



LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## POTASSIUM THIOCYANATE

### 1. Chemical Product and Company information.

**Product name:** Potassium Thiocyanate

**Contact Information:**

Radchem cc  
PO Box 166982  
Brackendowns  
Alberton 1454  
Telephone : **011 867 3726 / 2864**

### 2. Hazard Identification

Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

### 3. Composition / information on ingredients

**CAS #:** 333-20-0

**Synonym:** Aterocyn; Kyonate; Rodanca; Potassium Sulfoyanate; Potassium Isothiocyanate; Potassium Thiocyanide

**Chemical Name:** Thiocyanic acid, potassium salt

**Chemical Formula:** KCNS

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.



**Serious Inhalation:** Not available

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available

## **5. Fire-fighting measures**

**Flammability of the Product:** Non-flammable

**Fire Hazards in Presence of Various Substances:** oxidizing materials

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of oxidizing materials.

**Fire Fighting Media and Instructions:** Not applicable

**Special Remarks on Fire Hazards:** When heated to decomposition it emits very toxic fumes, possibly cyanide gas. Contact with oxidizers may cause fire.

**Special Remarks on Explosion Hazards:** Contact with oxidizers may cause explosion.

## **6. Accidental release measures**

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## **7. Handling and storage**

**Precautions:** Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C. Moisture sensitive. Sensitive to light. Store in light-resistant containers.

## **8. Exposure controls/personal protection**

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



## **9. Physical and chemical properties**

**Physical state and appearance:** Solid (Deliquescent crystals solid)

**Odour:** Odourless

**Taste:** Not available

**Colour:** White

**Boiling Point:** 500°C

**Melting Point:** 173°C

**Critical Temperature:** Not available

**Specific Gravity:** 1.89 (Water = 1)

**Vapour Density:** Not available

**Volatility:** Not available

**Odour Threshold:** Not available

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, acetone

**Solubility:** Easily soluble in cold water. Soluble in acetone. Soluble in alcohol. 1 g dissolves in 0.5 ml acetone. 1 gram dissolves in 12 of alcohol. 1 gram dissolves in 8 ml of boiling alcohol. 217 g dissolves in 100 ml water at 20 deg. C

## **10. Stability and reactivity**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, acids.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Sensitive to light. Slowly decomposes on exposure to light. Also incompatible with active halogen compounds. Incompatible with acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulphuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), oxidizers (chlorates, peroxides, nitrates, nitrites). Contact with acids liberates toxic cyanide gas or hydrogen sulphide. Moisture sensitive

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.

## **11. Toxicological information**

**Routes of Entry:** Absorbed through skin. Dermal contact. Inhalation. Ingestion

**Toxicity to Animals:** Acute oral toxicity (LD50): 594 mg/kg [Mouse].

**Chronic Effects on Humans:** Causes damage to the following organs: the nervous system. May cause damage to the following organs: blood, cardiovascular system, urinary system, and thyroid.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation (lung irritant).



**Special Remarks on Toxicity to Animals:** Lowest Published Lethal Dose: LDL [Human] - route: oral; Dose: 80 mg/kg

**Special Remarks on Chronic Effects on Humans:** May cause birth defects (teratogenic) based on animal test data

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: Causes skin irritation. May cause ulcers, discoloration, and eczema. It can be absorbed through the skin Eyes: Causes eye irritation and swelling of the eye lids. It may cause blurred vision. Inhalation: May cause respiratory tract and mucous membrane irritation. Symptoms may include coughing, chest pain, difficulty breathing. Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation with nausea, ulceration or bleeding from stomach, and vomiting. It may also affect behaviour/central nervous system (hallucinations, delirium, confusion, distorted perceptions, disorientation, toxic psychosis, convulsions, and muscle weakness), respiration (dyspnoea), cardiovascular system (hypotension, cardiovascular collapse). Ingestion may also cause skin eruptions. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect metabolism, thyroid (goitre, hypothyroidism), blood, and urinary system in addition to behaviour/central nervous system. Skin: Repeated or prolonged skin contact can cause dermatitis.

## **12. Ecological information**

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available

## **13. Disposal considerations**

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## **14. Transport information**

**DOT Classification:** Not a DOT controlled material

**Identification:** : Not applicable

**Special Provisions for Transport:** Not available

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