



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Sodium thiosulfate pentahydrate for analysis, ACS**

Revision date: 16.03.2022

Product code: 06207

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**Hazardous components**

| CAS No     | Chemical name                                 |          |                       | Quantity |
|------------|---|----------|-----------------------|----------|
|            | EC No   | Index No | REACH No              |          |
|            | Classification (Regulation (EC) No 1272/2008) |          |                       |          |
| 10102-17-7 | Sodium thiosulfate pentahydrate               |          |                       | 100 %    |
|            | 231-867-5                                     |          | 01-2119531537-38-XXXX |          |

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

| CAS No     | EC No  | Chemical name                   | Quantity |
|------------|--|---------------------------------|----------|
|            | Specific Conc. Limits, M-factors and ATE               |                                 |          |
| 10102-17-7 | 231-867-5  | Sodium thiosulfate pentahydrate | 100 %    |
|            | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg |                                 |          |

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

No data available

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Call a doctor if you feel unwell.

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

No data available

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

No data available

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

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

Non-combustible solids

Hazardous combustion products

In case of fire may be liberated:

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Sulphur oxides

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Use water spray jet to protect personnel and to cool endangered containers.

**SECTION 6: Accidental release measures**

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

**For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

No special environmental measures are necessary.

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

**For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Handle and open container with care.  
Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.  
Avoid dust formation. Do not breathe dust.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Take off contaminated clothing.  
Wash hands before breaks and after work.  
When using do not eat or drink.

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**Further information on handling**

Take off contaminated clothing and wash it before reuse.  
Wash hands before breaks and after work.

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

**Requirements for storage rooms and vessels**

Keep container tightly closed and dry.

**Hints on joint storage**

No data available

**Further information on storage conditions**

storage temperature: +15°C - +25°C

**7.3. Specific end use(s)**

Laboratory chemicals

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

**8.1. Control parameters**

**DNEL/DMEL values**

| CAS No                   | Substance                       | Exposure route | Effect   | Value                 |
|--------------------------|---------------------------------|----------------|----------|-----------------------|
| 10102-17-7               | Sodium thiosulfate pentahydrate |                |          |                       |
| Worker DNEL, long-term   |                                 | inhalation     | systemic | 374 mg/m <sup>3</sup> |
| Consumer DNEL, long-term |                                 | inhalation     | systemic | 110 mg/m <sup>3</sup> |
| Consumer DNEL, long-term |                                 | oral           | systemic | 14 mg/kg bw/day       |

**PNEC values**

| CAS No   | Substance                       | Value      |
|--|---------------------------------|------------|
| 10102-17-7                                       | Sodium thiosulfate pentahydrate |            |
| Freshwater                                       |                                 | 0,8 mg/l   |
| Marine water                                     |                                 | 0,08 mg/l  |
| Micro-organisms in sewage treatment plants (STP) |                                 | 102,6 mg/l |

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear eye/face protection.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

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By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: dust formation  
Filtering device with filter or ventilator filtering device of type: P1

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

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

Physical state: solid  
Colour: colourless  
Odour: odourless  
Odour threshold: not determined

**Changes in the physical state**

Melting point/freezing point: 48 °C  
Boiling point or initial boiling point and boiling range: not determined  
Sublimation point: not determined  
Softening point: not determined  
Pour point: not determined  
not determined:  
Flash point: not applicable

**Flammability**

Solid/liquid: not determined  
Gas: not applicable

**Explosive properties**

not determined

Lower explosion limits: not determined  
Upper explosion limits: not determined  
Auto-ignition temperature: not applicable

**Self-ignition temperature**

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|  |                         |
|--|-------------------------|
| Solid:                                 | not determined          |
| Gas:                                   | not applicable          |
| Decomposition temperature:             | 100 °C                  |
| pH-Value (at 20 °C):                   | 6,0 - 7,5 (100 g/l)     |
| Viscosity / dynamic:                   | not determined          |
| Viscosity / kinematic:                 | not determined          |
| Flow time:                             | not determined          |
| Water solubility:<br>(at 20 °C)        | 701 g/L                 |
| <b>Solubility in other solvents</b>    |                         |
| not determined                         |                         |
| Dissolution rate:                      | not determined          |
| Partition coefficient n-octanol/water: | log Pow: -4,53          |
| Dispersion stability:                  | not determined          |
| Vapour pressure:                       | not determined          |
| Vapour pressure:                       | not determined          |
| Density (at 20 °C):                    | 1,74 g/cm <sup>3</sup>  |
| Relative density:                      | not determined          |
| Bulk density:                          | ~1000 kg/m <sup>3</sup> |
| Relative vapour density:               | not determined          |
| Particle characteristics:              | not determined          |

**9.2. Other information**

**Information with regard to physical hazard classes**

|  |                   |
|--|-------------------|
| Sustaining combustion:                 | No data available |
| Oxidizing properties<br>not determined |                   |

**Other safety characteristics**

|                          |                |
|--------------------------|----------------|
| Solvent separation test: | not determined |
| Solvent content:         | not determined |
| Solid content:           | 100%           |
| Evaporation rate:        | not determined |

**Further Information**

not determined

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Oxidising agent

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Oxidising agent, strong  
Fluorine  
Acid  
Nitrite, Nitrate  
Peroxides

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**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:  
Sulphur oxides

**Further information**

No data available

**SECTION 11: Toxicological information**

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

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

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

| CAS No     | Chemical name                   |                   |         |                     |                    |
|------------|---------------------------------|-------------------|---------|---------------------|--------------------|
|            | Exposure route                  | Dose              | Species | Source              | Method             |
| 10102-17-7 | Sodium thiosulfate pentahydrate |                   |         |                     |                    |
|            | oral                            | LD50 > 5000 mg/kg | Rat     | Study report (1996) | OECD Guideline 401 |
|            | dermal                          | LD50 > 2000 mg/kg | Rabbit  | Study report (1996) | OECD Guideline 402 |

**Irritation and corrosivity**

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**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.  
No data available

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available

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**Other information**

No data available

**Further information**

No data available

**SECTION 12: Ecological information**

**12.1. Toxicity**

No data available

| CAS No     | Chemical name                   |                    |           |   |                     |  |
|------------|---------------------------------|--------------------|-----------|---|---------------------|--|
|            | Aquatic toxicity                | Dose               | [h]   [d] | Species   | Source              | Method                                   |
| 10102-17-7 | Sodium thiosulfate pentahydrate |                    |           |   |                     |  |
|            | Acute algae toxicity            | ErC50 > 100 mg/l   | 72 h      | Pseudokirchneriella subcapitata                     | Study report (2010) | OECD Guideline 201                       |
|            | Acute crustacea toxicity        | EC50 230 mg/l      | 48 h      | Daphnia magna                                       | Study report (1986) | other: Bionomics protocol for static acu |
|            | Fish toxicity                   | NOEC >= 316 mg/l   | 34 d      | Danio rerio   | Study report (2010) | OECD Guideline 210                       |
|            | Crustacea toxicity              | NOEC > 10 mg/l     | 21 d      | Daphnia magna                                       | Study report (1993) | OECD Guideline 211                       |
|            | Acute bacteria toxicity         | (EC50 > 1000 mg/l) | 3 h       | activated sludge of a predominantly domestic sewage | Study report (2010) | OECD Guideline 209                       |

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

log Pow: -4,35

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

No data available

**12.7. Other adverse effects**

Do not empty into drains.

**Further information**

Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not mix with other wastes.

Do not empty into drains.

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**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Inland waterways transport (ADN)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Marine transport (IMDG)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Air transport (ICAO-TI/IATA-DGR)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 1.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.