

# Material Safety Data Sheet

## Sodium thiocyanate

ACC# 21700

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Sodium thiocyanate

**Catalog Numbers:** AC196760000, AC196765000, AC419670000, AC419670030, AC419670050, AC419675000, S80197, S93383, NC9480845, S441-500, S441-500LC

**Synonyms:** Sodium thiocyanate; Sodium rhodanide; Sodium sulfocyanate.

**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

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid.

**Warning!** Harmful if swallowed. Contact with acids liberates hydrogen cyanide, a very toxic, flammable gas or liquid. May cause eye, skin, and respiratory tract irritation. May be harmful if absorbed through skin or if inhaled. Light sensitive. Hygroscopic (absorbs moisture from the air).

**Target Organs:** Central nervous system, cardiovascular system, thyroid, skin.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation. May be absorbed through the skin in harmful amounts. Allergic reactions have been reported.

**Ingestion:** May cause irritation of the digestive tract. Ingestion of thiocyanates may cause disorientation, weakness, low blood pressure, confusion, psychotic behavior, muscular spasms, convulsions, and death.

**Inhalation:** May cause respiratory tract irritation. May be harmful if inhaled.

**Chronic:** Thiocyanates used in drug therapy have caused nervous system effects such as fine motor weakness of the arms and legs. Elevated levels of thiocyanate in the blood will inhibit the uptake of iodine by the thyroid gland resulting in thyroid effects. Prolonged absorption of thiocyanates may produce various skin eruptions, running nose, dizziness, cramps, nausea and vomiting.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.

**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

**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.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding 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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid breathing dust.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. 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	5 mg/m <sup>3</sup> TWA (listed under Cyanide anion).

**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 gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** 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.

## 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:** NaSCN

**Molecular Weight:** 81.06

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. May decompose when exposed to light.

**Conditions to Avoid:** Light, dust generation, moisture, excess heat.

**Incompatibilities with Other Materials:** Acids, bases, alcohols, amines, ammonia, amides, glycols.

**Hazardous Decomposition Products:** Hydrogen cyanide, oxides of nitrogen, oxides of sulfur, cyanide fumes.

**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, mouse: LD50 = 360 mg/kg;

Oral, mouse: LD50 = 809 mg/kg;

Oral, rat: LD50 = 764 mg/kg;

Oral, rat: LD50 = 1180 mg/kg;

Oral, rat: LD50 = 232 mg/kg;

Oral, rat: LD50 = 837 mg/kg;

Data on potassium thiocyanate, a very similar chemical: oral TDLo: 428 mg/kg, toxic psychosis, hallucinations, distorted perceptions, gastritis. oral LDLo: 80 mg/kg, hallucinations, distorted perceptions, convulsions, muscle weakness. t oral LDLo: 500 mg/kg. a pig oral LDLo: 600 mg/kg. oral LDLo: 300 mg/kg.

**Carcinogenicity:**

CAS# 540-72-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** See actual entry in RTECS for complete information.

**Mutagenicity:** No information found

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** Biodegradable.

## 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	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## 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.

**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 540-72-7: immediate, delayed.

**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 depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. CAS# 540-72-7 is listed as a Priority Pollutant under the Clean Water Act. CAS# 540-72-7 is listed as a Toxic Pollutant under the Clean Water Act.

**OSHA:**

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

**STATE**

CAS# 540-72-7 can be found on the following state right to know lists: California, (listed as Cyanides, inorganic salts), New Jersey, (listed as Cyanide anion), Pennsylvania, (listed as Cyanide anion), Massachusetts, (listed as Cyanide anion).

**California Prop 65**

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 36/37 Wear suitable protective clothing and gloves.

S 50A Do not mix with acids.

**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.

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

**Canadian Ingredient Disclosure List**

CAS# 540-72-7 (listed as Cyanides, inorganic salts) is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 12/12/1997

**Revision #8 Date:** 9/30/2003

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