1. Identification

Product Name: Sodium hydrosulfite
Cat No.: S310-100; S310-500; S80-182
Synonyms: Sodium dithionite
Recommended Use: Laboratory chemicals.
Uses advised against: No Information available

Details of the supplier of the safety data sheet

Company: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-heating substances and mixtures</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
Self-heating; may catch fire
Harmful if swallowed
Causes serious eye irritation

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep cool. Protect from sunlight
Wear protective gloves/protective clothing/eye protection/face protection

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage
Maintain air gap between stacks/pallets
Store away from other materials

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Contact with acids liberates toxic gas
Strong reducing agent. Fire and explosion risk in contact with oxidizing agents

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>7775-14-6</td>
<td>&gt;85</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion
Do not induce vomiting. Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms/effects
No information available.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media
No information available

Flash Point
No information available
Method -
No information available

Autoignition Temperature
>80 °C / >176 °F

Explosion Limits
Upper
No data available
Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Self-heating; exposure to air may cause substance to self-heat without an energy supply.
Hazardous Combustion Products
Sulfur oxides

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### 6. Accidental release measures

**Personal Precautions**
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

**Environmental Precautions**
Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up**
Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

### 7. Handling and storage

**Handling**
Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage**
Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area.

### 8. Exposure controls / personal protection

**Exposure Guidelines**
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

- **Eye/face Protection**
  Tightly fitting safety goggles.

- **Skin and body protection**
  Long sleeved clothing.

- **Respiratory Protection**
  Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>rotten-egg like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>8-10.5</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>300 °C / 572 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No information available</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
Yes

Stability
Stable under normal conditions. Moisture sensitive. Strong reducing agent. Fire and explosion risk in contact with oxidizing agents.

Conditions to Avoid
Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water.

Incompatible Materials
Acids, Oxidizing agents

Hazardous Decomposition Products
Sulfur oxides

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
Contact with acids liberates toxic gas.

11. Toxicological information

Acute Toxicity

Product Information
Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>LD50 = 2500 mg/kg ( Rat )</td>
<td>&gt;2 g/kg ( Rat)</td>
<td>&gt;5.5 mg/L/4h ( Rat )</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Irritating to eyes

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>7775-14-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known
Aspiration hazard  No information available
Symptoms / effects, both acute and delayed  No information available
Endocrine Disruptor Information  No information available
Other Adverse Effects  The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Do not empty into drains. The product contains following substances which are hazardous for the environment. Harmful to aquatic organisms.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>EC50: 87 mg/L, 96h (Desmodesmus subspicatus)</td>
<td>LC50: 46 - 68 mg/L, 96h static (Leuciscus idus)</td>
<td>EC50 = 107 mg/L 17 h</td>
<td>EC50: 98 mg/L, 48h (Daphnia magna Straus)</td>
</tr>
<tr>
<td></td>
<td>EC50: 120 mg/L, 72h (Desmodesmus subspicatus)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability  Soluble in water. Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation  No information available.
Mobility  Will likely be mobile in the environment due to its water solubility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>-.7</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste Disposal Methods  Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
- UN-No  UN1384
- Proper Shipping Name  SODIUM DITHIONITE
- Hazard Class  4.2
- Packing Group  II

TDG
- UN-No  UN1384
- Proper Shipping Name  SODIUM DITHIONITE
- Hazard Class  4.2
- Packing Group  II

IATA
- UN-No  UN1384
- Proper Shipping Name  Sodium dithionite
- Hazard Class  4.2
- Packing Group  II

IMDG/IMO
- UN-No  UN1384
- Proper Shipping Name  Sodium dithionite (Sodium hydrosulphite)
- Hazard Class  4.2
- Packing Group  II

15. Regulatory information
### International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-890-0</td>
<td>-</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Legend:**
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).)
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

- **TSCA 12(b)** Not applicable
- **SARA 313** Not applicable

#### SARA 311/312 Hazard Categories
- **Acute Health Hazard** Yes
- **Chronic Health Hazard** No
- **Fire Hazard** Yes
- **Sudden Release of Pressure Hazard** No
- **Reactive Hazard** Yes

- **CWA (Clean Water Act)** Not applicable
- **Clean Air Act** Not applicable
- **OSHA** Occupational Safety and Health Administration Not applicable
- **CERCLA** Not applicable

#### California Proposition 65
This product does not contain any Proposition 65 chemicals

### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

### U.S. Department of Transportation

- **Reportable Quantity (RQ):** N
- **DOT Marine Pollutant** N
- **DOT Severe Marine Pollutant** N

### U.S. Department of Homeland Security

This product contains the following DHS chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>DHS Chemical Facility Anti-Terrorism Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dithionite</td>
<td>2000 lb STQ</td>
</tr>
</tbody>
</table>

### Other International Regulations
Mexico - Grade
No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
B6  Reactive flammable material
D2B  Toxic materials

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 27-Nov-2010
Revision Date 26-Jun-2014
Print Date 26-Jun-2014
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS