1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Sodium hydrosulfite

Product Number: 157953
Brand: Sigma-Aldrich
Index-No.: 016-028-00-1
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No.: 7775-14-6

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

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich
Address: 3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone: 800-325-5832
Fax: 800-325-5052

1.4 Emergency telephone number

Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Self-heating substances and mixtures (Category 1), H251
Acute toxicity, Oral (Category 4), H302
Acute aquatic toxicity (Category 2), H401
Chronic aquatic toxicity (Category 2), H411

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.
H411: Toxic to aquatic life with long lasting effects.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substances
Synonyms: Sodium dithionite
Synonyms: Sodium hypodisulfite

<table>
<thead>
<tr>
<th>Formula</th>
<th>Na₂O₄S₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>174.11 g/mol</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>7775-14-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>231-890-0</td>
</tr>
<tr>
<td>Index-No.</td>
<td>016-028-00-1</td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>Self-heat. 1; Acute Tox. 4; Aquatic Acute 2; Aquatic Chronic 2; H251, H302, H411</td>
<td>90 - 100 %</td>
</tr>
</tbody>
</table>

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

4. FIRST AID MEASURES
4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. 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
5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Dry powder

5.2 Special hazards arising from the substance or mixture
Sulphur oxides, Sodium oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
Addition of small amounts of water may cause self ignition.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment

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

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: powder
   Colour: white

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   7.0 - 9 at 50 g/l at 20 °C (68 °F)

e) Melting point/freezing point
   300 °C (572 °F)

f) Initial boiling point and boiling range
   no data available

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available

j) Upper/lower
   no data available
flammmability or explosive limits

k) Vapour pressure no data available
l) Vapour density no data available
m) Relative density 2.500 g/cm³ at 20 °C (68 °F)
n) Water solubility no data available
o) Partition coefficient: n-octanol/water log Pow: < -4.7
p) Auto-ignition temperature The substance or mixture is classified as self heating with the category 1.
q) Decomposition temperature no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available

9.2 Other safety information

Bulk density 1,250 kg/m³

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
May decompose on exposure to air and moisture. Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
Do not allow water to enter container because of violent reaction. Avoid moisture. Heat.

10.5 Incompatible materials
Strong oxidizing agents, acids, Water

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
no data available

no data available

Inhalation: no data available
Dermal: no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available
Respiratory or skin sensitisation
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component 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 identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
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

Additional Information
RTECS: Not available

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 10 - 100 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 10 - 100 mg/l - 48 h

12.2 Persistence and degradability
no data available

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 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.
no data available
13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

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

IMDG
- UN number: 1384
- Class: 4.2
- Packing group: II
- EMS-No: F-A, S-J
- Proper shipping name: SODIUM DITHIONITE
- Marine pollutant: No

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

15. REGULATORY INFORMATION

REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: 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
- Sodium dithionite
  - CAS-No.: 7775-14-6
  - Revision Date: 2007-03-01

Pennsylvania Right To Know Components
- Sodium dithionite
  - CAS-No.: 7775-14-6
  - Revision Date: 2007-03-01

New Jersey Right To Know Components
- Sodium dithionite
  - CAS-No.: 7775-14-6
  - Revision Date: 2007-03-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.
Acute Tox.  Acute toxicity
Aquatic Acute  Acute aquatic toxicity
Aquatic Chronic  Chronic aquatic toxicity
H251  Self-heating: may catch fire.
H302  Harmful if swallowed.
H401  Toxic to aquatic life.
H411  Toxic to aquatic life with long lasting effects.
Self-heat.  Self-heating substances and mixtures

**HMIS Rating**
- Health hazard: 2
- Chronic Health Hazard:  
- Flammability: 1
- Physical Hazard: 2

**NFPA Rating**
- Health hazard: 2
- Fire Hazard: 1
- Reactivity Hazard: 2
- Health hazard: 2
- Fire Hazard: 0
- Reactivity Hazard: 2

**Further information**
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**Preparation Information**
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

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