

# Material Safety Data Sheet

## Potassium thiocyanate

ACC# 19640

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Potassium thiocyanate

**Catalog Numbers:** AC196580000, AC196585000, AC424230000, AC424230050, AC424235000, S71230, S712301, S75192, S77756, NC9083422, NC9143438, NC9176709, NC9500039, NC9668442, NC9729090, NC9791271, NC9945820, NC9947676, P317-100, P317-500, S71230-1, XXP317100LB, XXP31710KGS, XXP31712KG, XXP3171KG

**Synonyms:** Thiocyanic acid, potassium salt; Potassium rhodanide; Rhocya; Potassium 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
333-20-0	Potassium thiocyanate	>98.5	206-370-1

**Hazard Symbols:** XN

**Risk Phrases:** 20/21/22 32

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

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

**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 available.

**Autoignition Temperature:** Not available.

**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
Potassium thiocyanate	none listed	none listed	none listed

**OSHA Vacated PELs:** Potassium 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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystalline powder

**Appearance:** white

**Odor:** odorless

**pH:** 5.3-8.7 (5% soln)

**Vapor Pressure:** Negligible

**Vapor Density:** No data

**Evaporation Rate:** Negligible

**Viscosity:** No data

**Boiling Point:** 500 deg C (dec)

**Freezing/Melting Point:** 173 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** 1.89

**Molecular Formula:** KSCN

**Molecular Weight:** 97.18

## 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#** 333-20-0: XL1925000

**LD50/LC50:**

CAS# 333-20-0:

Oral, mouse: LD50 = 594 mg/kg;

Oral, mouse: LD50 = 590 mg/kg;

Oral, rat: LD50 = 854 mg/kg;

**Carcinogenicity:**

CAS# 333-20-0: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information found.

**Teratogenicity:** No information found.

**Reproductive Effects:** No information found.

**Neurotoxicity:** No information found.

**Mutagenicity:** No information found.

**Other Studies:** The hazards associated with isocyanates may be seen in this product. See actual entry in RTECS for complete information .

## 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	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	No information available.				No information available.
<b>Hazard Class:</b>					

UN Number:

Packing Group:

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 333-20-0 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

#### 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 # 333-20-0: 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 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. 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# 333-20-0 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 36/37 Wear suitable protective clothing and gloves.

S 50A Do not mix with acids.

**WGK (Water Danger/Protection)**

CAS# 333-20-0: No information available.

**Canada - DSL/NDSL**

CAS# 333-20-0 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

**Canadian Ingredient Disclosure List**

CAS# 333-20-0 (listed as Cyanides, inorganic salts) is listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

CAS# 333-20-0 (listed as cyanide anion): OEL-ARAB Republic of Egypt:TWA 5 mg/m<sup>3</sup>;Skin OEL-AUSTRALIA:TWA 5 mg/m<sup>3</sup>;Skin OEL-AUSTRIA:TWA 5 mg/m<sup>3</sup>;Skin OEL-CZECHOSLOVAKIA:TWA 3 mg/m<sup>3</sup>;STEL 10 mg/m<sup>3</sup> JAN9 OEL-DENMARK :TWA 5 mg/m<sup>3</sup>;Skin OEL-FINLAND:TWA 5 mg/m<sup>3</sup>;STEL 10 mg/m<sup>3</sup> OEL-FRANCE:TWA 5 mg/m<sup>3</sup>;Skin OEL-GERMANY:TWA 5 mg/m<sup>3</sup>;Skin OEL-HUNGARY:TWA 0.3 mg/m<sup>3</sup>;STEL 0.6 mg/m<sup>3</sup>;Skin OEL-INDIA:TWA 4 mg/m<sup>3</sup>;Skin OEL-THE NETHERLAND S:TWA 5 mg/m<sup>3</sup>;Skin OEL-THE PHILIPPINES:TWA 5 mg/m<sup>3</sup>;Skin OEL-POLAND:TWA 0.3 mg/m<sup>3</sup> OEL-SWEDEN:STEL 5 mg/m<sup>3</sup>;Skin OEL-SWITZERLAND:TWA 5 mg/m<sup>3</sup>;STEL 10 mg/m<sup>3</sup>;Skin OEL-THAILAND:TWA 5 mg/m<sup>3</sup> OEL-UNITED KINGDOM:TWA 5 mg/m<sup>3</sup>;Skin

**Section 16 - Additional Information**

**MSDS Creation Date:** 12/12/1997

**Revision #5 Date:** 9/29/2003

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