

School Material Safety Data Sheet

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SODIUM SULFATE

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SECTION 1. INTRODUCTORY INFORMATION

MATERIAL NAME AND FORMULA: SODIUM SULFATE: Na_2SO_4

SYNONYMS: Disodium Sulfate, Sodium Sulfate Anhydrous, Salt Cake (Impure Form), (Glauber's Salt = the Decahydrate Form); Mirabilite and Thenardite are naturally occurring mineral forms.

CAS NUMBER: 7757-82-6

INGREDIENTS: Sodium Sulfate, ca 100%

DOT CLASSIFICATION: Not Found

MANUFACTURERS: Always request Material Safety Data Sheets from your chemical supplier.

These should indicate the manufacturer of the substance and include an emergency phone number to call. The Manufacturers section of this book contains a listing of some of the larger manufacturers and available emergency numbers.



DESCRIPTION: Sodium sulfate is a white granular or powdered material with no odor. Has a bitter saline taste.

PRELIMINARY INFORMATION: Sodium sulfate is a nonflammable and nontoxic material. It is a chemical reagent with a variety of applications in a chemistry lab. The material presents few hazards if used with care and reasonable precautions are taken.

SECTION 2. USE AND STORAGE INFORMATION

-- PRELIMINARY PLANNING CONSIDERATIONS --

- Safety glasses or goggles and protective clothing (rubberized apron, etc.) should be worn for all experiments.
- Be sure eyewash station and safety shower are in good working order and readily available.
- Always provide for safe disposal of all chemical waste generated in the lab. Check applicable regulations prior to use.
- Rubber gloves are recommended when working with this material as needed to avoid repeated or prolonged contact with skin.

-- USAGE PRECAUTIONS AND PROCEDURES --

- **READ THE LABEL** and follow all precautions.
- Maintain good housekeeping practices to avoid unintentional mixing with incompatible materials and dust accumulation.
- For safety, **contact lenses should not be worn in the laboratory**; soft lenses may absorb irritants and all lenses may concentrate them. Particles can also adhere to contact lenses and cause corneal damage.
- After working with this material, always wash hands and face before eating, drinking, or smoking.
- Keep this material away from notebooks, textbooks, or personal belongings to avoid contamination and transport of chemical residues out of the lab area.
- Avoid creating airborne dust conditions.
- Minimize skin contact; prevent eye contact. Do not inhale dust. Do not ingest.
- Keep containers tightly closed when not in use. It is a hygroscopic material.

-- ADDITIONAL INFORMATION --

- Material does not polymerize. This material is stable at room temperature under normal conditions.
- Incompatible with aluminum and magnesium.

-- PREFERRED STORAGE LOCATION AND METHODS --

- Storage area should be cool and well ventilated. Containers should be tightly closed. It is a hygroscopic material.
- All chemical containers should be protected from physical damage and kept out of direct sunlight.
- Smoking should not be permitted in areas where chemicals are stored.
- Purchase only amounts equivalent to one year's needs.
- Store with compatible materials on sturdy shelving. Protect from moisture.

SECTION 3. SPILLS AND DISPOSAL PROCEDURES

IF MATERIAL IS SPILLED:

- Ventilate area of spill.
- Cleanup personnel should wear personal protective equipment as necessary to prevent skin or eye contact and inhalation of dust.
- For liquid (solution) spills, cover material with an inert solid absorbent (vermiculite, dry sand, etc.) and scoop into an appropriate container (with secure lid) for disposal in accordance with existing regulations. Dike with inert absorbent material, as needed, to contain and limit spill area.
- Sweep, vacuum, or scoop up spilled solid, avoiding generation of dust. Place in a suitable container (with secure lid) for later disposal.
- Flush residues with quantities of water.

DISPOSAL OF SMALL QUANTITIES:

- Bury scrap material in an approved landfill, regulations permitting.
- If the above method is not practical, feasible, or in accord with existing regulations, contact your supplier or a licensed disposal contractor for specific treatment/disposal procedures.

DISPOSAL OF LARGER AMOUNTS: Contact a licensed disposal company.

FOLLOW ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS FOR ALL WASTE DISPOSAL

SECTION 4: HEALTH HAZARDS

Sodium sulfate has not been identified as a known or suspected carcinogen by the NTP, IARC, or OSHA.

No TLV established.

- Mouse, Oral, LD₅₀: 5989 mg/kg.
- Inhalation of dust may cause irritation of the nose, throat, and lungs.
- Repeated or prolonged skin contact may cause irritation.
- Eye contact may result in irritation.
- Gastrointestinal tract irritation may be caused by ingestion of sodium sulfate.
- Chronic effects have not been reported.

SECTION 5: FIRST AID PROCEDURES**Eye contact:**

- Flush eyes promptly with plenty of running water for at least 15 minutes, including under the eyelids.
- Get prompt medical attention.*

Skin contact:

- Remove contaminated clothing promptly.
- Flush affected area with large amounts of water.
- Wash exposed areas of skin with soap and water.
- Contact medical personnel.*

Inhalation:

- Remove victim to fresh air; restore and/or support breathing as necessary.
- Get medical help for coughing or breathing difficulty.*

Ingestion:

- Rinse victim's mouth with water. Give victim 2 or 3 glasses of water to drink to dilute material. Induce vomiting.
- Never give anything by mouth to a person who is unconscious or convulsing.
- Get prompt medical attention.*

* Get medical help (in school, paramedic, or community) for further treatment, observation, and support after first aid.

SECTION 6: FIRE PROCEDURES AND DATA

- Sodium sulfate is a nonflammable solid.
- This material is a potential explosion hazard if melted with aluminum.
- Extinguishing media: Use media appropriate to surrounding fire conditions.
- For major fires, or if large quantities of this material are involved, fire fighters should wear appropriate protective clothing and use respiratory protection. Self-contained breathing apparatus is recommended.
- A water spray may be used to cool fire-exposed containers and disperse vapors.

THERMAL DECOMPOSITION PRODUCTS may include oxides of sulfur (SO_x).

FLASH POINT AND METHOD(S) ... Nonflammable

AUTOIGNITION TEMPERATURE ... Nonflammable

FLAMMABILITY LIMITS IN AIR (vol. %) : Nonflammable

SECTION 7: PHYSICAL DATA

BOILING POINT (@ 1 atm) ... Not Found
SOLUBILITY IN WATER (@ 20°C) ... 17%
pH OF AQUEOUS SOLUTION ... 6 to 7.5

SPECIFIC GRAVITY (H₂O = 1) ... 2.6
MELTING POINT ... 1630.4°F (888°C)
FORMULA WEIGHT ... 142.04

DATA SOURCES: Genium's Industrial MSDS #188 (6/86) and references 1, 4, 5, 7, 19, 82, 506, 509-11.
(see glossary for titles)

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Indust. Hygiene/Safety

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