



## **Potassium Thiocyanate MSDS**

**Effective Date: July 17, 2013**

**24 Hour Emergency Contact:**

**ChemTel: (800)255-3924**

**www.pioneerforensics.com**

### **1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product:</b>	<b>Potassium Thiocyanate, ACS Reagent Grade</b>
<b>Product Number(s):</b>	PF042, PF043
<b>CAS#:</b>	333-20-0
<b>Synonyms:</b>	Potassium thiocyanide; Potassium isothiocyanate; Potassium sulfocyanate; Thiocyanic acid, potassium salt
<b>Manufacturer:</b>	Pioneer Forensics, LLC 804 E. Eisenhower Blvd. Loveland, CO 80537 Ph: (970) 292-8487
<b>Emergency Number:</b>	(800) 255-3924 (CHEM-TEL)
<b>Customer Service:</b>	(970) 292-8487

### **2. HAZARDS IDENTIFICATION**

**Emergency Overview:** MAY CAUSE IRRITATION TO SKIN, EYES, RESPIRATORY TRACT, AND/OR GASTROINTESTINAL TRACT. MAY BE HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN OR EYES.

*Safety Ratings:* Health: 1, Slight Reactivity: 0, None  
Flammability: 0, None Contact: 1, Slight

**OSHA Regulatory Status:** This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Potential Acute Health Effects:**

<b>Routes of Exposure:</b>	Inhalation, ingestion, skin contact, eye contact
<b>Inhalation:</b>	May be harmful if inhaled. Causes irritation to the respiratory tract and mucus membranes. May cause coughing and shortness of breath.
<b>Ingestion:</b>	Harmful or fatal if swallowed. May cause vomiting, disorientation, weakness, low blood pressure, convulsions, psychosis, and death.
<b>Skin Contact:</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eye Contact:</b>	May cause eye irritation.

**Target Organs:** Skin, gastrointestinal tract, nervous system, blood, cardiovascular system, urinary system, thyroid

**Chronic Health Effects:** Hazardous if ingested.

**Potential Environmental Effects:** This product is not expected to be harmful to the environment.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS#</u>	<u>Chemical Formula</u>	<u>Formula Weight</u>	<u>Hazardous</u>	<u>% by Weight</u>
Potassium Thiocyanate	333-20-0	KSCN	97.18	Yes	100

### 4. FIRST AID MEASURES

**First Aid Procedures:**

**Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen. If the victim is not breathing, provide artificial respiration. Get medical attention if symptoms persist.

**Ingestion:** Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation persists.

**General Advice:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

**Notes to Physician:** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**NFPA Ratings:** Health: 2      Flammability: 0      Reactivity: 0

**Flammable Properties:** Non-flammable.

**Flash Point:** No information found

**Auto-ignition Temp:** No information found

**Flammable Limits in Air (% by volume):** No information found

**Suitable Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media:** No information found

**Hazardous Combustion Products:** Cyanide, sulfur compounds, nitrogen oxides, carbon oxides

**Specific Hazards:** May cause fire or explosion if contacted with oxidizers. Thermal decomposition may release toxic fumes, including cyanide gas, under extreme heat conditions.

**Special Protective Equipment For Firefighters:** As in any fire, wear MSHA/NIOSH approved (or equivalent) self-contained positive pressure or pressure-demand breathing apparatus and full protective gear.

**Specific Methods:** Use water spray to cool unopened containers. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion, do not breathe fumes.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Ventilate area of leak or spill. Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Avoid contact with eyes, skin, and clothing.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Avoid discharge to the environment.

**Methods for Containment:** Prevent entry into waterways, sewer, basements or confined areas. Reduce airborne dust and prevent scattering by moistening with water.

**Methods for Cleaning Up:** Clean up spills in a manner that does not disperse dust into the air. Pick up spill for recovery or disposal and place in a suitable container for reclamation or disposal. Clean contaminated surface thoroughly. Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations.

## 7. HANDLING AND STORAGE

**Handling:** Wear personal protective equipment (see section 8). Avoid contact with skin, eyes and clothing. Do not ingest or inhale. Ensure adequate ventilation. Keep away from heat and flame. Keep away from acids and oxidizers. Wash thoroughly after handling.

**Storage:** Store in a cool, dry, ventilated area. Store in light resistant containers and keep from moisture. Keep containers tightly closed and upright. Separate from incompatibilities. Do not store near acids. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

**Exposure Limits:** OSHA (TWA): 5 mg/m<sup>3</sup>

**Engineering Controls:** In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels to an acceptable level.

### Personal Protective Equipment:

**Eye/Face Protection:** Wear safety goggles or glasses and face shield.

**Skin Protection:** Wear protective gloves and appropriate clothing to prevent skin contact.

**Respiratory Protection:** Not expected to require the use of a respirator, however, if engineering controls do not maintain airborne concentrations to an acceptable level, an approved/certified dust respirator should be worn.

**General Hygiene Considerations:**

Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Solid
<b>Appearance:</b>	Deliquescent crystal
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless
<b>Molecular Formula:</b>	KSCN
<b>Molecular Weight:</b>	97.18
<b>pH:</b>	5.0 – 9.0 (1 M aqueous solution)
<b>Specific Gravity:</b>	1.890
<b>Freezing/Melting Point:</b>	173 °C (343 °F)
<b>Boiling Point:</b>	500 °C (932 °F)
<b>Flash Point:</b>	No information found
<b>Auto Ignition Temperature:</b>	No information found
<b>Flammable Limits in Air (% by Volume):</b>	No information found
<b>Solubility:</b>	2170 g/L (20 °C)
<b>Vapor Pressure:</b>	No information found
<b>Vapor Density:</b>	No information found
<b>Percent Volatile:</b>	No information found
<b>Odor threshold (ppm):</b>	No information found
<b>Evaporation Rate:</b>	No information found
<b>Partition Coefficient (n-octanol/water):</b>	No information found

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	Heat, flames, incompatibles, light exposure, moisture
<b>Incompatible Materials:</b>	Acids, strong oxidizers, active halogen compounds
<b>Hazardous Decomposition Products:</b>	Carbon oxides, nitrogen oxides, sulfur compounds, cyanide
<b>Possibility of Hazardous Reactions:</b>	If exposed to acids, cyanide and hydrogen sulfide may be produced. If exposed to oxidizers or extreme heat, carbon oxides, nitrogen oxides, sulfur oxides, and cyanide may be produced.
<b>Hazardous Polymerization:</b>	Will not occur

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicological Data:</b>	Oral Rat LD50: 854 mg/kg	Oral Mouse LD50: 594 mg/kg
<b>Acute Effects:</b>	May be harmful if inhaled or absorbed through the skin or eyes.	
<b>Local Effects:</b>	May cause mild eye, skin, or respiratory system irritation.	

<b>Sensitization:</b>	Skin sensitizer
<b>Chronic Effects:</b>	Causes damage to the central nervous system; may cause damage to blood, cardiovascular system, urinary system, and thyroid.
<b>Carcinogenic Effects:</b>	No information found
<b>Skin Corrosion/Irritation:</b>	May cause skin irritation.
<b>Epidemiology:</b>	No epidemiological data is available for this product.
<b>Mutagenicity:</b>	May cause damage to germ cells.
<b>Neurological Effects:</b>	If ingested, may cause hallucinations, delirium, confusion, distorted perceptions, disorientation, toxic psychosis, convulsions, and muscle weakness.
<b>Reproductive Effects:</b>	No information found
<b>Teratogenic Effects:</b>	No information found
<b>Target Organs and Symptoms:</b>	Skin: ulcers, discoloration, eczema. Eyes: itching and swelling of eyelids, blurred vision. Lungs/mucous membranes: coughing, chest pain, difficulty breathing. Gastrointestinal tract: nausea, ulceration/stomach bleeding, vomiting. Cardiovascular system: hypotension, cardiovascular collapse.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicological Data:</b>	LC50 <i>Oncorhynchus mykiss</i> (Rainbow trout): >100 mg/L 96 H EC50 <i>Daphnia magna</i> (Water flea): 11 mg/L 48 H
<b>Ecotoxicity:</b>	No information found
<b>Environmental Effects:</b>	This product is not expected to be harmful to the environment.
<b>Aquatic Toxicity:</b>	Harmful to aquatic life.
<b>Persistence and Degradability:</b>	Long term biodegradation may occur. Products of biodegradation are expected to be less toxic than the product itself.
<b>Partition Coefficient (n-octanol/water):</b>	No information found

## 13. DISPOSAL INFORMATION

<b>Disposal Instructions:</b>	Dispose of this material and its container in accordance with local, state and federal regulations.
<b>Contaminated Packaging:</b>	Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.
<b>Waste Codes:</b>	No information found

## 14. TRANSPORT INFORMATION

<b>DOT:</b>	Not regulated
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## 15. REGULATORY INFORMATION

### U.S. Federal Regulations:

**OSHA:** This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** No information found

### U.S. EPCRA (SARA Title III):

<b>Sections 311/312:</b>	<u>Hazard Categories</u>	<u>List (Yes/No)</u>
	Section 311 – Hazardous Chemical	Yes
	Immediate Hazard	Yes
	Delayed Hazard	Yes
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No

**CERCLA Reportable Quantities:** N/A

<b>International Inventories:</b>	<u>Country(s) or Region</u>	<u>Inventory Name</u>	<u>On Inventory (Yes/No)*</u>
	Australia	Australian Inventory of Chemical Substances (AICS)	Yes
	Canada	Domestic Substances List (DSL)	Yes
	Canada	Non-Domestic Substances List (NDSL)	No
	China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
	Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
	Europe	European List of Notified Chemical Substances (ELINCS)	No
	Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
	Korea	Existing Chemicals List (ECL)	Yes
	New Zealand	New Zealand Inventory	No
	Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

\*A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s)

## 16. OTHER INFORMATION

**Product Use:** Laboratory and/or field reagent

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**Reason for Revision:** Not applicable