

Material Safety Data Sheet

Sodium Thiocyanate

ACC# 21700

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium Thiocyanate

Catalog Numbers: NC9728335, S/7120NC, S441-500, S80197, XXNATS15%WV20L

Synonyms: Sodium thiocyanide; Thiocyanate sodium; Sodium sulfocyanide.

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
540-72-7	Sodium thiocyanate	>98	208-754-4

Hazard Symbols: XN

Risk Phrases: 20/21/22 32

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid. May be harmful if swallowed. May cause eye and skin irritation. Contact with acid liberates a toxic gas, cyanide. Warning! Hygroscopic. Light sensitive. May cause respiratory tract irritation.

Target Organs: Central nervous system, cardiovascular system.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness and possible death.

Inhalation: May cause respiratory tract irritation. May be metabolized to cyanide which in turns act by inhibiting cytochrome oxidase impairing cellular respiration. Inhalation may result in

symptoms similar to cyanide poisoning which include tachypnea, hyperpnea (abnormally rapid or deep breathing), and dyspnea (labored breathing) followed rapidly by respiratory depression. Pulmonary edema may occur.

Chronic: May be metabolized to cyanide which in turn acts by inhibiting cytochrome oxidase impairing cellular respiration. Chronic exposure to cyanide solutions may lead to the development of a "cyanide" rash, characterized by itching, and by macular, papular, and vesicular eruptions, and may be accompanied by secondary infections.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. May react with acids or moisture to form explosive hydrogen gas.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Keep container tightly closed. Avoid ingestion and inhalation. Use only with adequate ventilation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium thiocyanate	none listed	none listed	none listed

OSHA Vacated PELs: Sodium thiocyanate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: Odorless

pH: Neutral in water

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Decomposes

Freezing/Melting Point: 287 deg C

Decomposition Temperature: Not available.

Solubility: 139g/100ml (21C)

Specific Gravity/Density: > 1.0

Molecular Formula: NaCNS

Molecular Weight: 81.0565

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
 Conditions to Avoid: Light, dust generation, exposure to moist air or water.
 Incompatibilities with Other Materials: Moisture, acids, strong bases.
 Hazardous Decomposition Products: Hydrogen cyanide, nitrogen oxides, oxides of sulfur.
 Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
 CAS# 540-72-7: XL2275000
 LD50/LC50:
 CAS# 540-72-7:
 Oral, mouse: LD50 = 362 mg/kg;
 Oral, rat: LD50 = 764 mg/kg;

Carcinogenicity:
 CAS# 540-72-7: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
 Epidemiology: No information available.
 Teratogenicity: No information available.
 Reproductive Effects: No information available.
 Neurotoxicity: No information available.
 Mutagenicity: No information available.
 Other Studies: The hazards associated with cyanide may be seen in this product.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
 RCRA P-Series: None listed.
 RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.

Hazard Class:	
UN Number:	
Packing Group:	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 540-72-7 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 540-72-7: acute, chronic.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 540-72-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 32 Contact with acids liberates very toxic gas.

Safety Phrases:
S 13 Keep away from food, drink and animal feeding stuffs.

WGK (Water Danger/Protection)

CAS# 540-72-7: 1

Canada - DSL/NDSL

CAS# 540-72-7 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List

CAS# 540-72-7 (listed as Cyanide compounds, inorganic, n.o.s.) is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 540-72-7 (listed as cyanide anion): OEL-ARAB Republic of Egypt: TW

A 5 mg/m³; Skin OEL-AUSTRALIA: TWA 5 mg/m³; Skin OEL-AUSTRIA: TWA 5 mg/m³; Skin OEL-CZECHOSLOVAKIA: TWA 3 mg/m³; STEL 10 mg/m³ JAN9 OEL-DENMARK : TWA 5 mg/m³; Skin OEL-FINLAND: TWA 5 mg/m³; STEL 10 mg/m³ OEL-FRANCE: TWA 5 mg/m³; Skin OEL-GERMANY: TWA 5 mg/m³; Skin OEL-HUNGARY: TWA 0.3 mg/m³; STEL 0.6 mg/m³; Skin OEL-INDIA: TWA 4 mg/m³; Skin OEL-THE NETHERLAND S: TWA 5 mg/m³; Skin OEL-THE PHILIPPINES: TWA 5 mg/m³; Skin OEL-POLAND: TWA 0.3 mg/m³ OEL-SWEDEN: STEL 5 mg/m³; Skin OEL-SWITZERLAND: TWA 5 mg/m³; STEL 10 mg/m³; Skin OEL-THAILAND: TWA 5 mg/m³ OEL-UNITED KINGDOM: TWA 5 mg/m³; Skin

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997

Revision #6 Date: 3/12/2002

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