

SODIUM THIOCYANATE SOLUTION (56% OR LESS)

STS

CAUTIONARY RESPONSE INFORMATION

Common Synonyms		Liquid	Clear to pale yellow	Odorless
Rhodanate Sodium rhodanide Sodium sulfocyanate				
<p>Keep people away. Avoid contact with liquid and vapor. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	Not flammable. POISONOUS GASES MAY BE PRODUCED WHEN HEATED. Use extinguishing agents appropriate for the surrounding fire.			
Exposure	CALL FOR MEDICAL AID. VAPOR Irritating to eyes, nose and throat. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Irritating to skin and eyes. If swallowed will cause nausea, vomiting or loss of consciousness. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.			
Water Pollution	Dangerous to aquatic life in high concentrations. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.			

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 0; Unassigned cargoes
- 2.2 Formula: NaSCN
- 2.3 IMO/UN Designation: Not listed.
- 2.4 DOT ID No.: Not listed.
- 2.5 CAS Registry No.: 540-72-7
- 2.6 NAERG Guide No.: Not listed
- 2.7 Standard Industrial Trade Classification: 52382

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Rubber or plastic gloves; splash-proof goggles; rubber or plastic apron.
- 3.2 **Symptoms Following Exposure:** Intensity of effects will vary with concentration of the solution. Inhalation of vapor causes irritation of nose and throat. Ingestion of large doses causes vomiting, extreme cerebral excitement, convulsions, and death in 10-48 hrs.; chronic poisoning can cause flu-like symptoms, skin rashes, weakness, fatigue, vertigo, nausea, vomiting, diarrhea, confusion. Contact with eyes causes irritation. Prolonged contact with skin may produce various skin eruptions, dizziness, cramps, nausea, and mild to severe disturbance of the nervous system.
- 3.3 **Treatment of Exposure:** Call for medical aid. INHALATION: Move to fresh air. INGESTION: Consult physician; hemodialysis is recommended as the treatment of choice. EYES or SKIN: Flush with water for 15 min.
- 3.4 TLV-TWA: Not listed.
- 3.5 TLV-STEL: Not listed.
- 3.6 TLV-Ceiling: Not listed.
- 3.7 Toxicity by Ingestion: Grade 3; LD₅₀ = 764 mg/kg (rat)
- 3.8 Toxicity by Inhalation: Currently not available.
- 3.9 Chronic Toxicity: Causes birth defects in chick embryos.
- 3.10 Vapor (Gas) Irritant Characteristics: Currently not available
- 3.11 Liquid or Solid Characteristics: Currently not available
- 3.12 Odor Threshold: Currently not available
- 3.13 IDLH Value: Not listed.
- 3.14 OSHA PEL-TWA: Not listed.
- 3.15 OSHA PEL-STEL: Not listed.
- 3.16 OSHA PEL-Ceiling: Not listed.
- 3.17 EPA AEGL: Not listed

4. FIRE HAZARDS

- 4.1 Flash Point: Not flammable.
- 4.2 Flammable Limits in Air: Not pertinent.
- 4.3 Fire Extinguishing Agents: Use extinguishing agents appropriate for the surrounding fire.
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent.
- 4.5 Special Hazards of Combustion Products: Irritating oxides of sulfur and nitrogen may form in fire.
- 4.6 Behavior in Fire: Currently not available
- 4.7 Auto Ignition Temperature: Not pertinent.
- 4.8 Electrical Hazards: Not pertinent.
- 4.9 Burning Rate: Not pertinent.
- 4.10 Adiabatic Flame Temperature: Not pertinent.
- 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.
- 4.12 Flame Temperature: Not pertinent.
- 4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent.
- 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

- 5.1 Reactivity with Water: No reaction.
- 5.2 Reactivity with Common Materials: Currently not available
- 5.3 Stability During Transport: Stable.
- 5.4 Neutralizing Agents for Acids and Caustics: Not pertinent.
- 5.5 Polymerization: Will not polymerize.
- 5.6 Inhibitor of Polymerization: Not pertinent.

6. WATER POLLUTION

- 6.1 Aquatic Toxicity: 3,240 ppm/2 hr/fish/killed/fresh water >500 ppm/48 hr/green crab/TL₅₀/aerated salt water
- 6.2 Waterfowl Toxicity: Currently not available
- 6.3 Biological Oxygen Demand (BOD): Currently not available
- 6.4 Food Chain Concentration Potential: None.
- 6.5 GESAMP Hazard Profile:
Bioaccumulation: 0
Damage to living resources: (3)
Human Oral hazard: 1
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: 50-60% solutions in water.
- 7.2 Storage Temperature: Ambient.
- 7.3 Inert Atmosphere: No requirement.
- 7.4 Venting: Open.
- 7.5 IMO Pollution Category: (B)
- 7.6 Ship Type: 3
- 7.7 Barge Hull Type: 3

8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Not listed.
- 8.2 49 CFR Class: Not pertinent.
- 8.3 49 CFR Package Group: Not listed.
- 8.4 Marine Pollutant: No
- 8.5 NFPA Hazard Classification: Not listed
- 8.6 EPA Reportable Quantity: Not listed.
- 8.7 EPA Pollution Category: Not listed.
- 8.8 RCRA Waste Number: Not listed
- 8.9 EPA FWPCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Physical State at 15° C and 1 atm: Liquid
- 9.2 Molecular Weight: 81.08
- 9.3 Boiling Point at 1 atm: Currently not available
- 9.4 Freezing Point: Currently not available
- 9.5 Critical Temperature: Currently not available
- 9.6 Critical Pressure: Currently not available
- 9.7 Specific Gravity: Currently not available
- 9.8 Liquid Surface Tension: Currently not available
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: Currently not available
- 9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available
- 9.12 Latent Heat of Vaporization: Currently not available
- 9.13 Heat of Combustion: Currently not available
- 9.14 Heat of Decomposition: Currently not available
- 9.15 Heat of Solution: Currently not available
- 9.16 Heat of Polymerization: Not pertinent.
- 9.17 Heat of Fusion: Currently not available
- 9.18 Limiting Value: Currently not available
- 9.19 Reid Vapor Pressure: Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E