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Material Safety Data Sheet

Sodium hydrosulfite
MSDS# 01503

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium hydrosulfite
Catalog Numbers: AC419520000, AC419520020, AC419525000, S80182, 23402355, S310-100, S310-500
Synonyms: Sodium hydrosulphite; Sodium sulfoxylate; Sodium dithionite.
Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 7775-14-6
Chemical Name: Sodium dithionite
EINECS#: 231-890-0

Hazard Symbols:

XN
22 31 7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Causes eye irritation. Heat sensitive. May cause central nervous system effects. Self-heating; exposure to air may cause substance to self-heat without an energy supply. Strong reducing agent. Fire and explosion risk in contact with oxidizing agents. May cause skin and respiratory tract irritation. Contact with acids liberates toxic gas, sulfur dioxide. Spontaneously combustible material. Exposure to small amounts of water causes spontaneous ignition, & the resulting decomposition causes SO₂ to be released. Large amounts of water will dissolve the product but the stability of solutions is limited & they quickly oxidize when exposed to air. Target Organs: Central nervous system, eyes.

Potential Health Effects

Eye: May cause lacrimation (tearing), blurred vision, and photophobia. May cause chemical conjunctivitis and corneal damage.

Skin: May cause skin irritation and possible burns.

Ingestion: May cause nausea, vomiting, abdominal pain, and increased salivation.

Inhalation: Inhalation of dust may cause respiratory tract irritation. Olfactory fatigue may occur.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Section 5 - Fire Fighting Measures

General Information: Evacuate area and fight fire from a safe distance. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Combustible solid. May decompose explosively when heated or involved in a fire. Powerful reducing agent. Closed containers may rupture violently when heated. Heats spontaneously in contact with air, especially moist air, and may ignite surrounding combustible materials.

Extinguishing Media:

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Use dry sand or earth to smother fire. If water is the only media available, use in flooding amounts.

Autoignition Temperature: > 80 deg C (> 176.00 deg F)

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating:

Health: 2; flammability: 1; instability: 2;

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Place under an inert atmosphere. Do not get water inside containers. Control runoff and isolate discharged material for proper disposal.

Section 7 - Handling and Storage

Handling:

Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Handle under an inert atmosphere. Store protected from air. Do not allow contact with water. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not expose to air. Store protected from moisture. Store under an inert atmosphere. Isolate from oxidizing materials and acids. Should not be exposed to temperatures above 122°F (50°C). Do not store in an area equipped with emergency water sprinklers. Consider equipping storage facilities with sulfur dioxide detectors.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium dithionite	none listed	none listed	none listed

OSHA Vacated PELs:

Sodium dithionite:

None listed

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

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.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Color: white
Odor: penetrating odor - sulfur dioxide odor
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 55 deg C (131.00&F)
Decomposition Temperature:
Solubility in water: 25 g/100ml (20&C)
Specific Gravity/Density: 1.4
Molecular Formula: Na2O4S2
Molecular Weight: 174.10

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid:

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Ignition sources, dust generation, exposure to air, excess heat, moisture, high humidity.
Incompatibilities with Other Materials
Strong oxidizing agents, strong acids.
Hazardous Decomposition Products
Carbon monoxide, oxides of sulfur, carbon dioxide.
Hazardous Polymerization
Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 7775-14-6: None listed
LD50/LC50: RTECS: Not available.
Carcinogenicity: Sodium dithionite -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology:
No information found
Teratogenicity:
No information found
Reproductive:
No information found
Neurotoxicity:
No information found
Mutagenicity:
No information found
Other:
Not available

Section 12 - Ecological Information

Other: Section 13 - Disposal Considerations
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: SODIUM DITHIONITE
Hazard Class: 4.2
UN Number: UN1384
Packing Group: II
Canada TDG
Shipping Name: SODIUM DITHIONITE
Hazard Class: 4.2
UN Number: UN1384
Packing Group: II

Section 15 - Regulatory Information

US Federal
TSCA
CAS# 7775-14-6 is listed on the TSCA Inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 7775-14-6: acute, flammable, reactive.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
STATE
Sodium dithionite can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.
California Prop 65
California No Significant Risk Level:
None of the chemicals in this product are listed.
European/International Regulations

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European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:

R 22 Harmful if swallowed.
R 31 Contact with acids liberates toxic gas.
R 7 May cause fire.

Safety Phrases:

S 7/8 Keep container tightly closed and dry.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28A After contact with skin, wash immediately with plenty of water.
S 43E In case of fire, use dry sand (never use water).

WGK (Water Danger/Protection)
CAS# 7775-14-6: 1

Canada

CAS# 7775-14-6 is listed on Canada's DSL List
Canadian WHMIS Classifications: B6
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 7775-14-6 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date:

1/19/1998
Revision #5 Date
3/29/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.