

MATERIAL SAFETY DATA SHEET

SODIUM THIOCYANATE

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium Thiocyanate

Synonyms: Sodium thiocyanate; Sodium rhodanide; Sodium sulfocyanate.

Company Identification:

GATEWAY INTERNATIONAL CORPORATION LIMITED

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 to aquatic organisms; may cause long-term adverse effects in the aquatic environment. 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 at 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 ³ 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: Human oral TDLo: 428 mg/kg, toxic psychosis, hallucinations, distorted perceptions, gastritis. Human oral LDLo: 80 mg/kg, hallucinations, distorted perceptions, convulsions, muscle weakness. Rabbit oral LDLo: 500 mg/kg. Guinea pig oral LDLo: 600 mg/kg. Frog 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

IMDG Non-hazardous for transport: This substance is considered to be non-hazardous for transport.

IATA Non-hazardous for Air transport: Non-hazardous for Air transport:

UN Number: None

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 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. 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), New Jersey, (listed as Cyanides, inorganic salts), 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.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

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.

Section 16 - Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Gateway International Corporation Limited be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.