SAFETY DATA SHEET

1. Identification

Product identifier: POTASSIUM THIOCYANATE

Other means of identification
Product No.: 7168, 3326

Recommended use and restriction on use
Recommended use: Not available.
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
          Center Valley, PA 18034
Telephone: Customer Service: 855-282-6867
Fax:
Contact Person: Environmental Health & Safety
    e-mail: info@avantormaterials.com

Emergency telephone number:
24 Hour Emergency: 908-859-2151
Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Health hazards
Acute toxicity (Oral) Category 4
Acute toxicity (Dermal) Category 4
Acute toxicity (Inhalation - dust and mist) Category 4
Serious eye damage/eye irritation Category 2

Environmental hazards
Chronic hazards to the aquatic environment Category 3

Label elements
Hazard symbol:

Signal word: Warning
Hazard statement: Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response: Specific treatment (see this label). IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTASSIUM THIOCYANATE</td>
<td></td>
<td>333-20-0</td>
<td>90 - 100%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Rinse mouth thoroughly. Drink a few glasses of water or milk. Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: Move to fresh air. Get medical attention if symptoms persist.

Skin contact: Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Most important symptoms/effects, acute and delayed

Symptoms: Harmful if inhaled. Harmful if swallowed. Causes serious eye irritation.
Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General fire hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling:** Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store in a cool and well-ventilated place. Store in a dry place. Store away from incompatible materials.

8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

None of the components have assigned exposure limits.
Appropriate engineering controls

No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection: Wear protective gloves.

Other: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: 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

Appearance

Physical state: Solid
Form: Crystals
Color: Colorless
Odor: Odorless
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: 173 °C
Initial boiling point and boiling range: 500 °C
Flash Point: No data available.
Evaporation rate: No data available.
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.

Vapor pressure: No data available.
Vapor density: No data available.
Relative density: 1.89 (20 °C)

Solubility(ies)

Solubility in water: Very Soluble
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.
Other information
Molecular weight: 97.18 g/mol (CHNS.K)

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Contact with incompatible materials. Light.
Incompatible materials: Strong oxidizing agents. Halogens and halogenated compounds.
Hazardous decomposition products: Thermal decomposition may produce oxides of nitrogen. Cyanides.

11. Toxicological information

Information on likely routes of exposure
Ingestion: Harmful if swallowed. May cause irritation of the gastrointestinal tract.
Inhalation: Harmful if inhaled. May cause irritation to the respiratory system.
Skin contact: Harmful in contact with skin. May cause irritation.
Eye contact: Causes serious eye irritation. May irritate eyes.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)
Oral Product: No data available.
Dermal Product: No data available.
Inhalation Product: No data available.
Repeated dose toxicity Product: No data available.

Skin corrosion/irritation
Product: May cause skin irritation.

Serious eye damage/eye irritation
Product: Causes serious eye irritation. May irritate eyes.

Respiratory or skin sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:  
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:  
No carcinogenic components identified

No carcinogenic components identified

Germ cell mutagenicity
In vitro  
Product: No mutagenic components identified

In vivo  
Product: No mutagenic components identified

Reproductive toxicity  
Product: No data available.

Specific target organ toxicity - single exposure  
Product: No data available.

Specific target organ toxicity - repeated exposure  
Product: No data available.

Aspiration hazard  
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:  
Acute hazards to the aquatic environment:

Fish  
Product: No data available.

Specified substance(s):  
POTASSIUM  
THIOCYANATE
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 12 h): 410 - 508 mg/l Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 12 h): 492 - 681 mg/l Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 12 h): 504 - 706 mg/l Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 18 h): 1,849 - 1,894 mg/l Mortality
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 955 - 1,386 mg/l Mortality

Aquatic invertebrates  
Product: No data available.

Specified substance(s):  
POTASSIUM  
THIOCYANATE
LC 50 (Water flea (Daphnia magna), 96 h): 1.16 - 8.946 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 96 h): 1.429 - 9.155 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 96 h): 22.03 - 41.633 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 96 h): 23.149 - 45.657 mg/l Mortality
LC 50 (Water flea (Daphnia magna), 96 h): 23.86 - 46.937 mg/l Mortality

Chronic hazards to the aquatic environment:
Fish Product: No data available.

Aquatic invertebrates Product: No data available.

Toxicity to Aquatic Plants Product: No data available.

Persistence and degradability

Biodegradation Product: There are no data on the degradability of this product.

BOD/COD ratio Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow) Product: No data available.

Mobility in soil: No data available.

Other adverse effects: Harmful to aquatic life with long lasting effects. There are no data on the ecotoxicity of this product.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws. Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT Not regulated.

IMDG Not regulated.

IATA Not regulated.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.
CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

- Acute (Immediate)
- Chronic (Delayed)
- Fire
- Reactive
- Pressure Generating

SARA 302 Extremely hazardous substance
None present or none present in regulated quantities.

SARA 304 Emergency release notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous chemical

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTASSIUM</td>
<td>500 lbs</td>
</tr>
<tr>
<td>THIOCYANATE</td>
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</table>

SARA 313 (TRI reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US state regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.
Inventory Status:

Australia AICS: On or in compliance with the inventory
Canada DSL Inventory List: On or in compliance with the inventory
EINECS, ELINCS or NLP: On or in compliance with the inventory
Japan (ENCS) List: On or in compliance with the inventory
China Inv. Existing Chemical Substances: On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
Canada NDSL Inventory: Not in compliance with the inventory.
Philippines PICCS: On or in compliance with the inventory
US TSCA Inventory: On or in compliance with the inventory
New Zealand Inventory of Chemicals: On or in compliance with the inventory
Japan ISHL Listing: On or in compliance with the inventory
Japan Pharmacopoeia Listing: Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID

Flammability
Health
Reactivity
Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date: 08-05-2014
Revision date: No data available.
Version #: 1.0
Further information: No data available.
Disclaimer:

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