

## Oxygen granules

Version number: GHS 9.0 (2023-03-20)

Replaces version: GHS 8 (2023-02-03)

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

#### 1.1 Product identifier

Trade name **Oxygen granules**  
 SDS-Ref 07560

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

Relevant identified uses Water treatment chemical  
 Professional use  
 Consumer use (private households)

Uses advised against Do not use for squirting or spraying  
 Do not use for products which come into direct contact with the skin

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

Steinbach International GmbH  
 L. Steinbach Platz 1  
 4311 Schwertberg  
 Austria  
 Telephone: +43 7262 61431 1000  
 e-Mail: info@steinbach-group.com  
 e-Mail (competent person): sdb@steinbach-group.com

#### 1.4 Emergency telephone number

| Country        | Name                                 | Postal code/city | Telephone            | Opening hours |
|----------------|--------------------------------------|------------------|----------------------|---------------|
| Austria        | Vergiftungsinformationszentrale      | 1090 Wien        | +43 1 406 4343 (24h) |               |
| United Kingdom | National Poisons Information Service |                  | 111 (24h)            |               |

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class  | Category | Hazard class and category | Hazard statement |
|---------|---|----------|---------------------------|------------------|
| 3.1O    | acute toxicity (oral)                                 | 4        | Acute Tox. 4              | H302             |
| 3.2     | skin corrosion/irritation                             | 1B       | Skin Corr. 1B             | H314             |
| 3.3     | serious eye damage/eye irritation                     | 1        | Eye Dam. 1                | H318             |
| 4.1C    | hazardous to the aquatic environment - chronic hazard | 3        | Aquatic Chronic 3         | H412             |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

#### 2.2 Label elements

Labelling

- Signal word Danger
- Pictograms  
GHS05, GHS07



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- Hazard statements
  - H302 Harmful if swallowed.
  - H314 Causes severe skin burns and eye damage.
  - H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P280 Wear protective gloves/eye protection/face protection.
  - P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
  - 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/doctor.
  - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  - P501 Dispose of contents/container to hazardous or special waste collection point.
- Supplemental hazard information
  - EUH208 Contains Dipotassium peroxodisulfate. May produce an allergic reaction.
- Hazardous ingredients for labelling
  - Pentapotassium bis(peroxymonosulphate) bis(sulphate)

### 2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .



## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture).

### 3.2 Mixtures

Description of the mixture

| Name of substance                                     | Identifier  | Classification acc. to GHS   | Pictograms  | Wt%       |
|---|---|--|---|-----------|
| Pentapotassium bis(peroxy-monosulphate) bis(sulphate) | CAS No<br>70693-62-8<br><br>EC No<br>274-778-7                                | Acute Tox. 4 / H302<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412   |  | $\geq 90$ |
| Dipotassium peroxodisulfate                           | CAS No<br>7727-21-1<br><br>EC No<br>231-781-8<br><br>Index No<br>016-061-00-1 | Ox. Sol. 3 / H272<br>Acute Tox. 4 / H302<br>Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319<br>Resp. Sens. 1 / H334<br>Skin Sens. 1 / H317<br>STOT SE 3 / H335 |  | $< 2.5$   |

| Name of substance                                    | Specific Conc. Limits | M-Factors | ATE       | Exposure route |
|--|-----------------------|-----------|-----------|----------------|
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | -                     | -         | 500 mg/kg | oral           |
| Dipotassium peroxodisulfate                          | -                     | -         | 742 mg/kg | oral           |

For full text of abbreviations: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Take off immediately all contaminated clothing. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Self-protection of the first aid-er.

#### Following inhalation

Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Let be drunken in little sips: 0, 1-0,2l Water. Do NOT induce vomiting. Call a physician immediately.

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

Symptoms and effects are not known to date.

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

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water, Foam, Alcohol resistant foam, ABC-powder

#### Unsuitable extinguishing media

Water jet

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

#### Hazardous combustion products

Sulphur oxides (SO<sub>x</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Remove persons to safety. Ventilate affected area.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10.

Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation  
Use only in well-ventilated areas. Use local and general ventilation.
- Specific notes/details  
Dust deposits may accumulate on all deposition surfaces in a technical room.
- Handling of incompatible substances or mixtures
- Keep away from  
Caustic solutions

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

Managing of associated risks

- Explosive atmospheres  
Removal of dust deposits.

Control of effects

- Protect against external exposure, such as  
High temperatures, Frost, Humidity, UV-radiation/sunlight
- Ventilation requirements  
Use local and general ventilation.

Packaging compatibilities

Professional use: Only packagings which are approved (e.g. acc. to ADR) may be used. Consumer use (private households): Keep only in original container.

Conditions of storage

Keep container tightly closed in a cool place. Protect from sunlight. Keep away from children.

### 7.3 Specific end use(s)

There is no additional information.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) |               |        |            |           |                          |            |                           |                 |                                |          |             |
|--|---------------|--------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|-------------|
| Country  | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source      |
| GB   | dust          |        | WEL        |           | 10                       |            |                           |                 |                                | i        | EH40 / 2005 |
| GB   | dust          |        | WEL        |           | 4                        |            |                           |                 |                                | r        | EH40 / 2005 |

#### Notation

|           |  |
|-----------|--|
| Ceiling-C | ceiling value is a limit value above which exposure should not occur   |
| i         | inhalable fraction   |
| r         | respirable fraction  |
| STEL      | short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)                   |
| TWA       | time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) |

#### Human health values

| Relevant DNELs and other threshold levels |                        |                                    |                               |                            |
|---|------------------------|------------------------------------|-------------------------------|----------------------------|
| Endpoint                                  | Threshold level        | Protection goal, route of exposure | Used in                       | Exposure time              |
| DNEL                                      | 0.28 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry)             | chronic - systemic effects |
| DNEL                                      | 50 mg/m <sup>3</sup>   | human, inhalatory                  | worker (industry)             | acute - systemic effects   |
| DNEL                                      | 0.28 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry)             | chronic - local effects    |
| DNEL                                      | 50 mg/m <sup>3</sup>   | human, inhalatory                  | worker (industry)             | acute - local effects      |
| DNEL                                      | 20 mg/kg bw/day        | human, dermal                      | worker (industry)             | chronic - systemic effects |
| DNEL                                      | 80 mg/kg bw/day        | human, dermal                      | worker (industry)             | acute - systemic effects   |
| DNEL                                      | 0.14 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - systemic effects |
| DNEL                                      | 25 mg/m <sup>3</sup>   | human, inhalatory                  | consumer (private households) | acute - systemic effects   |
| DNEL                                      | 0.14 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - local effects    |
| DNEL                                      | 25 mg/m <sup>3</sup>   | human, inhalatory                  | consumer (private households) | acute - local effects      |
| DNEL                                      | 10 mg/kg bw/day        | human, dermal                      | consumer (private households) | chronic - systemic effects |
| DNEL                                      | 40 mg/kg bw/day        | human, dermal                      | consumer (private households) | acute - systemic effects   |
| DNEL                                      | 10 mg/kg bw/day        | human, oral                        | consumer (private households) | chronic - systemic effects |
| DNEL                                      | 10 mg/kg bw/day        | human, oral                        | consumer (private households) | acute - systemic effects   |

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| Relevant DNELs of components of the mixture          |            |           |                        |                                    |                               |                            |
|--|------------|-----------|------------------------|------------------------------------|-------------------------------|----------------------------|
| Name of substance                                    | CAS No     | End-point | Threshold level        | Protection goal, route of exposure | Used in                       | Exposure time              |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 0.14 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - systemic effects |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 25 mg/m <sup>3</sup>   | human, inhalatory                  | consumer (private households) | acute - systemic effects   |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 0.14 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - local effects    |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 25 mg/m <sup>3</sup>   | human, inhalatory                  | consumer (private households) | acute - local effects      |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 10 mg/kg bw/day        | human, dermal                      | consumer (private households) | chronic - systemic effects |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 40 mg/kg bw/day        | human, dermal                      | consumer (private households) | acute - systemic effects   |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 10 mg/kg bw/day        | human, oral                        | consumer (private households) | chronic - systemic effects |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | DNEL      | 10 mg/kg bw/day        | human, oral                        | consumer (private households) | acute - systemic effects   |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 1.03 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - systemic effects |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 295 mg/m <sup>3</sup>  | human, inhalatory                  | consumer (private households) | acute - systemic effects   |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 1.03 mg/m <sup>3</sup> | human, inhalatory                  | consumer (private households) | chronic - local effects    |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 295 mg/m <sup>3</sup>  | human, inhalatory                  | consumer (private households) | acute - local effects      |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 9.1 mg/kg bw/day       | human, dermal                      | consumer (private households) | chronic - systemic effects |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 200 mg/kg bw/day       | human, dermal                      | consumer (private households) | acute - systemic effects   |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 9.1 mg/kg bw/day       | human, oral                        | consumer (private households) | chronic - systemic effects |
| Dipotassium peroxodisulfate                          | 7727-21-1  | DNEL      | 30 mg/kg bw/day        | human, oral                        | consumer (private households) | acute - systemic effects   |

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### Environmental values

#### Relevant PNECs and other threshold levels

| Endpoint | Threshold level | Organism              | Environmental compartment    | Exposure time                |
|----------|-----------------|-----------------------|------------------------------|------------------------------|
| PNEC     | 0.022 mg/l      | aquatic organisms     | freshwater                   | short-term (single instance) |
| PNEC     | 0.002 mg/l      | aquatic organisms     | marine water                 | short-term (single instance) |
| PNEC     | 108 mg/l        | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| PNEC     | 0.078 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| PNEC     | 0.008 mg/kg     | aquatic organisms     | marine sediment              | short-term (single instance) |
| PNEC     | 1 mg/kg         | terrestrial organisms | soil                         | short-term (single instance) |

#### Relevant PNECs of components of the mixture

| Name of substance                                    | CAS No     | End-point | Threshold level | Organism              | Environmental compartment    | Exposure time                |
|--|------------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 0.022 mg/l      | aquatic organisms     | freshwater                   | short-term (single instance) |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 0.002 mg/l      | aquatic organisms     | marine water                 | short-term (single instance) |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 108 mg/l        | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 0.078 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 0.008 mg/kg     | aquatic organisms     | marine sediment              | short-term (single instance) |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | PNEC      | 1 mg/kg         | terrestrial organisms | soil                         | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 0.076 mg/l      | aquatic organisms     | freshwater                   | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 0.011 mg/l      | aquatic organisms     | marine water                 | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 3.6 mg/l        | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 0.275 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 0.04 mg/kg      | aquatic organisms     | marine sediment              | short-term (single instance) |
| Dipotassium peroxodisulfate                          | 7727-21-1  | PNEC      | 0.015 mg/kg     | terrestrial organisms | soil                         | short-term (single instance) |

### 8.2 Exposure controls (professional use)

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

- Eye/face protection

Use safety goggles with side protection (EN 166).

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Type of material

PVC: polyvinyl chloride, NR: natural rubber, latex

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection

Particulate filter device (EN 143).

In case of inadequate ventilation wear respiratory protection: Full face mask (DIN EN 136).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | solid   |
| Colour   | white   |
| Odour  | characteristic                                    |
| Melting point/freezing point                             | not determined                                    |
| Boiling point or initial boiling point and boiling range | not determined                                    |
| Flammability   | non-combustible                                   |
| Lower and upper explosion limit                          | not determined                                    |
| Flash point  | not applicable                                    |
| Auto-ignition temperature                                | not determined                                    |
| Decomposition temperature                                | 90 °C   |
| pH (value)   | 1.5 – 2.5 (in aqueous solution: 1 % (w/w), 20 °C) |
| Kinematic viscosity                                      | not relevant                                      |
| Particle characteristics                                 | no data available                                 |
| Oxidising properties                                     | none  |
| Vapour pressure  |   |
| Vapour pressure  | <0 Pa at 25 °C                                    |



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### Density and/or relative density

|                         |   |
|-------------------------|---|
| Density                 | 2.34 g/cm <sup>3</sup> at 20 °C               |
| Relative vapour density | information on this property is not available |
| Bulk density            | 1,100 – 1,400 kg/m <sup>3</sup>               |

### Other safety parameters

#### Solubility(ies)

|                  |                   |
|------------------|-------------------|
| Water solubility | ≤370 g/l at 20 °C |
|------------------|-------------------|

#### Partition coefficient

|                                     |                            |
|-------------------------------------|----------------------------|
| n-Octanol/water (log KOW)           | <0.3 (pH value: ~1, 20 °C) |
| Soil organic carbon/water (log KOC) | <1.256                     |

## 9.2 Other information

Information with regard to physical hazard classes

hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics

Surface tension

72.9 mN/m (23 °C)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

##### Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4: May be harmful in contact with skin.

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### Acute toxicity estimate (ATE)

Oral 500 mg/kg

| Name of substance                                    | CAS No     | Exposure route        | End-point | Value         | Species |
|--|------------|-----------------------|-----------|---------------|---------|
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | oral                  | LD50      | 500 mg/kg     | rat     |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) | 70693-62-8 | dermal                | LD50      | >2,000 mg/kg  | rat     |
| Dipotassium peroxodisulfate                          | 7727-21-1  | oral                  | LD50      | 742 mg/kg     | rat     |
| Dipotassium peroxodisulfate                          | 7727-21-1  | dermal                | LD50      | >2,000 mg/kg  | rat     |
| Dipotassium peroxodisulfate                          | 7727-21-1  | inhalation: dust/mist | LC50      | >10.7 mg/l/4h | rat     |

### Skin corrosion/irritation

Causes severe skin burns and eye damage.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

Contains Dipotassium peroxodisulfate. May produce an allergic reaction.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

#### Aquatic toxicity (chronic) of components of the mixture

| Name of substance           | CAS No    | Endpoint | Value   | Species               | Exposure time |
|-----------------------------|-----------|----------|---------|-----------------------|---------------|
| Dipotassium peroxodisulfate | 7727-21-1 | EC50     | 11 mg/l | aquatic invertebrates | 5 d           |

### 12.2 Persistence and degradability

Data are not available.

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### 12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components of the mixture |            |     |                            |          |
|--|------------|-----|----------------------------|----------|
| Name of substance                                      | CAS No     | BCF | Log KOW                    | BOD5/COD |
| Pentapotassium bis(peroxymonosulphate) bis(sulphate)   | 70693-62-8 |     | <0.3 (pH value: ~1, 20 °C) |          |

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Other disposal recommendations

Dispose of contents/container to hazardous or special waste collection point. Waste treatment of containers/packagings: Mixed municipal waste.

#### Relevant provisions relating to waste

List of wastes (EU), Decision 2000/532/EC on the list of waste

Product Code/ Type of waste: 19 09 99

#### Remarks


Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

### SECTION 14: Transport information

|  |  |
|--|--|
| <b>14.1 UN number or ID number</b>   | 3260   |
| ADR/RID/ADN  | UN 3260  |
| IMDG-Code  | UN 3260  |
| ICAO-TI  | UN 3260  |
| <b>14.2 UN proper shipping name</b>  | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.                                   |
| ADR/RID/ADN  | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.                                   |
| IMDG-Code  | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.                                   |
| ICAO-TI  | Corrosive solid, acidic, inorganic, n.o.s.                                   |
| Technical name (hazardous ingredients)                                       | Pentapotassium bis(peroxymonosulphate) bis(sulphate), Dipotassium disulphate |
| <b>14.3 Transport hazard class(es)</b>                                       |  |
| ADR/RID/ADN  | 8  |
| IMDG-Code  | 8  |
| ICAO-TI  | 8  |
| <b>14.4 Packing group</b>  | II (substance presenting medium danger)                                      |
| ADR/RID/ADN  | II   |
| IMDG-Code  | II   |
| ICAO-TI  | II   |
| <b>14.5 Environmental hazards</b>  | non-environmentally hazardous acc. to the dangerous goods regulations        |
| <b>14.6 Special precautions for user</b>                                     |  |
| Provisions for dangerous goods (ADR) should be complied within the premises. |  |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b>          |  |
| The cargo is not intended to be carried in bulk.                             |  |

### Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

|                               |   |
|-------------------------------|---|
| Classification code           | C2  |
| Danger label(s)               | 8   |
|                               |  |
| Special provisions (SP)       | 274   |
| Excepted quantities (EQ)      | E2  |
| Limited quantities (LQ)       | 1 kg  |
| Transport category (TC)       | 2   |
| Tunnel restriction code (TRC) | E   |
| Hazard identification No      | 80  |
| Emergency Action Code         | 2X  |

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) -

##### Additional information

|                          |   |
|--------------------------|---|
| Classification code      | C2  |
| Danger label(s)          | 8   |
|                          |  |
| Special provisions (SP)  | 274   |
| Excepted quantities (EQ) | E2  |

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|                          |      |
|--------------------------|------|
| Limited quantities (LQ)  | 1 kg |
| Transport category (TC)  | 2    |
| Hazard identification No | 80   |

### International Maritime Dangerous Goods Code (IMDG) - Additional information

|                  |   |
|------------------|---|
| Marine pollutant | - |
| Danger label(s)  | 8 |



|                          |           |
|--------------------------|-----------|
| Special provisions (SP)  | 274       |
| Excepted quantities (EQ) | E2        |
| Limited quantities (LQ)  | 1 kg      |
| EmS                      | F-A, S-B  |
| Stowage category         | B         |
| Segregation group        | 1 - Acids |

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|                 |   |
|-----------------|---|
| Danger label(s) | 8 |
|-----------------|---|



|                          |      |
|--------------------------|------|
| Special provisions (SP)  | A3   |
| Excepted quantities (EQ) | E2   |
| Limited quantities (LQ)  | 5 kg |

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| No | Dangerous substance/hazard categories |
|----|---------------------------------------|
|    | not assigned                          |

##### Deco-Paint Directive

|             |     |
|-------------|-----|
| VOC content | 0 % |
|-------------|-----|

##### Industrial Emissions Directive (IED)

|             |     |
|-------------|-----|
| VOC content | 0 % |
|-------------|-----|

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

##### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

##### Water Framework Directive (WFD)

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### List of pollutants (WFD)

| Name of substance                                    | CAS No | Listed in | Remarks |
|--|--------|-----------|---------|
| Pentapotassium bis(peroxymonosulphate) bis(sulphate) |        | a)        |         |
| Dipotassium peroxodisulfate                          |        | a)        |         |

#### Legend

A) Indicative list of the main pollutants

### Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

### National inventories

| Country | Inventory  | Status                     |
|---------|------------|----------------------------|
| EU      | REACH Reg. | all ingredients are listed |

#### Legend

REACH Reg. REACH registered substances

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value)   | Safety-relevant |
|---------|---------------------------|---|-----------------|
| 3.2     |                           | Description of the mixture:<br>change in the listing (table)                  | yes             |
| 8.1     |                           | Relevant PNECs of components of the mixture:<br>change in the listing (table) | yes             |
| 11.1    |                           | Acute toxicity estimate (ATE):<br>change in the listing (table)               | yes             |
| 15.1    |                           | List of pollutants (WFD):<br>change in the listing (table)                    | yes             |

### Abbreviations and acronyms

| Abbr.           | Descriptions of used abbreviations  |
|-----------------|---|
| Acute Tox.      | acute toxicity  |
| ADN             | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR             | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)   |
| ADR/RID/ADN     | Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)   |
| Aquatic Chronic | hazardous to the aquatic environment - chronic hazard   |
| ATE             | Acute Toxicity Estimate   |
| BCF             | bioconcentration factor   |
| BOD             | Biochemical Oxygen Demand   |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C       | ceiling value   |
| COD             | chemical oxygen demand  |
| DGR             | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL            | Derived No-Effect Level   |
| EC50            | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval                                      |
| EC No           | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)                                     |
| EH40/2005       | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )                                 |
| EINECS          | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS          | European List of Notified Chemical Substances   |
| EmS             | Emergency Schedule  |

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| Abbr.       | Descriptions of used abbreviations  |
|-------------|---|
| Eye Dam.    | seriously damaging to the eye   |
| Eye Irrit.  | irritant to the eye   |
| GHS         | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA        | International Air Transport Association   |
| IATA/DGR    | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO        | International Civil Aviation Organization   |
| ICAO-TI     | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG        | International Maritime Dangerous Goods Code   |
| IMDG-Code   | International Maritime Dangerous Goods Code   |
| index No    | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| LC50        | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                       |
| LD50        | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| log KOW     | n-octanol/water   |
| NLP         | No-Longer Polymer   |
| Ox. Sol.    | oxidising solid   |
| PBT         | Persistent, Bioaccumulative and Toxic   |
| PNEC        | Predicted No-Effect Concentration   |
| ppm         | parts per million   |
| REACH       | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| Resp. Sens. | respiratory sensitisation   |
| RID         | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr.  | corrosive to skin   |
| Skin Irrit. | irritant to skin  |
| Skin Sens.  | skin sensitisation  |
| STEL        | short-term exposure limit   |
| STOT SE     | specific target organ toxicity - single exposure  |
| TWA         | time-weighted average   |
| VOC         | Volatile Organic Compounds  |
| vPvB        | very Persistent and very Bioaccumulative  |
| WEL         | workplace exposure limit  |

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text   |
|------|--|
| H272 | May intensify fire; oxidiser.  |
| H302 | Harmful if swallowed.  |
| H314 | Causes severe skin burns and eye damage.                                   |
| H315 | Causes skin irritation.  |
| H317 | May cause an allergic skin reaction.                                       |
| H318 | Causes serious eye damage.   |
| H319 | Causes serious eye irritation.   |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation.  |
| H412 | Harmful to aquatic life with long lasting effects.                         |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.