

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Potassium thiocyanate pure

Revision date: 17.08.2023

Product code: 15272

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Potassium thiocyanate pure

REACH Registration Number: 01-2119543697-26-0000  
CAS No: 333-20-0  
Index No: 615-004-00-3  
EC No: 206-370-1

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit  
Telefax: 0203/5194-290  
Telephone: 0203/5194-107/117

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### Further Information

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute Tox. 4; H332  
Acute Tox. 4; H312  
Acute Tox. 4; H302  
Eye Irrit. 2; H319  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



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**Hazard statements**

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

**Special labelling of certain mixtures**

EUH032 Contact with acids liberates very toxic gas.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Sum formula: KSCN  
Molecular weight: 97,18 g/mol

**Hazardous components**

| CAS No   | Chemical name   |              |                       | Quantity |
|----------|---|--------------|-----------------------|----------|
|          | EC No   | Index No     | REACH No              |          |
|          | Classification (Regulation (EC) No 1272/2008)   |              |                       |          |
| 333-20-0 | potassium thiocyanate   |              |                       | 100 %    |
|          | 206-370-1   | 615-004-00-3 | 01-2119543697-26-0000 |          |
|          | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2, Aquatic Chronic 3; H332 H312 H302 H319<br>H412 EUH032 |              |                       |          |

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

| CAS No   | EC No   | Chemical name         | Quantity |
|----------|---|-----------------------|----------|
|          | Specific Conc. Limits, M-factors and ATE  |                       |          |
| 333-20-0 | 206-370-1   | potassium thiocyanate | 100 %    |
|          | inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 508 mg/kg |                       |          |

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

Self-protection of the first aider

**After inhalation**

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.  
Call a physician immediately.

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#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Protect uninjured eye.

#### After ingestion

Rinse mouth immediately and drink plenty of water.  
Water, to which activated charcoal may be added  
Call a physician immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

Irritant  
Agitation  
Spasms  
Cardiac arrhythmias  
Circulatory collapse

#### 4.3. Indication of any immediate medical attention and special treatment needed

Release of: Hydrogen cyanide (hydrocyanic acid)

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

no restriction

#### 5.2. Special hazards arising from the substance or mixture

Non-combustible solids  
Hazardous combustion products  
In case of fire may be liberated:  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides  
Hydrogen cyanide (hydrocyanic acid)

#### 5.3. Advice for firefighters

Do not inhale explosion and combustion gases.  
Avoid contact with skin, eyes and clothes.  
In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Suppress gases/vapours/mists with water spray jet.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Move undamaged containers from immediate hazard area if it can be done safely.  
Use water spray jet to protect personnel and to cool endangered containers.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### For non-emergency personnel

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

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#### For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

#### **6.3. Methods and material for containment and cleaning up**

##### For containment

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

##### For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

##### Other information

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

#### Advice on safe handling

Read label before use. Handle and open container with care.  
When using do not eat, drink, smoke, sniff. Keep container tightly closed.  
Use personal protection equipment. Avoid contact with skin, eyes and clothes.  
Provide adequate ventilation. Avoid dust formation. Do not breathe dust.  
Use extractor hood (laboratory).

#### Advice on protection against fire and explosion

Usual measures for fire prevention.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.  
Make available sufficient washing facilities  
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### Further information on handling

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.

#### Further information on storage conditions

Store in a dry place.  
storage temperature +5°C - +30°C

### **7.3. Specific end use(s)**

Laboratory chemicals

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**DNEL/DMEL values**

| CAS No                   | Substance             | Exposure route | Effect   | Value                 |
|--------------------------|-----------------------|----------------|----------|-----------------------|
| 333-20-0                 | potassium thiocyanate |                |          |                       |
| Worker DNEL, long-term   |                       | inhalation     | systemic | 3,6 mg/m <sup>3</sup> |
| Worker DNEL, long-term   |                       | dermal         | systemic | 5,1 mg/kg bw/day      |
| Consumer DNEL, long-term |                       | inhalation     | systemic | 0,9 mg/m <sup>3</sup> |
| Consumer DNEL, long-term |                       | dermal         | systemic | 2,6 mg/kg bw/day      |
| Consumer DNEL, long-term |                       | oral           | systemic | 0,3 mg/kg bw/day      |

**PNEC values**

| CAS No   | Substance             | Value       |
|--|-----------------------|-------------|
| 333-20-0   | potassium thiocyanate |             |
| Environmental compartment                        |                       |             |
| Freshwater                                       |                       | 0,095 mg/l  |
| Freshwater (intermittent releases)               |                       | 0,027 mg/l  |
| Marine water                                     |                       | 0,009 mg/l  |
| Freshwater sediment                              |                       | 0,543 mg/kg |
| Marine sediment                                  |                       | 0,054 mg/kg |
| Secondary poisoning                              |                       | 1,667 mg/kg |
| Micro-organisms in sewage treatment plants (STP) |                       | 30 mg/l     |
| Soil   |                       | 6,336 mg/kg |

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe dust. Avoid dust formation.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Suitable material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Suitable material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

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The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

**Skin protection**

Wear suitable protective clothing.  
Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Filtering device with filter or ventilator filtering device of type: P2

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

|   |                   |                               |
|---|-------------------|-------------------------------|
| Physical state:   | solid             |                               |
| Colour:   | white             |                               |
| Odour:  | odourless         |                               |
| Odour threshold:  | No data available |                               |
| Melting point/freezing point:                             |                   | 177 °C                        |
| Boiling point or initial boiling point and boiling range: |                   | >400 °C                       |
| Flammability:   |                   | No data available             |
| Lower explosion limits:                                   |                   | No data available             |
| Upper explosion limits:                                   |                   | No data available             |
| Flash point:  |                   | X                             |
| Auto-ignition temperature:                                |                   | No data available             |
| Decomposition temperature:                                |                   | 500 °C                        |
| pH-Value (at 20 °C):                                      |                   | 5,3 - 8,5 (50 g/l)            |
| Viscosity / kinematic:                                    |                   | No data available             |
| Water solubility:<br>(at 20 °C)                           |                   | >1000 g/L                     |
| Solubility in other solvents                              |                   | No data available             |
| Dissolution rate:   |                   | No data available             |
| Partition coefficient n-octanol/water:                    |                   | No data available             |
| Dispersion stability:                                     |                   | No data available             |
| Vapour pressure:<br>(at 20 °C)                            |                   | <0,001 hPa                    |
| Vapour pressure:  |                   | No data available             |
| Density (at 20 °C):                                       |                   | 1,91 g/cm <sup>3</sup>        |
| Relative density:   |                   | No data available             |
| Bulk density:   |                   | ~750 - 1000 kg/m <sup>3</sup> |
| Relative vapour density:                                  |                   | No data available             |
| Particle characteristics:                                 |                   | No data available             |

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties  
No data available  
Sustaining combustion: No data available

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Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

#### Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

100%

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

#### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Oxidising agent

Acid

Formation of: Hydrogen cyanide (hydrocyanic acid)

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

No data available

### 10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

#### Further information

No data available

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Toxicokinetics, metabolism and distribution

No data available

#### Acute toxicity

Harmful if swallowed.

Harmful in contact with skin.

Harmful if inhaled.

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| CAS No   | Chemical name         |                   |                |                     |                    |
|----------|-----------------------|-------------------|----------------|---------------------|--------------------|
|          | Exposure route        | Dose              | Species        | Source              | Method             |
| 333-20-0 | potassium thiocyanate |                   |                |                     |                    |
|          | oral                  | LD50 508 mg/kg    | Japanese quail | Study report (1999) | OECD Guideline 401 |
|          | dermal                | LD50 > 2000 mg/kg | Rat            | Study report (2003) | OECD Guideline 402 |
|          | inhalation vapour     | ATE 11 mg/l       |                |                     |                    |
|          | inhalation dust/mist  | ATE 1,5 mg/l      |                |                     |                    |

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

Irritant

Agitation

Spasms

Cardiac arrhythmias

Circulatory collapse

**SECTION 12: Ecological information**

**12.1. Toxicity**



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| CAS No   | Chemical name            |           |           |         |                                 |   |
|----------|--------------------------|-----------|-----------|---------|---------------------------------|---|
|          | Aquatic toxicity         | Dose      | [h]   [d] | Species | Source                          | Method  |
| 333-20-0 | potassium thiocyanate    |           |           |         |                                 |   |
|          | Acute fish toxicity      | LC50      | 65 mg/l   | 96 h    | Oncorhynchus mykiss             | Study report (1999)<br>EU Method C.1                            |
|          | Acute algae toxicity     | ErC50     | 116 mg/l  | 72 h    | Pseudokirchneriella subcapitata | Study report (1999)<br>OECD Guideline 201                       |
|          | Acute crustacea toxicity | EC50 mg/l | 3,56      | 48 h    | Daphnia magna                   | Study report (1999)<br>OECD Guideline 202                       |
|          | Fish toxicity            | NOEC mg/l | 1,84      | 124 d   | Pimephales promelas             | Study report (1994)<br>Test was based on exposing juvenile fath |
|          | Crustacea toxicity       | NOEC mg/l | 1,25      | 21 d    | Daphnia magna                   | Study report (2005)<br>OECD Guideline 211                       |

**12.2. Persistence and degradability**

80 %; 28 d; aerob  
OECD 301D  
Readily biodegradable (according to OECD criteria).

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

| CAS No   | Chemical name         | Log Pow |
|----------|-----------------------|---------|
| 333-20-0 | potassium thiocyanate | -2,52   |

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.  
No data available

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.  
No data available

**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains.  
Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.  
Send to a hazardous waste incinerator facility under observation of official regulations.  
Do not allow to enter into surface water or drains.  
Do not mix with other wastes.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.  
Handle contaminated packages in the same way as the substance itself.

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**SECTION 14: Transport information**

**Land transport (ADR/RID)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Inland waterways transport (ADN)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Marine transport (IMDG)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Air transport (ICAO-TI/IATA-DGR)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

No dangerous good in sense of this transport regulation.

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 1.

**Abbreviations and acronyms**

Acute Tox: Acute toxicity

Eye Irrit: Eye irritation

Aquatic Chronic: Chronic aquatic hazard

**Relevant H and EUH statements (number and full text)**

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|                |   |
|----------------|---|
| H302           | Harmful if swallowed.                                     |
| H302+H312+H332 | Harmful if swallowed, in contact with skin or if inhaled. |
| H312           | Harmful in contact with skin.                             |
| H319           | Causes serious eye irritation.                            |
| H332           | Harmful if inhaled.                                       |
| H412           | Harmful to aquatic life with long lasting effects.        |
| EUH032         | Contact with acids liberates very toxic gas.              |

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.