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

1.1 Product identifier
   Trade name: Calcium / Magnesium Chloride Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Use of the Substance/Mixture: Veterinary product

1.3 Details of the supplier of the safety data sheet
   Company: MSD
   20 Spartan Road
   1619 Spartan, South Africa
   Telephone: +27119239300
   E-mail address of person responsible for the SDS: EHSDATASTEWARD@msd.com

1.4 Emergency telephone number
   +1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Not a hazardous substance or mixture.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Not a hazardous substance or mixture.

   Additional Labelling
   EUH210 Safety data sheet available on request.
   EUH208 Contains 4-Chloro-3-methylphenol.
   May produce an allergic reaction.

2.3 Other hazards
   This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid</td>
<td>10043-35-3</td>
<td>233-139-2</td>
<td>005-007-00-2</td>
<td></td>
<td>Repr. 1B; H360FD</td>
<td>&gt;= 1 - &lt; 5,5</td>
</tr>
<tr>
<td>4-Chloro-3-methylphenol</td>
<td>59-50-7</td>
<td>200-431-6</td>
<td>604-014-00-3</td>
<td></td>
<td>Acute Tox. 4; H302</td>
<td>&gt;= 0,1 - &lt; 0,25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4; H312</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1C; H314</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1; H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1B; H317</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3; H335</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 1; H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 3; H412</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M-Factor (Acute aquatic toxicity): 1</td>
<td></td>
</tr>
</tbody>
</table>

Substances with a workplace exposure limit:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium chloride</td>
<td>7786-30-3</td>
<td>232-094-6</td>
<td></td>
<td></td>
<td></td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

**Protection of first-aiders**: No special precautions are necessary for first aid responders.

**If inhaled**: If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

**In case of skin contact**: Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

**In case of eye contact**: Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

**If swallowed**: If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.
4.2 Most important symptoms and effects, both acute and delayed

Risks: May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
- Water spray
- Alcohol-resistant foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media:
None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting:
Exposure to combustion products may be a hazard to health.

Hazardous combustion products:
- Carbon oxides
- Metal oxides
- Chlorine compounds
- Boron oxides

5.3 Advice for firefighters

Special protective equipment for firefighters:
Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Specific extinguishing methods:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions:
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water.
6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- Soak up with inert absorbent material.
- For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
- Clean up remaining materials from spill with suitable absorbent.
- Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures:
- See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:
- Use only with adequate ventilation.
- Avoid prolonged or repeated contact with skin.

Advice on safe handling:
- Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
- Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures:
- If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.
- The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
- Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage:
- Do not store with the following product types:
  - Strong oxidizing agents

7.3 Specific end use(s)

Specific use(s):
- No data available
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium chloride</td>
<td>7786-30-3</td>
<td>TWA</td>
<td>OEB 2 (&gt;= 100 &lt; 1000 µg/m³)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium chloride</td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>7 mg/kg bw/day</td>
</tr>
<tr>
<td>Boric acid</td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>392 mg/kg bw/day</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>8,3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0,98 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0,98 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>4,15 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>196 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>4-Chloro-3-methylphenol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>6,289 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>3,567 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>1,551 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>1,783 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0,892 mg/kg bw/day</td>
<td></td>
</tr>
</tbody>
</table>

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium chloride</td>
<td>Fresh water</td>
<td>3,21 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,32 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>5,48 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>90 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>288,9 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>28,89 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>662,77 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td>Boric acid</td>
<td>Fresh water</td>
<td>2,9 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>13,7 mg/l</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Engineering measures
Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Laboratory operations do not require special containment.

Personal protective equipment
Eye protection : Wear safety glasses with side shields or goggles.
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Hand protection
Material : Chemical-resistant gloves
Skin and body protection : Work uniform or laboratory coat.
Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter type : Particulates type (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance : liquid
Colour : translucent, light yellow
Odour : No data available
Odour Threshold : No data available
pH : 3.0 - 4.0
Melting point/freezing point : No data available
Initial boiling point and boiling range : No data available
Flash point : No data available
SAFETY DATA SHEET

Calcium / Magnesium Chloride Formulation

Evaporation rate: No data available

Flammability (solid, gas): Not applicable

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

Vapour pressure: No data available

Relative vapour density: No data available

Relative density: No data available

Density: 1.000 - 1.200 g/cm³

Solubility (water): No data available

Partition coefficient: n-octanol/water: Not applicable

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity
  Viscosity, kinematic: No data available

Explosive properties: Not explosive

Oxidizing properties: The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids): No data available

Molecular weight: No data available

Particle size: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
Not classified as a reactivity hazard.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous reactions: Can react with strong oxidizing agents.

10.4 Conditions to avoid
SAFETY DATA SHEET

Calcium / Magnesium Chloride Formulation

Version 3.0  Revision Date: 09.04.2021  SDS Number: 7665402-00003  Date of last issue: 21.12.2020  Date of first issue: 10.12.2020

Conditions to avoid : None known.

10.5 Incompatible materials
Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Components:

Boric acid:
Acute oral toxicity : LD50 (Rat): 3.450 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

4-Chloro-3-methylphenol:
Acute oral toxicity : LD50 (Mouse): 600 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 2.871 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Magnesium chloride:
Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity
**Safety Data Sheet**

**Calcium / Magnesium Chloride Formulation**

<table>
<thead>
<tr>
<th>Remarks</th>
<th>Based on data from similar materials</th>
</tr>
</thead>
</table>

**Acute dermal toxicity**

- **LD50 (Rat):** > 2,000 mg/kg
- **Method:** OECD Test Guideline 402
- **Assessment:** The substance or mixture has no acute dermal toxicity
- **Remarks:** Based on data from similar materials

**Skin corrosion/irritation**

Not classified based on available information.

### Components:

#### Boric acid:

- **Species:** Rabbit
- **Result:** No skin irritation

#### 4-Chloro-3-methylphenol:

- **Species:** Rabbit
- **Method:** OECD Test Guideline 404
- **Result:** Corrosive after 1 to 4 hours of exposure

#### Magnesium chloride:

- **Species:** reconstructed human epidermis (RhE)
- **Method:** Regulation (EC) No. 440/2008, Annex, B.46
- **Remarks:** Based on data from similar materials
- **Result:** No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

### Components:

#### Boric acid:

- **Species:** Rabbit
- **Result:** No eye irritation

#### 4-Chloro-3-methylphenol:

- **Species:** Rabbit
- **Method:** OECD Test Guideline 405
- **Result:** Irreversible effects on the eye

#### Magnesium chloride:

- **Species:** Rabbit
- **Method:** OECD Test Guideline 405
- **Result:** No eye irritation
- **Remarks:** Based on data from similar materials
Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Components:

**Boric acid:**
- **Test Type:** Buehler Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Method:** OECD Test Guideline 406
- **Result:** negative

**4-Chloro-3-methylphenol:**
- **Test Type:** Maximisation Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Assessment:** Probability or evidence of low to moderate skin sensitisation rate in humans

**Magnesium chloride:**
- **Test Type:** Maximisation Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Method:** OECD Test Guideline 406
- **Result:** negative
- **Remarks:** Based on data from similar materials

**Germ cell mutagenicity**
Not classified based on available information.

Components:

**Boric acid:**
- **Genotoxicity in vitro:**
  - **Test Type:** Bacterial reverse mutation assay (AMES) Result: negative
  - **Test Type:** In vitro mammalian cell gene mutation test Result: equivocal
  - **Test Type:** Chromosome aberration test in vitro Result: negative

- **Genotoxicity in vivo:**
  - **Test Type:** Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
    - **Species:** Mouse
    - **Application Route:** Ingestion
    - **Result:** negative
SAFETY DATA SHEET

Calcium / Magnesium Chloride Formulation

Version 3.0  Revision Date: 09.04.2021  SDS Number: 7665402-00003  Date of last issue: 21.12.2020  Date of first issue: 10.12.2020

4-Chloro-3-methylphenol:
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative

Magnesium chloride:
Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473 Result: negative
Remarks: Based on data from similar materials

Test Type: Bacterial reverse mutation assay (AMES) Result: negative

Carcinogenicity
Not classified based on available information.

Components:

Boric acid:
Species : Mouse
Application Route : Ingestion
Exposure time : 103 weeks
Result : negative

Magnesium chloride:
Species : Mouse
Application Route : Ingestion
Exposure time : 18 Months
Result : negative
Remarks : Based on data from similar materials

Reproductive toxicity
Not classified based on available information.

Components:

Boric acid:
Effects on fertility : Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: positive

Effects on foetal development :
Species: Rabbit Application Route: Ingestion Result: positive

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments. Clear evidence of adverse effects on development, based on animal experiments.
4-Chloro-3-methylphenol:

Effects on fertility: Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

Magnesium chloride:

Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development: Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT - single exposure
Not classified based on available information.

Components:

4-Chloro-3-methylphenol:
Assessment: May cause respiratory irritation.

STOT - repeated exposure
Not classified based on available information.

Repeated dose toxicity

Components:

Boric acid:
Species: Rat
NOAEL: 100 mg/kg
LOAEL: 334 mg/kg
Application Route: Ingestion
Exposure time: 2 yr

4-Chloro-3-methylphenol:
Species: Rat
## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

**Boric acid:**
- **Toxicity to fish**
  - NOAEL: 74 mg/l
  - LOAEL: 150 mg/l
  - Exposure time: 96 h
- **Toxicity to daphnia and other aquatic invertebrates**
  - EC50: 102 mg/l
  - Exposure time: 48 h
- **Toxicity to algae/aquatic plants**
  - EC50: 52.4 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - NOEC: 17.5 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
- **Toxicity to microorganisms**
  - EC10: 35.4 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209
- **Toxicity to fish (Chronic toxicity)**
  - NOEC: 6.4 mg/l
  - Exposure time: 34 d
  - Species: Danio rerio (zebra fish)
  - Method: OECD Test Guideline 210
- **Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
  - NOEC: 10.8 mg/l
  - Exposure time: 21 d
  - Species: Daphnia magna (Water flea)

**4-Chloro-3-methylphenol:**

*Remarks:*
Not classified based on available information.
## Toxicity to fish

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 (Onchorhynchus mykiss (rainbow trout)):</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>917 µg/l</td>
<td>96 h</td>
<td></td>
</tr>
</tbody>
</table>

## Toxicity to daphnia and other aquatic invertebrates

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC50 (Daphnia magna (Water flea)):</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>1,5 mg/l</td>
<td>48 h</td>
<td>OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

## Toxicity to algae/aquatic plants

<table>
<thead>
<tr>
<th>Substance</th>
<th>ErC50 (Chlorella pyrenoidosa (algae)):</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>15 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

## M-Factor (Acute aquatic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>1</td>
</tr>
</tbody>
</table>

## Toxicity to microorganisms

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC50 :</th>
<th>Exposure time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>22.86 mg/l</td>
<td>60 h</td>
</tr>
</tbody>
</table>

## Toxicity to fish (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOEC:</th>
<th>Exposure time:</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>0,15 mg/l</td>
<td>28 d</td>
<td>Onchorhynchus mykiss (rainbow trout)</td>
<td>OECD Test Guideline 204</td>
</tr>
</tbody>
</table>

## Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOEC:</th>
<th>Exposure time:</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>0,32 mg/l</td>
<td>21 d</td>
<td>Daphnia magna (Water flea)</td>
<td>OECD Test Guideline 211</td>
</tr>
</tbody>
</table>

### Magnesium chloride:

## Toxicity to fish

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 (Pimephales promelas (fathead minnow)):</th>
<th>Exposure time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>2,119,3 mg/l</td>
<td>96 h</td>
</tr>
</tbody>
</table>

## Toxicity to daphnia and other aquatic invertebrates

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC50 (Daphnia magna (Water flea)):</th>
<th>Exposure time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>548,4 mg/l</td>
<td>48 h</td>
</tr>
</tbody>
</table>

## Toxicity to algae/aquatic plants

<table>
<thead>
<tr>
<th>Substance</th>
<th>ErC50 (Desmodesmus subspicatus (green algae)):</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>&gt; 100 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOEC (Desmodesmus subspicatus (green algae)):</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>&gt; 100 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

## Toxicity to microorganisms

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOEC:</th>
<th>Exposure time:</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>&gt; 900 mg/l</td>
<td>3 h</td>
<td>OECD Test Guideline 209</td>
</tr>
</tbody>
</table>

## Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC10:</th>
<th>Exposure time:</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium / Magnesium Chloride Formulation</td>
<td>321 mg/l</td>
<td>21 d</td>
<td>Daphnia magna (Water flea)</td>
</tr>
</tbody>
</table>
12.2 Persistence and degradability

**Components:**

**4-Chloro-3-methylphenol:**
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 78 \%
  - Exposure time: 15 d
  - Method: OECD Test Guideline 301

12.3 Bioaccumulative potential

**Components:**

**Boric acid:**
- Bioaccumulation: Species: Cyprinus carpio (Carp)
  - Bioconcentration factor (BCF): <= 3.2
  - Method: OECD Test Guideline 305
- Partition coefficient: n-octanol/water: log Pow: -1.09

**4-Chloro-3-methylphenol:**
- Bioaccumulation: Species: Cyprinus carpio (Carp)
  - Bioconcentration factor (BCF): 5.5 - 13
- Partition coefficient: n-octanol/water: log Pow: 0.477

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

**Product:**
- Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1\% or higher.

12.6 Other adverse effects

**Product:**
- Endocrine disrupting potential: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1\% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product:**
- Dispose of in accordance with local regulations.
  - According to the European Waste Catalogue, Waste Codes
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Remarks: Not applicable for product as supplied.

SECTION 15: Regulatory information

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

The components of this product are reported in the following inventories:

- DSL: not determined
- AICS: not determined
- IECSC: not determined

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information: Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H302: Harmful if swallowed.
H312: Harmful in contact with skin.
Calcium / Magnesium Chloride Formulation

H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H335 : May cause respiratory irritation.
H360FD : May damage fertility. May damage the unborn child.
H400 : Very toxic to aquatic life.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure

Further information

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

ZA / EN