

## SAFETY DATA SHEET

Creation Date 22-Dec-2009

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Revision Number 3

### 1. Identification

**Product Name** Sodium thiocyanate

**Cat No. :** A11867

**CAS No** 540-72-7  
**Synonyms** Sodium rhodanate; Sodium sulfocyanate; Thiocyanic acid sodium salt; Sodium isothiocyanate

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

**Company**

Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757

**Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |            |
|--|------------|
| Acute oral toxicity                                  | Category 4 |
| Acute dermal toxicity                                | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists          | Category 4 |
| Specific target organ toxicity - (repeated exposure) | Category 2 |
| Target Organs - Liver, Blood, Thyroid.               |            |

**Label Elements****Signal Word**

Warning

**Hazard Statements**

May cause damage to organs through prolonged or repeated exposure  
Harmful if swallowed, in contact with skin or if inhaled



### Precautionary Statements

#### Prevention

Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not eat, drink or smoke when using this product  
Wash face, hands and any exposed skin thoroughly after handling

#### Response

Get medical attention/advice if you feel unwell

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse

#### Ingestion

Rinse mouth

#### Storage

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Contact with acids liberates very toxic gas

Harmful to aquatic life with long lasting effects

#### Other hazards

Harmful to aquatic life with long lasting effects.

## 3. Composition/Information on Ingredients

| Component          | CAS No   | Weight % |
|--------------------|----------|----------|
| Sodium thiocyanate | 540-72-7 | >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

Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

|  |  |
|--|--|
| <b>Ingestion</b>                           | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.   |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

## 5. Fire-fighting measures

|   |                          |
|---|--------------------------|
| <b>Unsuitable Extinguishing Media</b>   | No information available |
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Nitrogen oxides (NOx). Sulfur oxides.

### 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**  
2

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                  |  |
|----------------------------------|--|
| <b>Personal Precautions</b>      | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. |
| <b>Environmental Precautions</b> | Should not be released into the environment. Do not flush into surface water or sanitary sewer system.   |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

## 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Use only under a chemical fume hood. Wear personal protective equipment/face protection. Avoid dust formation. Do not breathe (dust, vapor, mist, gas). Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from acids. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light. Keep away from acids. Incompatible Materials. Strong oxidizing agents. Acids. Strong bases.   |

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component          | ACGIH TLV | OSHA PEL                           | NIOSH                      | Mexico OEL (TWA) |
|--------------------|-----------|------------------------------------|----------------------------|------------------|
| Sodium thiocyanate |           | (Vacated) TWA: 5 mg/m <sup>3</sup> | IDLH: 25 mg/m <sup>3</sup> |                  |

Legend

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

**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.

**Recommended Filter type:**

Particulates filter conforming to EN 143.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

|  |                          |
|--|--------------------------|
| Physical State                         | Solid                    |
| Appearance                             | White                    |
| Odor                                   | Odorless                 |
| Odor Threshold                         | No information available |
| pH                                     | 5.5-7.5 5% aq.sol. 20°C  |
| Melting Point/Range                    | 287 °C / 548.6 °F        |
| Boiling Point/Range                    | No information available |
| Flash Point                            | No information available |
| Evaporation Rate                       | Not applicable           |
| Flammability (solid,gas)               | No information available |
| Flammability or explosive limits       |                          |
| Upper                                  | No data available        |
| Lower                                  | No data available        |
| Vapor Pressure                         | No information available |
| Vapor Density                          | Not applicable           |
| Specific Gravity                       | > 1.0                    |
| Solubility                             | Soluble in water         |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | No information available |
| Decomposition Temperature              | No information available |
| Viscosity                              | Not applicable           |
| Molecular Formula                      | C N Na S                 |
| Molecular Weight                       | 81.07                    |

**10. Stability and reactivity****Reactive Hazard**

No

**Stability**

Hygroscopic. Light sensitive.

|   |  |
|---|--|
| <b>Conditions to Avoid</b>              | Avoid dust formation. Incompatible products. Excess heat. Exposure to light. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Acids, Strong bases   |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NOx), Sulfur oxides   |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.   |
| <b>Hazardous Reactions</b>              | Contact with acids liberates very toxic gas.   |

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

| Component          | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|--------------------|--------------------------|-------------|-----------------|
| Sodium thiocyanate | LD50 = 764 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component          | CAS No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------------|----------|------------|------------|------------|------------|------------|
| Sodium thiocyanate | 540-72-7 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** Liver Blood Thyroid

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

### 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** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

### 15. Regulatory information

#### United States of America Inventory

| Component          | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--------------------|----------|------|---|-----------------------------|
| Sodium thiocyanate | 540-72-7 | X    | ACTIVE  | -                           |

**Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

**TSCA 12(b)** - Notices of Export

Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component          | CAS No   | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|--------------------|----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Sodium thiocyanate | 540-72-7 | X   | -    | 208-754-4 | X     | X    | X    | X    | X     | KE-31631 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### U.S. Federal Regulations

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component          | CAS No   | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|--------------------|----------|----------|-------------------------------|---------------------------------|
| Sodium thiocyanate | 540-72-7 | >95      | 1.0 %                         | -                               |

##### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### CWA (Clean Water Act)

| Component          | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Sodium thiocyanate | -                          | -                           | X                      | X                         |

**Clean Air Act**

| Component          | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|--------------------|-----------|-------------------------|-------------------------|
| Sodium thiocyanate | X         |                         | -                       |

OSHA - Occupational Safety and Health Administration

Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component          | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------|---------------|------------|--------------|----------|--------------|
| Sodium thiocyanate | -             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant Y  
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

**Authorisation/Restrictions according to EU REACH**

Not applicable

| Component          | CAS No   | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------------|----------|---|---|---|
| Sodium thiocyanate | 540-72-7 | -   | -   | -   |

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component          | CAS No   | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------|----------|----------|------------------------------|---------------------------|--|
| Sodium thiocyanate | 540-72-7 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| Component | CAS No | Seveso III Directive | Seveso III Directive | Rotterdam | Basel Convention |
|-----------|--------|----------------------|----------------------|-----------|------------------|
|-----------|--------|----------------------|----------------------|-----------|------------------|

|                    |          | (2012/18/EC) -<br>Qualifying Quantities<br>for Major Accident<br>Notification | (2012/18/EC) -<br>Qualifying Quantities<br>for Safety Report<br>Requirements | Convention (PIC) | (Hazardous Waste) |
|--------------------|----------|---|--|------------------|-------------------|
| Sodium thiocyanate | 540-72-7 | Not applicable  | Not applicable   | Not applicable   | Not applicable    |

## 16. Other information

**Prepared By** Health, Safety and Environmental Department  
Email: chem.techinfo@thermofisher.com  
www.thermofisher.com

**Creation Date** 22-Dec-2009  
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**Print Date** 26-Mar-2024  
**Revision Summary** New emergency telephone response service provider.

### Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**