MATERIAL SAFETY DATA SHEET
Potassium thiocyanate

Section 1 - Chemical Product and Company Identification

MSDS Name: Potassium thiocyanate
Catalog Numbers: P/7240/50, P/7240/53, P/7280/50, P/7280/53
Synonyms: Thiocyanic acid, potassium salt; Potassium rhodanide; Potassium sulfocyanate.
Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
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</thead>
<tbody>
<tr>
<td>333-20-0</td>
<td>Potassium thiocyanate</td>
<td>98-100</td>
<td>206-370-1</td>
</tr>
</tbody>
</table>

Hazard Symbols: XN
Risk Phrases: 20/21/22 32 52/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Harmful by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Eye: Causes redness and pain.
Skin: May cause skin irritation. Harmful if absorbed through the skin.
Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. May cause headache. May cause nausea and vomiting.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation. Prolonged exposure may result in dizziness and general weakness.
Chronic: Prolonged absorption of thiocyanates may produce various skin eruptions, running nose, dizziness, cramps, nausea and vomiting.

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 immediately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Notes to Physician:**

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### 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. Substance is noncombustible.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

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### 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 generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

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### Section 7 - Handling and Storage

**Handling:** Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Keep away from acids. Store protected from moisture. Store protected from light.

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### 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 only under a chemical fume hood.

**Exposure Limits**

- **CAS# 333-20-0:**
  - United States OSHA: 5 mg/m3 TWA (Cyanide anion).
  - Netherlands: (cyanide anion): 1 mg/m3 MAC; 10 mg/m3 MAC

**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.

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### Section 9 - Physical and Chemical Properties

- **Physical State:** Crystals
- **Color:** colorless or white
- **Odor:** odorless
- **pH:** 5.3-8.7 (5% soln)
- **Vapor Pressure:** < 1 hPa @ 20 deg C
Viscosity: No data
Boiling Point: 500 deg C (932.00°F)
Freezing/Melting Point: 170-179 deg C
Autoignition Temperature: Not available.
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: 1.886
Molecular Formula: KSCN
Molecular Weight: 97.18

Section 10 - Stability and Reactivity

Chemical Stability: Moisture sensitive. Light sensitive.
Conditions to Avoid: Incompatible materials, light, dust generation, moisture, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, acids, strong bases.
Hazardous Decomposition Products: Hydrogen cyanide, carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide, cyanide fumes, oxides of potassium.
Hazardous Polymerization: Will not occur.

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;
. Other: 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: Potassium thiocyanate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Biodegradable. Do not empty into drains.

Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
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<tbody>
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<td>UN Number:</td>
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<td>Packing Group:</td>
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Section 15 - Regulatory Information

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 13 Keep away from food, drink and animal feeding stuffs.
   S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)
   CAS# 333-20-0: Not available

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

US Federal

TSCA
   CAS# 333-20-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997
Revision #9 Date 2/15/2008

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