

SODIUM DITHIONITE

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1. Product Identification

Synonyms: Sodium Hydrosulfite; Dithionous acid, disodium salt; Sodium Sulfoxylate

CAS No.: 7775-14-6

Molecular Weight: 174.10

Chemical Formula: $\text{Na}_2\text{S}_2\text{O}_4$

Product Codes: CHEM-476 and others

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Hydrosulfite	7775-14-6	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE SOLID. MAY IGNITE WITH MOISTURE AND AIR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

SAF-T-DATA^(tm) Ratings

Health Rating: 1 - Slight

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 3 - Severe (Water Reactive)

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Red Stripe (Store Separately)

Potential Health Effects

Inhalation:

Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. High concentrations may cause lung damage. Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency.

Ingestion:

May cause abdominal pain, nausea, vomiting, colic and diarrhea, circulatory disturbances, central nervous system depression, irritability, restlessness, convulsions, cyanosis, respiratory and cardiovascular collapse, and death. Estimated lethal dose 30 grams.

Skin Contact:

Can irritate the skin causing a rash or burning feeling on contact. High concentrations could cause burns.

Eye Contact:

Causes irritation, redness, and pain. May cause burns and possible damage to vision.

Chronic Exposure:

Exposure may induce allergic reaction.

Aggravation of Pre-existing Conditions:

Persons allergic to "sulfiting" agents, used to preserve some foods, may be more susceptible to the effects of this substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Flammable Solid. Heats spontaneously in contact with moisture and air. May ignite in the presence of combustible materials.

Explosion:

Not considered to be an explosion hazard. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.

Fire Extinguishing Media:

Carbon dioxide, dry chemical or sand.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White to grayish-white granular powder.

Odor:

Distinct sulfur dioxide odor.

Solubility:

Soluble in water.

Density:

2.19

pH:

No information found.

% Volatiles by volume @ 21°C (70°F):

0

Boiling Point:

Not applicable.

Melting Point:

52°C (126°F) Decomposes.

Vapor Density (Air=1):

3.6

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable when stored in closed containers at room temperature. Heats spontaneously in contact with moisture and air. Loses all of its water of crystallization at 110C. Decomposes in hot water and acid.

Hazardous Decomposition Products:

Burning may produce sulfur oxides.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Water, combustible materials, strong oxidizing agents, strong acids and sodium chlorite. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.

Conditions to Avoid:

Moisture, humidity, heat, flame, ignition sources and incompatibles.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

Ingredient	Cancer Lists		IARC Category
	NTP Carcinogen		
	Known	Anticipated	
Sodium Hydrosulfite (7775-14-6)	No	No	3

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: SODIUM DITHIONITE

Hazard Class: 4.2

UN/NA: UN1384

Packing Group: II

Information reported for product/size: 2KG

International (Water, I.M.O.)

Proper Shipping Name: SODIUM DITHIONITE

Hazard Class: 4.2

UN/NA: UN1384

Packing Group: II

Information reported for product/size: 2KG

15. Regulatory Information

Chemical Inventory Status - Part 1

Ingredient	TSCA	EC	Japan	Australia
Sodium Hydrosulfite (7775-14-6)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

Ingredient	Canada	Korea	DSL	NDSL	Phil.
Sodium Hydrosulfite (7775-14-6)		Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302	SARA 313	RQ	TPQ	List	Chemical Catg.
Sodium Hydrosulfite (7775-14-6)	No	No	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA	TSCA	CERCLA	261.33	8(d)
Sodium Hydrosulfite (7775-14-6)	No	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No

Reactivity: Yes (Pure / Solid)

Australian Hazchem Code: 1P

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 3 Flammability: 1 Reactivity: 2 Other: **Water reactive**

Label Hazard Warning:

WARNING! FLAMMABLE SOLID. MAY IGNITE WITH MOISTURE AND AIR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions:

Keep away from heat, sparks and flame.
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Keep container closed.
Use only with adequate ventilation.
Store in a tightly closed container.
Wash thoroughly after handling.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use:

Laboratory Reagent and Consumer Hobby

Revision Information:

No Changes.

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