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

1.1 Product identifiers

Product name: Sodium hydrosulfite
Product Number: 157953
Brand: SIGALD
Index-No.: 016-028-00-1
CAS-No.: 7775-14-6

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Self-heating chemicals (Category 1), H251
Acute toxicity, Oral (Category 4), H302
Eye irritation (Category 2A), H319
Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger
Hazard statement(s)
H251  Self-heating; may catch fire.
H302  Harmful if swallowed.
H319  Causes serious eye irritation.
H402  Harmful to aquatic life.

Precautionary statement(s)
P235 + P410  Keep cool. Protect from sunlight.
P264  Wash skin thoroughly after handling.
P270  Do not eat, drink or smoke when using this product.
P273  Avoid release to the environment.
P280  Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330  IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313  If eye irritation persists: Get medical advice/ attention.
P403 + P235  Store in a well-ventilated place. Keep cool.
P420  Store away from other materials.
P407  Maintain air gap between stacks/ pallets.
P501  Dispose of contents/ container to an approved waste disposal plant.

2.3  Hazards not otherwise classified (HNOC) or not covered by GHS
Contact with acids liberates toxic gas.

SECTION 3: Composition/information on ingredients
3.1  Substances
Synonyms : Sodium hypodisulfite
Formula : Na₂O₄S₂
Molecular weight : 174.11 g/mol
CAS-No. : 7775-14-6
EC-No. : 231-890-0
Index-No. : 016-028-00-1

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium dithionite</td>
<td>1; Acute Tox. 4; Eye Irrit. 2A; Aquatic Acute 3; H251, H302, H319, H402</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures
4.1  Description of first-aid measures
General advice
Show this material safety data sheet to the doctor in attendance.
If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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
Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Sulfur oxides
Sodium oxides
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Addition of small amounts of water may cause self ignition. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.
6.3 **Methods and materials for containment and cleaning up**
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 **Reference to other sections**
For disposal see section 13.

**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling**
For precautions see section 2.2.

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

**Storage conditions**

**Storage class**
Storage class (TRGS 510): 4.2: Pyrophoric and self-heating hazardous materials

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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

8.1 **Control parameters**

**Ingredients with workplace control parameters**
Contains no substances with occupational exposure limit values.

8.2 **Exposure controls**

**Appropriate engineering controls**
Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

**Personal protective equipment**

**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**
Handle with impervious gloves.

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).

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

**Body Protection**
protective clothing

**Respiratory protection**
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains.

### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a)</strong> Appearance</td>
<td>Form: powder</td>
</tr>
<tr>
<td></td>
<td>Color: white</td>
</tr>
<tr>
<td><strong>b)</strong> Odor</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>c)</strong> Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>d)</strong> pH</td>
<td>7.0 - 9 at 50 g/l at 20 °C (68 °F)</td>
</tr>
<tr>
<td><strong>e)</strong> Melting point/freezing point</td>
<td>300 °C (572 °F)</td>
</tr>
<tr>
<td><strong>f)</strong> Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>g)</strong> Flash point</td>
<td>()Not applicable</td>
</tr>
<tr>
<td><strong>h)</strong> Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>j)</strong> Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>k)</strong> Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>l)</strong> Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>m)</strong> Density</td>
<td>2.38 g/cm³ at 20 °C (68 °F)</td>
</tr>
<tr>
<td></td>
<td>Relative density: No data available</td>
</tr>
<tr>
<td><strong>n)</strong> Water solubility</td>
<td>241,000 g/l at 20 °C (68 °F) - soluble</td>
</tr>
<tr>
<td><strong>o)</strong> Partition coefficient: n-octanol/water</td>
<td>Not applicable for inorganic substances</td>
</tr>
<tr>
<td><strong>p)</strong> Autoignition</td>
<td>140 °C (284 °F) at 0.1 hPa - Regulation (EC) No. 440/2008,</td>
</tr>
</tbody>
</table>
温度

q) 分解温度

No data available

r) 黏度

No data available

s) 爆炸性质

No data available

t) 氧化性质

none

9.2 其他安全信息

No data available

SECTION 10: 稳定性和反应性

10.1 反应性

Self-heating; may catch fire.
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Contact with acids liberates toxic gas.

10.2 化学稳定性

The product is chemically stable under standard ambient conditions (room temperature). May decompose on exposure to air and moisture.

10.3 可能的有害反应

Generates dangerous gases or fumes in contact with:
Acids

10.4 避免条件

Do not allow water to enter container because of violent reaction. Avoid moisture. Heat.
No information available

10.5 不相容材料

Strong oxidizing agents, acids, Water

10.6 危害性分解产物

In the event of fire: see section 5

SECTION 11: 毒理学信息

11.1 毒理学效应信息

急性毒性

Oral: No data available
Inhalation: No data available
Dermal: No data available

皮肤腐蚀/刺激

No data available
**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitization**
Sensitisation test: - Mouse
Result: negative
(OECD Test Guideline 429)

**Germ cell mutagenicity**
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

**Carcinogenicity**
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**Reproductive toxicity**
No data available
No data available

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**11.2 Additional Information**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

---

**SECTION 12: Ecological information**

**12.1 Toxicity**
Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 98.31 mg/l - 48 h Remarks: (ECHA)

**12.2 Persistence and degradability**
The methods for determining biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**
No data available

**12.4 Mobility in soil**
No data available
12.5 **Results of PBT and vPvB assessment**  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 **Endocrine disrupting properties**  
No data available

12.7 **Other adverse effects**  
No data available

### SECTION 13: Disposal considerations

13.1 **Waste treatment methods**

**Product**  
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

### SECTION 14: Transport information

**DOT (US)**

- UN number: 1384  
- Class: 4.2  
- Packing group: II  
- Proper shipping name: Sodium dithionite  
- Reportable Quantity (RQ):  
  - Poison Inhalation Hazard: No

**IMDG**

- UN number: 1384  
- Class: 4.2  
- Packing group: II  
- Proper shipping name: SODIUM DITHIONITE

**IATA**

- UN number: 1384  
- Class: 4.2  
- Packing group: II  
- Proper shipping name: Sodium dithionite

### SECTION 15: Regulatory information

**SARA 302 Components**  
This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**  
Reactivity Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**  
No components are subject to the Massachusetts Right to Know Act.
SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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