

# Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Last Revision Date 17-Jan-2022

Version: 1

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

### 1.1. Product identifier

|                                 |                                  |
|---------------------------------|----------------------------------|
| Product Name                    | Osmocote Exact High K 12-7-19+TE |
| Product Code                    | 8848-225HA                       |
| Unique Formula Identifier (UFI) | 0NGS-V0HF-Q00F-H1KT              |
| Pure substance/mixture          | Mixture                          |

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

|                      |  |
|----------------------|--|
| Recommended Use      | Fertilizer (PC12). Restricted to professional users. |
| Uses Advised Against | Consumer use (SU21)                                  |

Reason why uses advised against Use advised against in Chemical Safety Assessment per REACH Annex I point 7 2.3

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

Everris International B.V. Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190

For further information, please contact: INFO-MSDS@EVERRIS.COM  
Non-Emergency Telephone Number +31 (0) 418655700

### 1.4. Emergency telephone number

IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24/7)

|                |                                |
|----------------|--------------------------------|
| Europe         | 112                            |
| Austria        | +43 1 406 43 43                |
| Belgium        | 070 245 245                    |
| Denmark        | +45 8212 1212                  |
| Finland        | 0800 147 111                   |
| France         | + 33 (0)1 45 42 59             |
| Ireland        | 01 809 2566                    |
| Netherlands    | +31 88 75 585 61               |
| Norway         | +45 735 80500                  |
| Poland         | +48 42 2538 400                |
| Portugal       | +351 800 250 250               |
| Spain          | +34 91 562 04 20               |
| Sweden         | 112                            |
| Switzerland    | Tox Info Switzerland 145 (24h) |
| United Kingdom | 111                            |

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|                                   |                     |
|-----------------------------------|---------------------|
| Serious eye damage/eye irritation | Category 1 - (H318) |
| Chronic aquatic toxicity          | Category 3 - (H412) |

### 2.2. Label elements



Contains Potassium sulphate;  $K_2SO_4$ , Manganese sulphate;  $MnSO_4$ , Calcium phosphate monobasic;  $Ca(H_2PO_4)_2$

**Signal word**

Danger

**Hazard statements**

H318 - Causes serious eye damage

H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name   | EC No     | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP]                                   | Specific concentration limit (SCL) | REACH registration number | M-Factor | M-Factor (long-term) |
|---|-----------|----------|---|------------------------------------|---------------------------|----------|----------------------|
| Ammonium nitrate;<br>$NH_4NO_3$<br>(6484-52-2)        | 229-347-8 | 25 - 40% | Eye Irrit. 2 (H319)<br>Ox. Sol. 3 (H272)  | Eye Irrit. 2 ::<br>C>=80%          | 01-2119490981-27          | -        | -                    |
| Potassium sulphate;<br>$K_2SO_4$<br>(7778-80-5)       | 231-915-5 | 10 - 25% | Eye Dam. 1 (H318)   | -                                  | 01-2119489441-34          | -        | -                    |
| Iron sulphate;<br>$FeSO_4 \cdot 7H_2O$<br>(7782-63-0) | 231-753-5 | 1 - 5%   | Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)                                | Skin Irrit. 2 ::<br>C>=25%         | 01-2119513203-57          | -        | -                    |
| Copper sulphate<br>anhydrous; $CuSO_4$<br>(7758-98-7) | 231-847-6 | 0.1 - 1% | Skin irrit. 2 (H319)<br>Eye irrit. 2 (H315)<br>Acute Tox. 4 (H302)<br>Aquatic Chronic 1<br>(H410) | -                                  | 01-2119520566-40          | 10       | 10                   |
| Manganese sulphate;<br>$MnSO_4$<br>(7785-87-7)        | 232-089-9 | 0.1 - 1% | STOT RE 2 (H373)<br>Eye Dam. 1 (H318)<br>Aquatic Chronic 2<br>(H411)                              | -                                  | 01-2119456624-35          | -        | -                    |
| Sodium tetraborate<br>pentahydrate<br>(12179-04-3)    | 601-808-1 | 0.1 - 1% | Eye Dam. 2 (H319)<br>Carc.1B (H360)   | -                                  | 01-2119490790-32          | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE<sub>mix</sub>) for classifying a mixture based on its components

| Chemical name                                      | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L |
|--|-----------------|-------------------|---|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>  | 2217            | 5000              | 88.8  |
| Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> | 6600            | No data available | No data available                           |
| Copper sulphate anhydrous; CuSO <sub>4</sub>       | 300             | 1000              | No data available                           |
| Manganese sulphate; MnSO <sub>4</sub>              | 782             | No data available | No data available                           |
| Sodium tetraborate pentahydrate                    | 2403            | No data available | No data available                           |

| Chemical name                   | CAS No     | SVHC candidates |
|---------------------------------|------------|-----------------|
| Sodium tetraborate pentahydrate | 12179-04-3 | X               |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General advice</b>                     | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.  |
| <b>Eye contact</b>                        | Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.   |
| <b>Ingestion</b>                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.  |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).  |

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

|                 |                    |
|-----------------|--------------------|
| <b>Symptoms</b> | Burning sensation. |
|-----------------|--------------------|

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

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                      |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.                                       |

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

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

In case of fire, the product will smoulder even without the presence of external oxygen. In these conditions the product will show self sustaining decomposition. The best method to extinguish the fire is to cool the decomposition front with water Thermal decomposition can lead to release of irritating and toxic gases and vapors

**Hazardous Combustion Products** Carbon oxides. Phosphorus oxides. Ammonia. Nitrogen oxides (NOx).

### 5.3. Advice for firefighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

## **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8. Prevent entry into waterways, sewers, basements or confined areas.

### 6.2. Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal. Use up product completely. Packaging material is industrial waste.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Packaging materials** Keep in original container, tightly closed in a safe place.

### 7.3. Specific end use(s)

**Specific use(s)** Fertilizer.

**Exposure scenario** Mixture. Not required.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**Other Information**

LGK (Germany) TRGS 510

5.1C

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure Limits**

| Chemical name  | European Union  | Austria   | Belgium  | Bulgaria  | Croatia   |
|--|---|---|--|---|---|
| Potassium sulphate;<br>K <sub>2</sub> SO <sub>4</sub>  | -   | -   | -  | TWA: 10.0 mg/m <sup>3</sup>                               | -   |
| Iron sulphate;<br>FeSO <sub>4</sub> +7H <sub>2</sub> O | -   | -   | TWA: 1 mg/m <sup>3</sup>   | TWA: 1.0 mg/m <sup>3</sup>                                | TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>     |
| Copper sulphate<br>anhydrous; CuSO <sub>4</sub>        | -   | STEL 4 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>      | -  | TWA: 1.0 mg/m <sup>3</sup>                                | -   |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | -   | TWA: 0.2 mg/m <sup>3</sup><br>STEL 1.6 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup>   | TWA: 0.05 mg/m <sup>3</sup>                               | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> |
| Sodium tetraborate<br>pentahydrate                     | -   | -   | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>  | TWA: 5.0 mg/m <sup>3</sup>                                | TWA: 1 mg/m <sup>3</sup>                                  |
| Chemical name  | Cyprus  | Czech Republic  | Denmark  | Estonia   | Finland   |
| Ammonium nitrate;<br>NH <sub>4</sub> NO <sub>3</sub>   | -   | TWA: 10.0 mg/m <sup>3</sup>                               | -  | -   | -   |
| Iron sulphate;<br>FeSO <sub>4</sub> +7H <sub>2</sub> O | -   | -   | TWA: 1 mg/m <sup>3</sup>   | -   | TWA: 1 mg/m <sup>3</sup>                                  |
| Copper sulphate<br>anhydrous; CuSO <sub>4</sub>        | -   | -   | -  | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>    | TWA: 0.02 mg/m <sup>3</sup>                               |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>Ceiling: 2 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup>   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.02 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup> |
| Sodium tetraborate<br>pentahydrate                     | -   | -   | TWA: 1 mg/m <sup>3</sup>   | -   | -   |
| Chemical name  | France  | Germany   | Germany MAK  | Greece  | Hungary   |
| Iron sulphate;<br>FeSO <sub>4</sub> +7H <sub>2</sub> O | -   | -   | -  | TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>     | -   |
| Copper sulphate<br>anhydrous; CuSO <sub>4</sub>        | -   | -   | TWA: 0.01 mg/m <sup>3</sup><br>Peak: 0.02 mg/m <sup>3</sup>  | -   | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup> |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | -   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.02 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.02 mg/m <sup>3</sup><br>Peak: 1.6 mg/m <sup>3</sup><br>Peak: 0.16 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> |
| Sodium tetraborate<br>pentahydrate                     | TWA: 1 mg/m <sup>3</sup>                                  | -   | TWA: 5 mg/m <sup>3</sup><br>Peak: 5 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>                                 | -   |
| Chemical name  | Italy   | Latvia  | Lithuania  | Luxembourg  | Netherlands   |
| Potassium sulphate;<br>K <sub>2</sub> SO <sub>4</sub>  | -   | TWA: 10 mg/m <sup>3</sup>                                 | TWA: 10 mg/m <sup>3</sup>  | -   | -   |
| Copper sulphate<br>anhydrous; CuSO <sub>4</sub>        | -   | TWA: 0.5 mg/m <sup>3</sup>                                | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>   | -   | TWA: 0.1 mg/m <sup>3</sup>                                |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | TWA: 0.05 mg/m <sup>3</sup>                               | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup>  | -   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> |
| Chemical name  | Norway  | Poland  | Portugal   | Romania   | Slovakia  |
| Iron sulphate;<br>FeSO <sub>4</sub> +7H <sub>2</sub> O | TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup>     | -   | TWA: 1 mg/m <sup>3</sup>   | -   | -   |
| Copper sulphate<br>anhydrous; CuSO <sub>4</sub>        | -   | TWA: 0.2 mg/m <sup>3</sup>                                | -  | -   | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 ppm                  |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.1 ppm               | TWA: 0.05 mg/m <sup>3</sup>                               | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup>                                |

|  |  |   |   |   |   |
|--|--|---|---|---|---|
| Sodium tetraborate pentahydrate                        | -  | -   | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>     | -   | -   |
| Chemical name  | Slovenia   | Spain   | Sweden  | Switzerland   | United Kingdom  |
| Iron sulphate;<br>FeSO <sub>4</sub> +7H <sub>2</sub> O | -  | TWA: 1 mg/m <sup>3</sup>                                  | -   | TWA: 1 mg/m <sup>3</sup>                                  | TWA: 1 mg/m <sup>3</sup>                                  |
| Copper sulphate anhydrous; CuSO <sub>4</sub>           | -  | TWA: 0.1 mg/m <sup>3</sup>                                | NGV: 0.01 mg/m <sup>3</sup>                               | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup> | -   |
| Manganese sulphate;<br>MnSO <sub>4</sub>               | TWA: 0.05 mg/m <sup>3</sup><br>STEL: 0.4 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> | NGV: 0.2 mg/m <sup>3</sup><br>NGV: 0.05 mg/m <sup>3</sup> | TWA: 0.5 mg/m <sup>3</sup>                                | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup> |
| Sodium tetraborate pentahydrate                        | -  | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>     | -   | -   | TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup>     |

#### Biological occupational exposure limits

|  |                |   |          |  |                |
|--|----------------|---|----------|--|----------------|
| Chemical name                            | European Union | Austria   | Bulgaria | Croatia  | Czech Republic |
| Manganese sulphate;<br>MnSO <sub>4</sub> | -              | 20 µg/L (blood - whole blood not provided)<br>( - ) | -        | -  | -              |
| Chemical name                            | Denmark        | Finland   | France   | Germany  | Germany        |
| Manganese sulphate;<br>MnSO <sub>4</sub> | -              | -   | -        | 15 µg/L - BAR (end of exposure or end of shift) blood<br>15 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) blood | -              |

**Derived No Effect Level (DNEL)** No information available.  
**Predicted No Effect Concentration (PNEC)** No information available.

#### 8.2. Exposure controls

|  |  |
|--|--|
| <b>Personal protective equipment</b>   | Wear normal, light working clothing  |
| <b>Eye/face protection</b>             | Tight sealing safety goggles.  |
| <b>Hand protection</b>                 | Wear suitable gloves.  |
| <b>Skin and body protection</b>        | Wear suitable protective clothing.   |
| <b>Respiratory protection</b>          | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b>  | Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.                             |
| <b>Environmental exposure controls</b> | Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.  |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

**Physical state** Solid  
**Appearance:** Granules

**Color:** Various  
**Odor:** Fertilizer.

| <u>Property</u>                      | <u>Values</u>     | <u>Remarks • Method</u> |
|--------------------------------------|-------------------|-------------------------|
| <b>Melting Point/Freezing Point:</b> | No data available | None known              |
| <b>Boiling Point/Range:</b>          | No data available | None known              |
| <b>Flammability (solid, gas):</b>    | No data available | None known              |
| <b>Flammability Limits in Air:</b>   |                   | None known              |
| <b>Upper Flammability Limit:</b>     | No data available |                         |
| <b>Lower Flammability Limit:</b>     | No data available |                         |
| <b>Flash Point:</b>                  | No data available | None known              |
| <b>Autoignition Temperature:</b>     | No data available | None known              |
| <b>Decomposition Temperature:</b>    |                   | None known              |
| <b>pH</b>                            | No data available | None known              |
| <b>pH (as aqueous solution)</b>      | No data available | None known              |
| <b>Kinematic Viscosity:</b>          | No data available | None known              |
| <b>Dynamic Viscosity:</b>            | No data available | None known              |
| <b>Water solubility</b>              | No data available | None known              |
| <b>Solubility(ies)</b>               | No data available | None known              |
| <b>Partition Coefficient:</b>        | No data available | None known              |
| <b>Vapor Pressure:</b>               | No data available | None known              |
| <b>Relative density</b>              | No data available | None known              |
| <b>Bulk density</b>                  | No data available |                         |
| <b>Density:</b>                      | No data available |                         |
| <b>Vapour density</b>                | No data available | None known              |
| <b>Particle characteristics</b>      |                   |                         |
| <b>Particle Size</b>                 | No data available |                         |
| <b>Particle Size Distribution</b>    | No data available |                         |

## 9.2. Other information

9.2.1. Information with regard to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

**Reactivity** Not reactive.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

#### **Specific methods:**

Sensitivity to mechanical impact Not sensitive.  
Sensitivity to static discharge Not sensitive.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Hazardous Decomposition Products None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Causes serious eye damage.

**Skin contact** Specific test data for the substance or mixture is not available. May cause irritation.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. Burning. May cause blindness.

**Numerical measures of toxicity**

**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document  
ATEmix (oral) 34,722.20 mg/kg

0 % of the mixture consists of ingredient(s) of unknown toxicity

**Component Information**

| Chemical name                                       | Oral LD50            | Dermal LD50             | Inhalation LC50         |
|---|----------------------|-------------------------|-------------------------|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>   | = 2217 mg/kg ( Rat ) | > 5000 mg/kg            | > 88.8 mg/L ( Rat ) 4 h |
| Potassium sulphate; K <sub>2</sub> SO <sub>4</sub>  | = 6600 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )    | -                       |
| Iron sulphate; FeSO <sub>4</sub> ·7H <sub>2</sub> O | = 1520 mg/kg         | -                       | -                       |
| Copper sulphate anhydrous; CuSO <sub>4</sub>        | = 300 mg/kg ( Rat )  | = 1000 mg/kg ( Rabbit ) | -                       |
| Manganese sulphate; MnSO <sub>4</sub>               | = 2125 mg/kg ( Rat ) | -                       | > 4.98 mg/L (Rat) 4h    |
| Sodium tetraborate pentahydrate                     | = 2403 mg/kg ( Rat ) | -                       | -                       |

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:**

**Skin corrosion/irritation** May cause skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Respiratory or skin sensitization** Based on available data, the classification criteria are not met.



**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

| Chemical name                                 | European Union |
|---|----------------|
| Sodium tetraborate pentahydrate<br>12179-04-3 | Repr. 1B       |

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**Endocrine disrupting properties**

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

#### Unknown aquatic toxicity

Contains 7 % of components with unknown hazards to the aquatic environment.

| Chemical name                                      | Algae/aquatic plants                           | Fish  | Toxicity to microorganisms | Crustacea                           |
|--|--|---|----------------------------|-------------------------------------|
| Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> | EC50: =2900mg/L (72h, Desmodesmus subspicatus) | LC50: 510 - 880mg/L (96h, Pimephales promelas)<br>LC50: =3550mg/L (96h, Lepomis macrochirus)<br>LC50: =653mg/L (96h, Lepomis macrochirus) | -                          | EC50: =890mg/L (48h, Daphnia magna) |
| Copper sulphate anhydrous; CuSO <sub>4</sub>       | -  | LC50: =0.1mg/L (96h, Oncorhynchus mykiss)   | -                          | 0.024: 48 h Daphnia magna mg/L EC50 |

### 12.2. Persistence and degradability

**Persistence and Degradability:** No information available.

### 12.3. Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

#### Component Information

| Chemical name                                     | Partition coefficient |
|---|-----------------------|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> | -3.1                  |

### 12.4. Mobility in soil

**Mobility in soil** no data available.

**Mobility** no data available.

### 12.5. Results of PBT and vPvB assessment

#### PBT and vPvB assessment

| Chemical name                                     | PBT and vPvB assessment   |
|---|---|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> | The substance is not PBT / vPvB PBT assessment does not apply Further |

|  |   |
|--|---|
|  | information relevant for the PBT assessment is necessary      |
| Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> | The substance is not PBT / vPvB PBT assessment does not apply |
| Copper sulphate anhydrous; CuSO <sub>4</sub>       | The substance is not PBT / vPvB PBT assessment does not apply |
| Manganese sulphate; MnSO <sub>4</sub>              | The substance is not PBT / vPvB PBT assessment does not apply |

**12.6. Endocrine disrupting properties**

**12.7. Other adverse effects**

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

|  |   |
|--|---|
| <b>Waste from residues/unused products</b> | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.                                 |
| <b>Contaminated packaging</b>              | Do not reuse empty containers.  |
| <b>Other Information</b>                   | Use up product completely. Packaging material is industrial waste. If material is uncontaminated, collect and reuse as recommended for product. |

**SECTION 14: Transport information**

**IMDG**

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| <b>14.1</b>                       |                                   |
| <b>UN-No:</b>                     | 2071                              |
| <b>14.2</b>                       |                                   |
| <b>Proper shipping name:</b>      | AMMONIUM NITRATE BASED FERTILIZER |
| <b>14.3</b>                       |                                   |
| <b>Transport hazard class(es)</b> | 9                                 |
| <b>14.4</b>                       |                                   |
| <b>Packing group:</b>             | III                               |
| <b>14.5</b>                       |                                   |
| <b>Marine Pollutant:</b>          | Not regulated                     |

| Chemical name                                | IMDG - Marine Pollutants  |
|--|---|
| Copper sulphate anhydrous; CuSO <sub>4</sub> | IMDG regulated marine pollutant (Listed in the index, listed under Copper sulphate, anhydrous, hydrates and solution) |

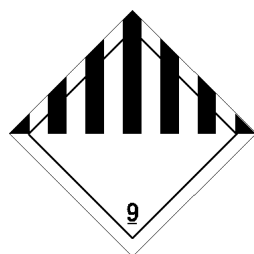
|   |                   |
|---|-------------------|
| <b>14.6</b>   |                   |
| <b>EmS:</b>   | F-H / S-Q         |
| <b>Special Provisions</b>                                       | 186, 193          |
| <b>14.7</b>   |                   |
| <b>Bulk transport according Annex II of MARPOL and IBC Code</b> | No data available |

**ADR**

|                                   |               |
|-----------------------------------|---------------|
| <b>14.1</b>                       |               |
| <b>UN-No:</b>                     | Not regulated |
| <b>14.2</b>                       |               |
| <b>Proper shipping name:</b>      | Not regulated |
| <b>14.3</b>                       |               |
| <b>Transport hazard class(es)</b> | Not regulated |
| <b>14.4</b>                       |               |
| <b>Packing group:</b>             | Not regulated |
| <b>14.5</b>                       |               |
| <b>Environmental hazards</b>      | Not regulated |
| <b>14.6</b>                       |               |
| <b>Special Provisions</b>         | None          |

**IATA**

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| <b>14.1</b>                       |                                   |
| <b>UN number or ID number</b>     | 2071                              |
| <b>14.2</b>                       |                                   |
| <b>Proper shipping name:</b>      | AMMONIUM NITRATE BASED FERTILIZER |
| <b>14.3</b>                       |                                   |
| <b>Transport hazard class(es)</b> | 9                                 |
| <b>14.4</b>                       |                                   |
| <b>Packing group</b>              | III                               |
| <b>14.5</b>                       |                                   |
| <b>Environmental hazards</b>      | Not regulated                     |
| <b>14.6</b>                       |                                   |
| <b>Special Provisions</b>         | A89, A90                          |



**SECTION 15: Regulatory information**

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

**National regulations**

**Denmark**

Sikkerhedsgruppe DK

B

**France**

ICPE

Classified installation: article 4702

**Germany**

LGK (Germany) TRGS 510

5.1C

Gefahrstoffverordnung (Germany) TRGS 511

B II

Water hazard class (WGK)

slightly hazardous to water (WGK 1)

| Chemical name                                       | German WGK Section  |
|---|---|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>   | 1   |
| Potassium sulphate; K <sub>2</sub> SO <sub>4</sub>  | 1   |
| Iron sulphate; FeSO <sub>4</sub> +7H <sub>2</sub> O | 3   |
| Copper sulphate anhydrous; CuSO <sub>4</sub>        | 2   |
| Manganese sulphate; MnSO <sub>4</sub>               | 2   |
| Sodium tetraborate pentahydrate                     | Reg. no. 37, hazard class 1 - slightly hazardous to water |

**Netherlands**

| Chemical name                         | Netherlands - List of Carcinogens | Netherlands - List of Mutagens | Netherlands - List of Reproductive Toxins        |
|---------------------------------------|-----------------------------------|--------------------------------|--|
| Manganese sulphate; MnSO <sub>4</sub> | -                                 | -                              | Fertility Category 2<br>Development Category 2   |
| Sodium tetraborate pentahydrate       | -                                 | -                              | Fertility Category 1B<br>Development Category 1B |

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Take note of Directive 94/33/EC on the protection of young people at work**

Not to be used by professional users below 18 years of age, see the National Working Environment Authorities Executive Order on young peoples dangerous work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name                                     | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|---|---|--|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> | 58.                                       | -  |
| Sodium tetraborate pentahydrate                   | 30.                                       | -  |

**REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors**

| Chemical name                                     | REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors |
|---|---|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> | Present (16% by weight of N in relation to AN or higher)                    |

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**Persistent Organic Pollutants** Not applicable

**Named dangerous substances per Seveso Directive (2012/18/EU)**

| Chemical name                                     | Lower-tier requirements (tons) | Upper-tier requirements (tons) |
|---|--------------------------------|--------------------------------|
| Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> | 350                            | 2500                           |

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**EU - Plant Protection Products (1107/2009/EC)**

| Chemical name                                       | EU - Plant Protection Products (1107/2009/EC) |
|---|---|
| Iron sulphate; FeSO <sub>4</sub> ·7H <sub>2</sub> O | Plant protection agent                        |

**Biocidal Products Regulation (EU) No 528/2012 (BPR)**

**International Inventories:**

**Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** Substance(s) usage is covered according to Reach regulation 1907/2006

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**

- H272 - May intensify fire; oxidizer
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H318 - Causes serious eye damage
- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H360 - May damage fertility or the unborn child
- 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

**Legend**

- SVHC: Substances of Very High Concern for Authorization:
- PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

**Classification procedure**

- Calculation method
- Expert judgment and weight of evidence determination

| Classification procedure   |                    |
|--|--------------------|
| <i>Classification according to Regulation (EC) No. 1272/2008 [CLP]</i> | <i>Method Used</i> |
| Acute oral toxicity  | Calculation method |
| Acute dermal toxicity  | Calculation method |
| Acute inhalation toxicity - gas  | Calculation method |
| Acute inhalation toxicity - vapor                                      | Calculation method |
| Acute inhalation toxicity - dust/mist                                  | Calculation method |
| Skin corrosion/irritation  | Calculation method |
| Serious eye damage/eye irritation                                      | Calculation method |
| Respiratory sensitization  | Calculation method |
| Skin sensitization   | Calculation method |
| Mutagenicity   | Calculation method |
| Carcinogenicity  | Calculation method |
| Reproductive toxicity  | Calculation method |
| STOT - single exposure   | Calculation method |
| STOT - repeated exposure   | Calculation method |
| Acute aquatic toxicity   | Calculation method |
| Chronic aquatic toxicity   | Calculation method |
| Aspiration hazard  | Calculation method |
| Ozone  | Calculation method |

**Key literature references and sources for data used to compile the SDS**

- Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGl(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

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U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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**Last Revision Date** 17-Jan-2022

**Restrictions on use** Restricted to professional users

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

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**End of Safety Data Sheet**