



Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Creation Date 18-Feb-2009

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Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Sodium sulfide nonahydrate
Cat No.	S425-212; S425-500
Synonyms	Sodium monosulfide nonahydrate (Crystalline/Certified ACS)
Recommended Use	Laboratory chemicals
Company	Emergency Telephone Number
Fisher Scientific	CHEMTREC®, Inside the USA: 800-
One Reagent Lane	424-9300
Fair Lawn, NJ 07410	CHEMTREC®, Outside the USA: 703-
Tel: (201) 796-7100	527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Toxic in contact with skin. Harmful if swallowed. Causes burns by all exposure routes. Contact with acids liberates toxic gas. Very toxic to aquatic organisms.

Appearance Light yellow

Physical State Solid

odor No information available

Target Organs Respiratory system, Eyes, Skin, Gastrointestinal tract (GI), Central nervous system (CNS)

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes

Causes burns.

Skin

Toxic in contact with skin. Causes burns.

Inhalation

Causes burns. May be harmful if inhaled.

Ingestion

Harmful if swallowed. Causes burns.

Chronic Effects

Repeated or prolonged exposure may cause central nervous system damage.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Sodium sulfide	1313-82-2	-
Sodium sulfide, nonahydrate	1313-84-4	>95

4. FIRST AID MEASURES

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	No information available.
Method	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available
Lower	No data available
Suitable Extinguishing Media	Flooding quantities of water.
Unsuitable Extinguishing Media	Carbon dioxide (CO ₂)
Hazardous Combustion Products	No information available.
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA **Health** 3 **Flammability** 1 **Instability** 1 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

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Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.
Environmental Precautions	Should not be released into the environment.
Methods for Containment and Clean Up	Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

Handling	Use only under a chemical fume hood. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Keep away from acids. Wear personal protective equipment. Do not ingest. Do not breathe vapors/dust.
Storage	Keep containers tightly closed in a cool, well-ventilated place. Store under an inert atmosphere. Protect from light. Protect from moisture. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.
Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Light yellow
odor	No information available
Odor Threshold	No information available.
pH	No information available.
Vapor Pressure	No information available.
Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	50°C / 122°F
Decomposition temperature	No information available.
Flash Point	No information available.
Evaporation Rate	No information available.
Specific Gravity	No information available.
Solubility	Partly soluble in water

9. PHYSICAL AND CHEMICAL PROPERTIES

log Pow	No data available
Molecular Weight	240.18
Molecular Formula	Na ₂ S . 9 H ₂ O

10. STABILITY AND REACTIVITY

Stability	Moisture sensitive. Sensitive to air. Sensitivity to light. Decomposes slowly on exposure to water.
Conditions to Avoid	Avoid dust formation. Incompatible products. Exposure to air. Exposure to light. Exposure to moisture. Exposure to moist air or water. Temperatures above 100°C.
Incompatible Materials	Acids, Oxidizing agents, Water
Hazardous Decomposition Products	Sulfur oxides, Sulfides
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	Contact with acids liberates toxic gas.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium sulfide	208 mg/kg (Rat)	340 mg/kg (Rabbit)	Not listed
Sodium sulfide, nonahydrate	208 mg/kg (Rat)	340 mg/kg (Rabbit)	Not listed

Irritation Causes burns by all exposure routes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Sodium sulfide	Not listed	Not listed	EC50 = 4.29 mg/L 15 min	EC50 = 2.1 mg/L 48h
Sodium sulfide, nonahydrate	Not listed	Not listed	EC50 = 4.29 mg/L 15 min	Not listed

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Sodium sulfide	-3.5 - 3.5

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No UN1849
 Proper Shipping Name SODIUM SULFIDE, HYDRATED
 Hazard Class 8
 Packing Group II

TDG

UN-No UN1849
 Proper Shipping Name SODIUM SULFIDE, HYDRATED
 Hazard Class 8
 Packing Group II

IATA

UN-No 1849
 Proper Shipping Name SODIUM SULPHIDE, HYDRATED
 Hazard Class 8

14. TRANSPORT INFORMATION

Packing Group II

IMDG/IMO

UN-No 1849
 Proper Shipping Name SODIUM SULPHIDE, HYDRATED
 Hazard Class 8
 Packing Group II

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Sodium sulfide	X	X	-	215-211-5	-		X	X	X	X	KE-12378 X
Sodium sulfide, nonahydrate	-	-	-	-	-		X	-	X	-	-

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes
 Chronic Health Hazard No
 Fire Hazard No
 Sudden Release of Pressure Hazard No
 Reactive Hazard No

Clean Water Act

Not applicable

Clean Air Act

Not applicable

OSHA

Not applicable

CERCLA

Not Applicable

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium sulfide	X	X	-	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D1B Toxic materials

E Corrosive material



16. OTHER INFORMATION

Prepared By

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Revision Summary "****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS