

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## Calcium Formulation

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 28.09.2024  |
| 8.0     | 14.04.2025     | 7725885-00013 | Date of first issue: 07.01.2021 |

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

#### 1.1 Product identifier

Trade name : Calcium Formulation

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

Use of the Sub-stance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

#### 1.3 Details of the supplier of the safety data sheet

Company : MSD  
Drynam Road  
K67 P263 Dublin, Ireland

Telephone : +1-908-740-4000

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)

|                                    |                                                            |
|------------------------------------|------------------------------------------------------------|
| Skin corrosion, Sub-category 1B    | H314: Causes severe skin burns and eye damage.             |
| Serious eye damage, Category 1     | H318: Causes serious eye damage.                           |
| Reproductive toxicity, Category 1B | H360FD: May damage fertility. May damage the unborn child. |

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.

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H360FD May damage fertility. May damage the unborn child.

Supplemental Hazard Statements : EUH071 Corrosive to the respiratory tract.

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/ doctor.

P303 + P361 + P353 + P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

### Hazardous components which must be listed on the label:

Boric acid  
Sodium hydroxide

### Additional Labelling

Restricted to professional users.

## 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.

Ecological information: 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.

Toxicological information: 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 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

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| Chemical name       | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification                                                                                                                                                                                                                                                                                           | Concentration<br>(% w/w) |
|---------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Boric acid          | 10043-35-3<br>233-139-2<br>005-007-00-2               | Repr. 1B; H360FD                                                                                                                                                                                                                                                                                         | $\geq 1 - < 10$          |
| Sodium hydroxide    | 1310-73-2<br>215-185-5<br>011-002-00-6                | Met. Corr. 1; H290<br>Skin Corr. 1A; H314<br>Eye Dam. 1; H318<br>EUH014, EUH071<br><br>specific concentration<br>limit<br>Skin Corr. 1A; H314<br>$\geq 5\%$<br>Skin Corr. 1B; H314<br>$2 - < 5\%$<br>Skin Irrit. 2; H315<br>$0.5 - < 2\%$<br>Eye Irrit. 2; H319<br>$0.5 - < 2\%$<br>EUH071<br>$\geq 2\%$ | $\geq 2 - < 3$           |
| Calcium phosphinate | 7789-79-9<br>232-190-8                                | Flam. Sol. 2; H228<br>Acute Tox. 4; H302<br><br>Acute toxicity esti-<br>mate<br><br>Acute oral toxicity:<br>2,000 mg/kg                                                                                                                                                                                  | $\geq 1 - < 10$          |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.  
If not breathing, give artificial respiration.

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- If breathing is difficult, give oxygen.  
Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention immediately.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
If vomiting occurs have person lean forward.  
Call a physician or poison control centre immediately.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.

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

- Risks : Causes digestive tract burns.  
  
Causes serious eye damage.  
May damage fertility. May damage the unborn child.  
Causes severe burns.  
Corrosive to the respiratory tract.

### 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 (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Metal oxides

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Chlorine compounds  
Boron oxides  
Oxides of phosphorus

### 5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
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 : Use personal protective equipment.  
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.  
Local authorities should be advised if significant spillages cannot be contained.

### 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.

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### 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 | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Do not breathe vapours or spray mist.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>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.<br>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 locked up. Keep tightly closed. Store in accordance with the particular national regulations.                      |
| Advice on common storage                      | : | Do not store with the following product types:<br>Strong oxidizing agents<br>Self-reactive substances and mixtures<br>Organic peroxides<br>Explosives<br>Gases |

#### 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

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|------------|---------|-------------------------------|--------------------|-------|
|------------|---------|-------------------------------|--------------------|-------|

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|                                                                                           |            |                      |         |        |
|-------------------------------------------------------------------------------------------|------------|----------------------|---------|--------|
| Boric acid                                                                                | 10043-35-3 | OELV - 8 hrs (TWA)   | 2 mg/m3 | IE OEL |
| Further information: Repr 1B - Substances which are presumed human reproductive toxicants |            |                      |         |        |
| Sodium hydroxide                                                                          | 1310-73-2  | OELV - 15 min (STEL) | 2 mg/m3 | IE OEL |

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

| Substance name                       | End Use   | Exposure routes | Potential health effects   | Value              |
|--------------------------------------|-----------|-----------------|----------------------------|--------------------|
| Magnesium chloride 6 hydrate crystal | Consumers | Ingestion       | Long-term systemic effects | 7 mg/kg bw/day     |
| Boric acid                           | Workers   | Skin contact    | Long-term systemic effects | 392 mg/kg bw/day   |
|                                      | Workers   | Inhalation      | Long-term systemic effects | 8.3 mg/m3          |
|                                      | Consumers | Ingestion       | Acute systemic effects     | 0.98 mg/kg bw/day  |
|                                      | Consumers | Ingestion       | Long-term systemic effects | 0.98 mg/kg bw/day  |
|                                      | Consumers | Inhalation      | Long-term systemic effects | 4.15 mg/m3         |
|                                      | Consumers | Skin contact    | Long-term systemic effects | 196 mg/kg bw/day   |
| Sodium hydroxide                     | Consumers | Inhalation      | Long-term local effects    | 1 mg/m3            |
|                                      | Workers   | Inhalation      | Long-term local effects    | 1 mg/m3            |
| Calcium phosphinate                  | Workers   | Inhalation      | Long-term systemic effects | 0.821 mg/m3        |
|                                      | Workers   | Skin contact    | Long-term systemic effects | 1.173 mg/kg bw/day |
|                                      | Consumers | Inhalation      | Long-term systemic effects | 0.205 mg/m3        |
|                                      | Consumers | Skin contact    | Long-term systemic effects | 0.587 mg/kg bw/day |
|                                      | Consumers | Ingestion       | Long-term systemic effects | 0.058 mg/kg bw/day |
|                                      | Consumers | Ingestion       | Acute systemic effects     | 0.352 mg/kg bw/day |

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

| Substance name                       | Environmental Compartment | Value                        |
|--------------------------------------|---------------------------|------------------------------|
| Magnesium chloride 6 hydrate crystal | Fresh water               | 1.6 mg/l                     |
|                                      | Freshwater - intermittent | 5.48 mg/l                    |
|                                      | Marine water              | 0.16 mg/l                    |
|                                      | Sewage treatment plant    | 42 mg/l                      |
|                                      | Fresh water sediment      | 1050 mg/kg dry weight (d.w.) |
|                                      | Marine sediment           | 105 mg/kg dry                |

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|                     |                             |                                |
|---------------------|-----------------------------|--------------------------------|
|                     |                             | weight (d.w.)                  |
|                     | Soil                        | 1045 mg/kg dry weight (d.w.)   |
| Boric acid          | Fresh water                 | 2.9 mg/l                       |
|                     | Intermittent use/release    | 13.7 mg/l                      |
|                     | Marine water                | 2.9 mg/l                       |
|                     | Sewage treatment plant      | 10 mg/l                        |
|                     | Soil                        | 5.7 mg/kg dry weight (d.w.)    |
| Calcium phosphinate | Fresh water                 | 0.418 mg/l                     |
|                     | Freshwater - intermittent   | 1 mg/l                         |
|                     | Marine water                | 0.042 mg/l                     |
|                     | Marine water - intermittent | 0.1 mg/l                       |
|                     | Sewage treatment plant      | 10 mg/l                        |
|                     | Fresh water sediment        | 0.757 mg/kg dry weight (d.w.)  |
|                     | Marine sediment             | 0.0757 mg/kg dry weight (d.w.) |
|                     | Soil                        | 0.1 mg/kg dry weight (d.w.)    |

### 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/face 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.  
Equipment should conform to I.S. EN 143

Filter type : Particulates type (P)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : liquid

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Colour : Colorless to pale yellow

Odour : odourless

Odour Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 5.0 - 7.0

Viscosity  
Viscosity, kinematic : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Vapour pressure : No data available

Relative density : No data available

Density : 1.150 - 1.350 g/cm<sup>3</sup>

Relative vapour density : No data available

Particle characteristics  
Particle size : Not applicable

### 9.2 Other information

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|                      |   |                                                          |
|----------------------|---|----------------------------------------------------------|
| Explosives           | : | Not explosive                                            |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Evaporation rate     | : | No data available                                        |
| Molecular weight     | : | No data available                                        |

### 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

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 hazard classes as defined in Regulation (EC) No 1272/2008

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

##### Acute toxicity

|| Not classified based on available information.

##### Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

##### Components:

##### **Boric acid:**

|| Acute oral toxicity : LD50 (Rat): 3,450 mg/kg  
|| Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l

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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

### Sodium hydroxide:

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

### Calcium phosphinate:

Acute oral toxicity : LD50 (Rat): 2,000 mg/kg  
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): > 3.3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

### Skin corrosion/irritation

Causes severe burns.

### Components:

#### Boric acid:

Species : Rabbit  
Result : No skin irritation

#### Sodium hydroxide:

Result : Corrosive after 3 minutes or less of exposure

#### Calcium phosphinate:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

### Serious eye damage/eye irritation

Causes serious eye damage.

### Components:

#### Boric acid:

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

### Sodium hydroxide:

|         |                                   |
|---------|-----------------------------------|
| Result  | : Irreversible effects on the eye |
| Remarks | : Based on skin corrosivity.      |

### 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                |

#### Sodium hydroxide:

|                 |                                          |
|-----------------|------------------------------------------|
| Test Type       | : Human repeat insult patch test (HRIPT) |
| Exposure routes | : Skin contact                           |
| Result          | : negative                               |

#### Calcium phosphinate:

|                 |                                        |
|-----------------|----------------------------------------|
| 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)<br>Result: negative   |
|                       | Test Type: In vitro mammalian cell gene mutation test<br>Result: equivocal |
|                       | Test Type: Chromosome aberration test in vitro<br>Result: negative         |

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

### Calcium phosphinate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

Not classified based on available information.

### Components:

#### Boric acid:

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

### Reproductive toxicity

May damage fertility. May damage the unborn child.

### Components:

#### Boric acid:

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

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rabbit  
Application Route: Ingestion  
Result: positive

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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.

### Calcium phosphinate:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: negative  
Remarks: Based on data from similar materials

### STOT - single exposure

Corrosive to the respiratory tract.

### STOT - repeated exposure

Not classified based on available information.

### Components:

#### Calcium phosphinate:

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

### Repeated dose toxicity

### Components:

#### Boric acid:

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

#### Calcium phosphinate:

Species : Rat  
NOAEL : > 300 mg/kg  
Application Route : Ingestion  
Exposure time : 54 Days  
Method : OECD Test Guideline 422  
Remarks : Based on data from similar materials

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### Aspiration toxicity

|| Not classified based on available information.

### 11.2 Information on other hazards

#### Endocrine disrupting properties

|| Not classified based on available information.

#### Product:

Assessment : 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 12: Ecological information

### 12.1 Toxicity

#### Components:

##### **Boric acid:**

|                                                                        |                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                       | : LC50 (Pimephales promelas (fathead minnow)): 74 mg/l<br>Exposure time: 96 h                                                                                                                                                                                |
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 (Ceriodaphnia dubia (water flea)): 102 mg/l<br>Exposure time: 48 h                                                                                                                                                                                    |
| Toxicity to algae/aquatic plants                                       | : EC50 (Pseudokirchneriella subcapitata (green algae)): 52.4 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms                                             | : EC10 : 35.4 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209                                                                                                                                                                                  |
| Toxicity to fish (Chronic toxicity)                                    | : NOEC: 6.4 mg/l<br>Exposure time: 34 d<br>Species: Danio rerio (zebra fish)<br>Method: OECD Test Guideline 210                                                                                                                                              |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC: 10.8 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)                                                                                                                                                                              |

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### Calcium phosphinate:

|                                                                        |                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                       | : LC50 (Danio rerio (zebra fish)): > 100 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials                                                                                                                                                                                                        |
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202                                                                                                                                                                                                                                                       |
| Toxicity to algae/aquatic plants                                       | : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>EC10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms                                             | : EC10 (activated sludge): > 1 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209<br>Remarks: Based on data from similar materials                                                                                                                                                                                                                   |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC: 32 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211                                                                                                                                                                                                                                                |

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

#### Components:

#### **Boric acid:**

|                                        |                                                                                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Bioaccumulation                        | : Species: Cyprinus carpio (Carp)<br>Bioconcentration factor (BCF): ≤ 3.2<br>Method: OECD Test Guideline 305 |
| Partition coefficient: n-octanol/water | : log Pow: -1.09                                                                                             |

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

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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 Endocrine disrupting properties

#### Product:

Assessment : 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.

### 12.7 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

|                        |                                                                                                                                                                                                                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                | : Dispose of in accordance with local regulations.<br>According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.<br>Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.<br>Do not dispose of waste into sewer. |
| Contaminated packaging | : Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>If not otherwise specified: Dispose of as unused product.                                                                                                                                                        |

## SECTION 14: Transport information

### 14.1 UN number or ID number

|      |                                     |
|------|-------------------------------------|
| ADN  | : Not regulated as a dangerous good |
| ADR  | : Not regulated as a dangerous good |
| RID  | : Not regulated as a dangerous good |
| IMDG | : Not regulated as a dangerous good |
| IATA | : Not regulated as a dangerous good |

### 14.2 UN proper shipping name

|      |                                     |
|------|-------------------------------------|
| ADN  | : Not regulated as a dangerous good |
| ADR  | : Not regulated as a dangerous good |
| RID  | : Not regulated as a dangerous good |
| IMDG | : Not regulated as a dangerous good |
| IATA | : Not regulated as a dangerous good |

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### 14.3 Transport hazard class(es)

|      |   |                                   |
|------|---|-----------------------------------|
| ADN  | : | Not regulated as a dangerous good |
| ADR  | : | Not regulated as a dangerous good |
| RID  | : | Not regulated as a dangerous good |
| IMDG | : | Not regulated as a dangerous good |
| IATA | : | Not regulated as a dangerous good |

### 14.4 Packing group

|                  |   |                                   |
|------------------|---|-----------------------------------|
| ADN              | : | Not regulated as a dangerous good |
| ADR              | : | Not regulated as a dangerous good |
| RID              | : | Not regulated as a dangerous good |
| IMDG             | : | Not regulated as a dangerous good |
| IATA (Cargo)     | : | Not regulated as a dangerous good |
| IATA (Passenger) | : | 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 Maritime transport in bulk according to IMO instruments

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

|                                                                                                                                            |   |                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered:<br>Number on list 3 |
|--------------------------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------|

Number on list 30: Boric acid

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the

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restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

|                                                                                                                                                         |   |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).                                                               | : | Boric acid     |
| Regulation (EU) No 2024/590 on substances that deplete the ozone layer                                                                                  | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast)                                                                                     | : | Not applicable |
| Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals                          | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV)                                                                                         | : | Not applicable |
| Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. | : | Not applicable |

### Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 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

|        |   |                                                    |
|--------|---|----------------------------------------------------|
| H228   | : | Flammable solid.                                   |
| H290   | : | May be corrosive to metals.                        |
| H302   | : | Harmful if swallowed.                              |
| H314   | : | Causes severe skin burns and eye damage.           |
| H318   | : | Causes serious eye damage.                         |
| H360FD | : | May damage fertility. May damage the unborn child. |
| EUH014 | : | Reacts violently with water.                       |
| EUH071 | : | Corrosive to the respiratory tract.                |

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### Full text of other abbreviations

|                               |   |                                                                                                                               |
|-------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------|
| Acute Tox.                    | : | Acute toxicity                                                                                                                |
| Eye Dam.                      | : | Serious eye damage                                                                                                            |
| Flam. Sol.                    | : | Flammable solids                                                                                                              |
| Met. Corr.                    | : | Corrosive to metals                                                                                                           |
| Repr.                         | : | Reproductive toxicity                                                                                                         |
| Skin Corr.                    | : | Skin corrosion                                                                                                                |
| IE OEL                        | : | Ireland. List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2 |
| IE OEL / OELV - 8 hrs (TWA)   | : | Occupational exposure limit value (8-hour reference period)                                                                   |
| IE OEL / OELV - 15 min (STEL) | : | Occupational exposure limit value (15-minute reference period)                                                                |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

|                                                           |   |                                                                                                                                                                                   |
|-----------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sources of key data used to compile the Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> |
|-----------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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### Classification of the mixture:

|               |        |
|---------------|--------|
| Skin Corr. 1B | H314   |
| Eye Dam. 1    | H318   |
| Repr. 1B      | H360FD |

### Classification procedure:

|                    |
|--------------------|
| Calculation method |
| Calculation method |
| Calculation method |

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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.

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