



Safety Data Sheet

Date of Issue: 22.07.2024

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Product Name	Potassium Thiocyanate
Product Code	43901
CAS No.	333-20-0

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Serious eye damage/eye irritation (Category 1)
Hazardous to the aquatic environment - chronic hazard (Category 3)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word : **Danger**

Hazard Statements

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P261 Avoid breathing dust.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

2.3 Other hazards

Contact with acids liberates very toxic gas.

3: Composition/information on ingredients

3.1 Substances

Formula	:	KSCN
Molecular weight	:	97.18 g/mol
CAS-No.	:	333-20-0
EC-No.	:	206-370-1
Index-No.	:	615-030-00-5

4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Sulfur oxides

Potassium oxides

Not combustible.

Fire may cause evolution of :

Sulfur oxides, nitrogen oxides, Hydrogen cyanide (hydrocyanic acid)
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Do not store near acids.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	Solid
Appearance	:	White powder or colourless crystals. Turns brown, green, blue when fused, white again on cooling.
Odour	:	Odourless.
Decomposition	:	500 °C (bpt.)
Temperature Melting Point	:	173 - 175 °C
Boiling Point	:	500 °C (decomp.)
Solubility in Water	:	Soluble.
Solubility in Organic solvents	:	Soluble in alcohol and acetone.
Specific Gravity	:	1.89
pH	:	~ 5.3 - 8.5 (50 g/L, H ₂ O, 20 °C)
Flammability	:	Non combustible material.
Molecular Weight	:	97.18

9.2 Other Information

Taste: Saline, cooling taste.

10: Stability and reactivity

10.1 Reactivity

Contact with acids liberates very toxic gas.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:
perchloryl fluoride , Strong oxidizing agents.

Generates dangerous gases or fumes in contact with:
Acids

Possible formation of :
Hydrogen cyanide (hydrocyanic acid)

Risk of ignition or formation of inflammable gases or vapours with:
Chlorites

Generates dangerous gases or fumes in contact with:
Acids

10.4 Conditions to avoid

Exposure to moisture. Light, heat, incompatibles.
Slowly decomposes on exposure to light.

10.5 Incompatible materials

Strong oxidisers, active halogen compounds, acids, bases, cyanides, nitrites.

10.6 Hazardous decomposition products

Cyanide fumes, potassium, hydrogen cyanide and oxides of carbon, nitrogen and sulfur
In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 854 mg/kg

Ingestion

Harmful if swallowed. May cause gastrointestinal irritation with psychosis, nausea, vomiting, disorientation, weakness, low blood pressure, convulsions and death which may be delayed. Ingestion of this material may lead to CNS effects, depression of the respiratory and cardiovascular systems. The probable lethal dose is between 15-30 grams.

Inhalation

Harmful by inhalation. Causes irritation to the mucous membranes and the respiratory tract. Symptoms may include coughing, chest pains and shortness of breath.

Skin

Harmful if absorbed through the skin. Causes irritation to skin with symptoms of redness, itching, and pain. Contact with skin may cause ulcers, discoloration or eczema.

Eye

Harmful if contact the eyes. Causes irritation to the eye, redness, pain, blurred vision and swollen eye lids.

Carcinogenicity

No evidence of carcinogenic properties

Chronic Effects

Prolonged or repeated skin exposure may cause dermatitis. Repeated ingestion of small amounts may cause weakness, confusion, central nervous system effects, nausea and skin eruptions.

Mutagenicity

No evidence of mutagenic effects.

12: Ecological information

12.1 Toxicity

Biological Properties

Harmful to aquatic life. May cause long term adverse effects in the aquatic environment.

Environmental Protection

Do not allow product to enter drains, waterways or sewers. Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Acute Toxicity – Daphnia

EC50 (Daphnia magna): 11 mg/l/48 h.

13: Disposal considerations

Disposal Considerations

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	-	-	-
14.2	UN Proper Shipping name	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3	Transport Hazard Class	-	-	-
14.4	Packaging group	-	-	-
14.5	Environmental Hazards	No	No	no
14.6	Special precautions for user	None		

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code:

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits

Group Standard 2006 HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required, not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company 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 the company has been advised of the possibility of such damages.

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