



MATERIAL SAFETY DATA SHEET

Sodium Sulfate, Anhydrous

1. Product Identification

Synonyms: Disodium sulfate; sulfuric acid, disodium salt; sodium sulfate

CAS No.: 7757-82-6

Molecular Weight: 142.04

Chemical Formula: Na₂SO₄

Product Codes: S282

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Sulfate, Anhydrous	7757-82-6	90 - 100%	Yes

3. Hazards Identification

EMERGENCY OVERVIEW

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Health Rating: 0 - None

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Orange (General Storage)

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant). Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Inhalation:

Not expected to be a health hazard.

Ingestion:

Mildly toxic by ingestion. Slowly absorbed from the alimentary tract. Because of osmotic activity, it will draw water into the lumen of the bowel and may cause purging, fluid loss, blood in stools, fall of blood pressure, and high sodium levels in the blood.

Skin Contact:

No adverse effects expected.

Eye Contact:

No adverse effects expected but dust may cause mechanical irritation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures**Inhalation:**

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

Serious Inhalation:

Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Skin Contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact:

Not available.

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

5. Fire Fighting Measures**Fire:**

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard, but violent explosions occur when potassium sulfate and sodium sulfate are melted with aluminum.

Special Remarks on Explosion Hazards:

At a temperature of 800 C, sodium sulfate and aluminum will explode.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Products of Combustion:

Not available.

Fire Hazards in Presence of Various Substances:

Not applicable.

Special Information on Fire Hazards:

Not available.

Fire Fighting Media and Instructions:

Not applicable.

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling and Storage**Precautions:**

Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, metals.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic.

8. Exposure Controls/Personal Protection**Airborne Exposure Limits:**

None established.

Ventilation System:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Personal Respirators:

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 protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. **Physical and Chemical Properties**

Appearance:

Fine white crystalline granules.

Odor:

Odorless.

Solubility:

Soluble in approx. 3.6 parts water, 1 in 2 parts maximum @ 33C (91F).

Density:

2.68.

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0.

Boiling Point:

No information found.

Melting Point:

844C (1551F).

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Molecular Weight:

142.06

Evaporation Rate (BuAc=1):

No information found.

10. **Stability and Reactivity**

Stability:

Stable in tightly closed containers under normal conditions of storage.

Conditions to Avoid:

Air, moisture, and incompatibles.

Conditions of Instability:

Excess dust generation, incompatible materials.

Incompatibilities:

In combination with sodium sulfate, aluminum and magnesium will explode @ 800C (1472F); strong mineral acids and bases..

Hazardous Decomposition

Oxides of sulfur and sodium may form when heated to decomposition.

Special Remarks on Reactivity:

Hygroscopic. Sodium sulfate reacts violently with magnesium. Also incompatible with aluminum, potassium, mercury, lead, calcium, silver, barium, ammonium ions, and strontium. Sulfates give precipitates with salts of lead, barium, strontium, and calcium. Silver and mercury form slightly soluble salts. Alcohol precipitates most sulfates out of solution.

Corrosivity:

Non-corrosive in presence of glass.

Special Remarks on Corrosivity:

The rates of corrosion of iron and steel in water are a function of the specific mineral quality as well as the alkalinity and pH values. Sodium sulfate ... is a strong contributor to the rate of corrosion. For example, in water with 400 mg/l of alkalinity (as CaCO₃) at pH 7, the corrosion rate will be zero at 200 mg/l of Na₂SO₄, but when the concentration of sodium sulfate is 400 mg/l, the corrosion rate will be about 100 mg per square cm per day

Hazardous Polymerization:

Will not occur.

11. Toxicological Information**Routes of Entry:**

Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 5989 mg/kg [Mouse].

Chronic Effects on Humans:

Not available.

Other Toxic Effects on Humans:

Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects (fetotoxicity) based on animal studies. Human data found May cause cancer (tumorigenic) based on animal studies. No human data found. Placental absorption of sulfate ion has been characterized. Sulfate ion levels at term are somewhat higher in fetal than in maternal blood.

Special Remarks on other Toxic Effects on Humans:**Acute Potential Health Effects:****Skin:**

May cause irritation, although it is not known to be an irritant.

Eyes:

May cause eye irritation.

Inhalation:

May cause respiratory tract irritation. Low hazard for usual industrial handling.

Ingestion:

Saline cathartics (laxatives) are poorly absorbed from the gastrointestinal tract; hence, systemic toxicity is unlikely unless massive amounts have been ingested. Ingestion of large amounts may cause gastrointestinal (digestive) tract irritation with abdominal pain, nausea, vomiting, and diarrhea. Low hazard for usual industrial handling.

12. **Ecological Information**

Ecotoxicity:

Not available

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:

The product itself and its products of degradation are not toxic.

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.

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. **Transport Information**

DOT Classification:

Not a DOT controlled material.

Identification:

Not applicable.

Special Provisions for Transport:

Not available.

Protective Equipment:

Gloves (impervious). Synthetic apron. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

15. **Other Information**

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**

Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label Precautions:

None.

Label First Aid:

Not applicable.

Product Use:

Laboratory Reagent.

Revision Information:

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.



Block No. 511, Near
Lasundra Stand, Savli Road,
TUNDAV- 391 775
Tal. : Savali, Dist. : Vadodara
Email : info@planetscience.in