesinger KE & Christensen GM (1994)) |

| <b>Calcium formate- (544-17-2)</b> |   |
|------------------------------------|---|
| EC50 Daphnia 1                     | > 1000 mg/l                                       |
| EC50 other aquatic organisms 1     | > 1000 mg/l (bacterium)                           |
| EC50 other aquatic organisms 2     | > 1000 mg/l 72h, (Pseudokirchnerella subcapitata) |

### 12.2. Persistence and degradability

No additional information available

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### 12.3. Bioaccumulative potential

| BREXIL DUO                |   |
|---------------------------|---|
| Bioaccumulative potential | Product does not contain any bioaccumulative substance. |

| Calcium formate- (544-17-2) |                 |
|-----------------------------|-----------------|
| Log Pow                     | -2.6 (OECD 107) |

### 12.4. Mobility in soil

| BREXIL DUO       |   |
|------------------|---|
| Mobility in soil | In general, the mobility in the soil of the microelements in the mixture is influenced by several factors such as pH, CO <sub>2</sub> concentration, redox conditions, and availability of organic and inorganic complexing agents. |

### 12.5. Results of PBT and vPvB assessment

| BREXIL DUO   |  |
|--|--|
| 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 |  |
| Results of PBT assessment  | The components in this formulation do not meet the criteria for classification as PBT or vPvB. |

| Component                   |   |
|-----------------------------|---|
| Calcium formate- (544-17-2) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII<br>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

### 12.6. Other adverse effects

No additional information available

## 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 ADR / IATA / IMDG / RID / AND / NZS 5433:2012 Transport of Dangerous Goods on Land

| ADR / RID  | IMDG  | IATA  | ADN   | NZS5433:2012  |
|--|---|---|---|---|
| <b>14.1. UN number</b>   |   |   |   |   |
| 3077   | 3077  | 3077  | 3077  | 3077  |
| <b>14.2. UN proper shipping name</b>   |   |   |   |   |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.   | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  | Environmentally hazardous substance, solid, n.o.s.  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  |
| <b>Transport document description</b>  |   |   |   |   |
| UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, (E) | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III, MARINE POLLUTANT | UN 3077 Environmentally hazardous substance, solid, n.o.s. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ((manganese sulphate, zinc sulphate, copper sulphate)), 9, III |






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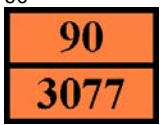
Code: 2496

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| ADR / RID   | IMDG  | IATA  | ADN  | NZS5433:2012  |
|---|---|---|--|---|
| <b>14.3. Transport hazard class(es)</b>   |   |   |  |   |
| 9   | 9   | 9   | 9  | 9   |
|  |  |  |  |  |
| <b>14.4. Packing group</b>  |   |   |  |   |
| III   | III   | III   | III  | III   |
| <b>14.5. Environmental hazards</b>  |   |   |  |   |
| Dangerous for the environment : Yes   | Dangerous for the environment : Yes<br>Marine pollutant : Yes                     | Dangerous for the environment : Yes   | Dangerous for the environment : Yes  | Dangerous for the environment : Yes   |
| No supplementary information available  |   |   |  |   |

**14.6. Special precautions for user**

**- Overland transport**

- Classification code (ADR) : M7
- Special provisions (ADR) : 274, 335, 601, 375
- Limited quantities (ADR) : 5kg
- Excepted quantities (ADR) : E1
- Packing instructions (ADR) : P002, IBC08, LP02, R001
- Special packing provisions (ADR) : PP12, B3
- Mixed packing provisions (ADR) : MP10
- Portable tank and bulk container instructions (ADR) : T1, BK1, BK2
- Portable tank and bulk container special provisions (ADR) : TP33
- Tank code (ADR) : SGAV, LGBV
- Vehicle for tank carriage : AT
- Transport category (ADR) : 3
- Special provisions for carriage - Packages (ADR) : V13
- Special provisions for carriage - Bulk (ADR) : VC1, VC2
- Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
- Hazard identification number (Kemler No.) : 90
- Orange plates : 
- Tunnel restriction code (ADR) : E
- EAC code : 2Z
- Hazchem Code : 2Z

**- Transport by sea**

- Special provisions (IMDG) : 274, 335, 966, 967
- Limited quantities (IMDG) : 5 kg
- Excepted quantities (IMDG) : E1
- Packing instructions (IMDG) : P002, LP02
- Special packing provisions (IMDG) : PP12
- IBC packing instructions (IMDG) : IBC08
- IBC special provisions (IMDG) : B3
- Tank instructions (IMDG) : T1, BK1, BK2, BK3
- Tank special provisions (IMDG) : TP33
- EmS-No. (Fire) : F-A
- EmS-No. (Spillage) : S-F
- Stowage category (IMDG) : A
- MFAG-No : 171

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**- Air transport**

|  |                         |
|--|-------------------------|
| PCA Excepted quantities (IATA)               | : E1                    |
| PCA Limited quantities (IATA)                | : Y956                  |
| PCA limited quantity max net quantity (IATA) | : 30kgG                 |
| PCA packing instructions (IATA)              | : 956                   |
| PCA max net quantity (IATA)                  | : 400kg                 |
| CAO packing instructions (IATA)              | : 956                   |
| CAO max net quantity (IATA)                  | : 400kg                 |
| Special provisions (IATA)                    | : A97, A158, A179, A197 |
| ERG code (IATA)                              | : 9L                    |

**- Inland waterway transport**

|                                       |  |
|---------------------------------------|--|
| Classification code (ADN)             | : M7   |
| Special provisions (ADN)              | : 274, 335, 61   |
| Limited quantities (ADN)              | : 5 kg   |
| Excepted quantities (ADN)             | : E1   |
| Carriage permitted (ADN)              | : T* B**   |
| Equipment required (ADN)              | : PP, A  |
| Number of blue cones/lights (ADN)     | : 0  |
| Additional requirements/Remarks (ADN) | : * Only in the molten state. ** For carriage in bulk see also 7.1.4.1. *** Only in the case of transport in bulk. |

**- Rail transport**

|   |                           |
|---|---------------------------|
| Classification code (RID)   | : M7                      |
| Special provisions (RID)  | : 274, 335, 601           |
| Limited quantities (RID)  | : 5kg                     |
| Excepted quantities (RID)   | : E1                      |
| Packing instructions (RID)  | : P002, IBC08, LP02, R001 |
| Special packing provisions (RID)  | : PP12, B3                |
| Mixed packing provisions (RID)  | : MP10                    |
| Portable tank and bulk container instructions (RID)                     | : T1, BK1, BK2            |
| Portable tank and bulk container special provisions (RID)               | : TP33                    |
| Tank codes for RID tanks (RID)  | : SGAV, LGBV              |
| Transport category (RID)  | : 3                       |
| Special provisions for carriage – Packages (RID)                        | : W13                     |
| Special provisions for carriage – Bulk (RID)                            | : VW1                     |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW31              |
| Colis express (express parcels) (RID)                                   | : CE11                    |
| Hazard identification number (RID)                                      | : 90                      |

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

**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**



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Classification: : Classified as hazardous according 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) 2, 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

**15.2. Chemical safety assessment**

No additional information available

**SECTION 16: Other information**

Issue date: September 17, 2021

Abbreviations and acronyms:

|       |   |
|-------|---|
| SDS   | Safety Data Sheet   |
|       | CAS - Chemical Abstracts Service  |
|       | GHS - Globally Harmonised System  |
|       | CSR - Chemical Safety Report  |
| 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 Rail                    |
|       | PVC (Polyvinyl chloride).   |

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|       |   |
|-------|---|
| 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                   |

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

|                   |      |                    |
|-------------------|------|--------------------|
| Eye Dam. 1        | H318 | Calculation method |
| Aquatic Chronic 2 | H411 | Calculation method |

*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*