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

1.1 **Product identifier**

   **Identification of the substance**
   Sodium polytungstate hydrate

   **Article number**
   8828

   **Registration number (REACH)**
   01-2120061128-61-xxxx

   **Index No**
   074-001-00-X

   **EC number**
   412-770-9

   **CAS number**
   12141-67-2

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

   **Identified uses:**
   laboratory chemical
   laboratory and analytical use

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

   Carl Roth GmbH + Co KG
   Schoemperlenstr. 3-5
   D-76185 Karlsruhe
   Germany

   **Telephone:** +49 (0) 721 - 56 06 0
   **Telefax:** +49 (0) 721 - 56 06 149
   **e-mail:** sicherheit@carlroth.de
   **Website:** www.carlroth.de

   Competent person responsible for the safety data sheet:
   Department Health, Safety and Environment
   **e-mail (competent person):** sicherheit@carlroth.de

1.4 **Emergency telephone number**

   Emergency information service:
   Poison Centre Munich: +49/(0)89 19240

---

**SECTION 2: Hazards identification**

2.1 **Classification of the substance or mixture**

   **Classification according to Regulation (EC) No 1272/2008 (CLP)**

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1O</td>
<td>acute toxicity (oral)</td>
<td>(Acute Tox. 4)</td>
<td>H302</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Dam. 1)</td>
<td>H318</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>(Aquatic Chronic 3)</td>
<td>H412</td>
</tr>
</tbody>
</table>

2.2 **Label elements**
Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word | Danger
---|---

Pictograms

GHS05, GHS07

Hazard statements

H302 Harmful if swallowed
H318 Causes serious eye damage
H412 Harmful to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.

Precautionary statements - response

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.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)

H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
P280 Wear protective gloves/eye 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/doctor.

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Sodium polytungstate hydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>074-001-00-X</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>01-2120061128-61-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>412-770-9</td>
</tr>
<tr>
<td>CAS number</td>
<td>12141-67-2</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>Na₆O₃₉W₁₂ * H₂O</td>
</tr>
<tr>
<td>Molar mass</td>
<td>2.986 g/mol</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Take off contaminated clothing.

Following inhalation
Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact
Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion
Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
Irritation, Vomiting, Nausea, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Non-combustible.

Hazardous combustion products
in case of fire and/or explosion do not breathe fumes

5.3 Advice for firefighters
Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

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

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill
Covering of drains.

Advices on how to clean up a spill
Take up mechanically. Control of dust.

Other information relating to spills and releases
Place in appropriate containers for disposal.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid dust formation.

• Measures to prevent fire as well as aerosol and dust generation
Removal of dust deposits.

Advice on general occupational hygiene
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in a dry place.

Incompatible substances or mixtures
Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements
Use local and general ventilation.

• Specific designs for storage rooms or vessels
Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)
No information available.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)
Data are not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggles with side protection.

Skin protection

• hand protection
Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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
NBR (Nitrile rubber)

• material thickness
>0,11 mm

• breakthrough times of the glove material
>480 minutes (permeation: level 6)

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

Respiratory protection

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls
Keep away from drains, surface and ground water.
### SECTION 9: Physical and chemical properties

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

**Appearance**
- Physical state: solid (granulate)
- Colour: white - light grey
- Odour: odourless
- Odour threshold: No data available

**Other physical and chemical parameters**
- pH (value): ~ 3 (water: 4.000 g/l, 20 °C)
- Melting point/freezing point: not determined
- Initial boiling point and boiling range: This information is not available.
- Flash point: not applicable
- Evaporation rate: no data available
- Flammability (solid, gas): These information are not available

**Explosive limits**
- Lower explosion limit (LEL): this information is not available
- Upper explosion limit (UEL): this information is not available
- Explosion limits of dust clouds: these information are not available

**Vapour pressure**: This information is not available.

**Density**
- 5.47 g/cm³ at 20 °C

**Vapour density**: This information is not available.

**Bulk density**
- ~ 1.570 kg/m³

**Relative density**: Information on this property is not available.

**Water solubility**
- >1.000 g/l at 20 °C

**Partition coefficient**
- n-octanol/water (log KOW): < -5.2 (20 °C) (ECHA)

**Auto-ignition temperature**: Information on this property is not available.

**Decomposition temperature**: no data available

**Viscosity**: not relevant (solid matter)

**Explosive properties**: Shall not be classified as explosive

**Oxidising properties**: none

#### 9.2 Other information

There is no additional information.

**Surface tension**
- 73.4 mN/m (20 °C)
SECTION 10: Stability and reactivity

10.1 Reactivity
This material is not reactive under normal ambient conditions.

10.2 Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
Violent reaction with: Strong oxidiser

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
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>1.715 mg/kg</td>
<td>rat</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties
Shall not be classified as germ cell mutagenic, carcinogenic nor 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.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed
nausea, vomiting
• If in eyes
Causes serious eye damage, risk of blindness

• If inhaled
Inhalation of dust may cause irritation of the respiratory system

• If on skin
Frequently or prolonged contact with skin may cause dermal irritation

Other information
None

SECTION 12: Ecological information

12.1 Toxicity
Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>83,4 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
<tr>
<td>ErC50</td>
<td>&gt;79,16 mg/l</td>
<td>algae</td>
<td>ECHA</td>
<td>72 h</td>
</tr>
</tbody>
</table>

Aquatic toxicity (chronic)
May cause long-term adverse effects in the aquatic environment.

12.2 Process of degradability
The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.

n-octanol/water (log KOW) <-5,2 (20 °C)

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data
Sewage disposal-relevant information
Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

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

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

SECTION 14: Transport information

14.1 UN number
(not subject to transport regulations)

14.2 UN proper shipping name
not relevant

14.3 Transport hazard class(es)
Class
not relevant

14.4 Packing group
not relevant not assigned to a packing group

14.5 Environmental hazards
none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user
There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations
• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.
• International Maritime Dangerous Goods Code (IMDG)
Not subject to IMDG.
• International Civil Aviation Organization (ICAO-IATA/DGR)
Not subject to ICAO-IATA.

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)
• Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
Not listed.
• Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
Not listed.
• Regulation 850/2004/EC on persistent organic pollutants (POP)
Not listed.
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Sodium polytungstate hydrate  ≥99,9 %
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- Restrictions according to REACH, Annex XVII
  not listed

- Restrictions according to REACH, Title VIII
  None.

- List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
  not listed

- Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II
not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)
not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors
not listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors
not listed

National inventories
Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>NDSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend
AICS: Australian Inventory of Chemical Substances
CSCL-ENCS: List of Existing and New Chemical Substances (CSCL-ENCS)
ECSI: EC Substance Inventory (EINECS, ELINCS, NLP)
NDSL: Non-domestic Substances List (NDSL)
NZIoC: New Zealand Inventory of Chemicals
**Safety data sheet**

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

**Sodium polytungstate hydrate ≥99,9 %**

article number: 8828

<table>
<thead>
<tr>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH Reg.</td>
</tr>
<tr>
<td>TCSI</td>
</tr>
<tr>
<td>TSCA</td>
</tr>
</tbody>
</table>

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

### SECTION 16: Other information

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
<th>Safety-relevant</th>
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</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Pictograms: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Precautionary statements - prevention: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>14.4</td>
<td>Packing group: not relevant</td>
<td>Packing group: not relevant not assigned to a packing group</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>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)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>Index No</td>
<td>the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
</tbody>
</table>
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Sodium polytungstate hydrate ≥99,9 %
article number: 8828

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVHC</td>
<td>Substance of Very High Concern</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>harmful if swallowed</td>
</tr>
<tr>
<td>H318</td>
<td>causes serious eye damage</td>
</tr>
<tr>
<td>H412</td>
<td>harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

Disclaimer
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.