

Material Safety Data Sheets

1. IDENTIFICATION

Product Name	Sodium thiosulphate, pentahydrate
Other Names	Sodium thiosulfate, pentahydrate
Uses	Industrial use.
Chemical Family	No Data Available
Chemical Formula	$\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$
Chemical Name	Thiosulfuric acid, disodium salt, pentahydrate
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Hazard Categories	No Data Available
Risk Phrases	No Data Available
Safety Phrases	No Data Available

Symbol



3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium thiosulfate, pentahydrate	$\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$	10102-17-7	$\leq 100\%$

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. *Most important symptoms and effects, both acute and delayed: May cause irritation to skin, eyes and respiratory tract.

Medical Conditions Aggravated by No information available.

Exposure

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction.
Fire and Explosion Hazard	Decomposes on heating, emitting toxic fumes.
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic gases, including Sulphur oxides, Sodium oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep up and shovel. Keep in suitable, closed containers for disposal (see SECTION 13). *Vacuuming or wet sweeping may be used to avoid dust dispersal.
Containment	Stop leak if you can do it without risk. Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	Ventilate area of leak or spill.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect against physical damage. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container. *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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	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.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or where exposure to the substance is apparent. Recommended: Dust mask/particulate respirator. Use respirators and components tested and approved under appropriate government standards (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or goggles. Use equipment for eye protection tested and approved under appropriate government standards. - Hand protection: Handle with gloves. Recommended: Protective gloves, e.g. Nitrile rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Chemical-resistant apron; Long-sleeved clothing. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline
Odour	Odourless
Colour	Colourless
pH	7.0 - 8.1 (1%)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	48 ° C
Freezing Point	No Data Available
Solubility	Soluble in water

Specific Gravity	1.70 - 1.75
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	100 ° C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	248.18 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Decomposes on heating, emitting toxic fumes, including Sulphur oxides, Sodium oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat and sources of ignition. Protect from moisture.
Materials to Avoid	Incompatible/reactive with Sodium nitrate, halogens and oxidizing agents. Reacts with acids to release sulfur dioxide.
Hazardous Decomposition Products	Decomposes on heating, emitting toxic fumes, including Sulphur oxides, Sodium oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on likely routes of exposure: - Acute toxicity: No data available. - Skin corrosion/irritation: No data available. - Serious eye damage/irritation: No data available. - Respiratory/skin sensitisation: No data available. - Germ cell mutagenicity: No data available. - Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. - Reproductive toxicity: No data available. - STOT (single exposure): No data available. - STOT (repeated exposure): No data available. - Aspiration toxicity: No data available. Information on likely routes of exposure: - Ingestion: Low level of toxicity by ingestion. Diarrhoea may occur by ingestion of large quantities. - Eye contact: Contact may cause mechanical irritation. - Skin contact: Irritation may occur from prolonged skin contact. - Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath. Chronic effects: Chronic exposure may cause skin effects.
Acute	
Other	Acute toxicity (Intravenous): - LD50, Rat: >2,500 mg/kg [Supplier's SDS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.
Special Precautions for Land Fill	Processing, use or contamination of this product may change the waste management options.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Sodium thiosulfate, pentahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

Proper Shipping Name	Sodium thiosulfate, pentahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

Proper Shipping Name	Sodium thiosulfate, pentahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

15. OTHER INFORMATION

Revision

2

Key/Legend

< Less Than
 > Greater Than
 atm Atmosphere
 CAS Chemical Abstracts Service (Registry Number)
 cm² Square Centimetres
 CO₂ Carbon Dioxide
 COD Chemical Oxygen Demand
 deg C (° C) Degrees Celcius
 deg F (° F) Degrees Farenheit
 g Grams
 g/cm³ Grams per Cubic Centimetre
 g/l Grams per Litre
 HSNO Hazardous Substance and New Organism
 IDLH Immediately Dangerous to Life and Health
 immiscible Liquids are insoluable in each other.
 inHg Inch of Mercury
 inH₂O Inch of Water
 K Kelvin
 kg Kilogram
 kg/m³ Kilograms per Cubic Metre
 lb Pound
 LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
 LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
 ltr or L Litre
 m³ Cubic Metre
 mbar Millibar
 mg Milligram
 mg/24H Milligrams per 24 Hours
 mg/kg Milligrams per Kilogram
 mg/m³ Milligrams per Cubic Metre
 Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
 mm Millimetre
 mmH₂O Millimetres of Water
 mPa.s Millipascals per Second
 N/A Not Applicable
 NIOSH National Institute for Occupational Safety and Health
 NOHSC National Occupational Heath and Safety Commission
 OECD Organisation for Economic Co-operation and Development
 Oz Ounce
 PEL Permissible Exposure Limit
 Pa Pascal
 ppb Parts per Billion
 ppm Parts per Million
 ppm/2h Parts per Million per 2 Hours
 ppm/6h Parts per Million per 6 Hours
 psi Pounds per Square Inch
 R Rankine
 RCP Reciprocal Calculation Procedure
 STEL Short Term Exposure Limit
 TLV Threshold Limit Value
 tne Tonne
 TWA Time Weighted Average
 ug/24H Micrograms per 24 Hours
 UN United Nations
 wt Weight