

**Safety data sheet  
according to 1907/2006/EC, Article 31**

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

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

- **1.1 Product identifier**
- **Trade name: Potassium thiocyanate**
- **Article number:** 1695, 1679
- **CAS Number:**  
333-20-0
- **EC number:**  
206-370-1
- **Index number:**  
615-004-00-3
- **Registration number** 01-2119543697-26-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Life cycle stages**
  - F Formulation or re-packing
  - IS Use at industrial Sites
  - M Manufacture
- **Application of the substance / the mixture**
  - Chemical analytics
  - Laboratory chemicals
  - Commercial use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Th. Geyer GmbH & Co. KG  
Dornierstr. 4 – 6  
D-71272 Renningen  
  
Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417  
www.thgeyer.de  
sicherheitsdatenblaetter@thgeyer.de
- **Further information obtainable from:** Product management department
- **1.4 Emergency telephone number:**  
National Poisons Information Service  
City Hospital  
Dudley Road  
Birmingham B18 7QH  
Tel.:Emergency: (00 44) 87 06 00 62 66  
Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

(Contd. on page 2)

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 1)

Acute Tox. 4      H312 Harmful in contact with skin.

Acute Tox. 4      H332 Harmful if inhaled.

Aquatic Chronic 3    H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

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 water.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

EUH032 Contact with acids liberates very toxic gas.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Description**

CAS: 333-20-0 potassium thiocyanate

- **Identification number(s)**

- **EC number:** 206-370-1

- **Index number:** 615-004-00-3

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Remove person from danger zone.

Supply fresh air.

Seek medical treatment.

- **After skin contact:**

Wash with plenty of soap and water, take off soiled clothes and shoes.

After prolonged contact (accidental/forced) or any signs of skin changes (redness or other signs of inflammation), consult a doctor.

Take into account possible simultaneous inhalation.

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 2)

- **After eye contact:**  
Protect unharmed eye.  
Rinse out opened eye for several minutes under running water.  
Seek medical treatment.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Induce vomiting, if person is conscious. Seek medical help.
- **Information for doctor:** Please observe safety data sheet/label.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Cramp  
Gastric or intestinal disorders  
Unconsciousness  
Nausea  
In certain cases, the symptoms of poisoning may only appear after a longer period of time.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
In case of lung irritation, administer glucocorticoid dose aerosol.  
If necessary oxygen respiration treatment.  
If swallowed, induce vomiting (if patient is conscious).  
If swallowed, gastric irrigation.  
Monitor circulation.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon oxides (CO, CO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides  
Hydrogen cyanide (HCN, hydrocyanic acid)  
Formation of toxic gases is possible during heating or in case of fire.  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Mouth respiratory protective device.  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Safely prevent extinguishing water from entering groundwater or surface water.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation.  
Avoid formation of dust.  
Do not breathe dust.  
Avoid contact with eyes and skin.  
Mount respiratory protective device.
- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Cover the sewerage system.

(Contd. on page 4)

E

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 3)

Prevent spreading over an area (e.g. by damming or oil booms).  
 Pick up mechanically.  
 Dispose contaminated material as waste according to section 13.  
 Dispose of the material collected according to regulations.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

### SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.  
 Keep away from heat and direct sunlight.  
 Apply the general protective and hygienic measures when handling chemicals.

**Information about fire - and explosion protection:**

Substance itself does not burn, adapt extinguishing measures to surroundings

**7.2 Conditions for safe storage, including any incompatibilities**
**Storage:**
**Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.  
 Store only in the original receptacle.

**Information about storage in one common storage facility:**

Store away from oxidising agents.  
 Store away from water.  
 Do not store together with acids.

**Further information about storage conditions:**

Store in dry conditions.  
 Protect from humidity and water.

**Storage class: 13**
**7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**
**Ingredients with limit values that require monitoring at the workplace:**
**CAS: 333-20-0 potassium thiocyanate**

WEL	Long-term value: 5 mg/m <sup>3</sup> as CN; Sk
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**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Hand protection**



Protective gloves

(Contd. on page 5)

E

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 4)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Information on suitable glove materials is not available at present.

However, experience has shown that the glove materials polychloroprene, nitrile rubber, butyl rubber, fluororubber and polyvinyl chloride are suitable for protection against undissolved solids.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

NBR: Acrylonitrile butadiene rubber

Material thickness > 0.11 mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Level 6 for applications > 480 min

- **Eye/face protection**



Safety glasses

- **Body protection:**



Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

### SECTION 9: Physical and chemical properties

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

- **General Information**

- **Physical state**

Solid

- **Colour:**

Colourless

- **Odour:**

Odourless

- **Melting point/freezing point:**

175 °C

- **Boiling point or initial boiling point and boiling range**

500 °C

- **Flammability**

Product is not flammable.

- **Lower and upper explosion limit**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Flash point:**

Not applicable.

- **Decomposition temperature:**

Not determined.

- **pH**

5.3–8.5

- **Viscosity:**

- **Kinematic viscosity**

Not applicable.

- **Dynamic:**

Not applicable.

- **Solubility**

- **water at 20 °C:**

2170 g/l

- **Partition coefficient n-octanol/water (log value)**

Not determined.

- **Vapour pressure:**

Not applicable.

- **Density and/or relative density**

- **Density at 20 °C:**

1.89 g/cm<sup>3</sup>

- **Relative density**

Not determined.

Not determined.

(Contd. on page 6)

E

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

Trade name: Potassium thiocyanate

(Contd. of page 5)

<ul style="list-style-type: none"> <li>· Vapour density</li> <li>· Particle characteristics See section 3.</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· 9.2 Other information</li> <li>· Appearance:</li> <li>· Form: Solid material</li> <li>· Important information on protection of health and environment, and on safety.</li> <li>· Ignition temperature: Not determined.</li> <li>· Explosive properties: Product does not present an explosion hazard.</li> <li>· Molecular weight: 97.18 g/mol</li> <li>· Change in condition</li> <li>· Evaporation rate: Not applicable.</li> </ul>	
<ul style="list-style-type: none"> <li>· Information with regard to physical hazard classes</li> <li>· Explosives: Void</li> <li>· Flammable gases: Void</li> <li>· Aerosols: Void</li> <li>· Oxidising gases: Void</li> <li>· Gases under pressure: Void</li> <li>· Flammable liquids: Void</li> <li>· Flammable solids: Void</li> <li>· Self-reactive substances and mixtures: Void</li> <li>· Pyrophoric liquids: Void</li> <li>· Pyrophoric solids: Void</li> <li>· Self-heating substances and mixtures: Void</li> <li>· Substances and mixtures, which emit flammable gases in contact with water: Void</li> <li>· Oxidising liquids: Void</li> <li>· Oxidising solids: Void</li> <li>· Organic peroxides: Void</li> <li>· Corrosive to metals: Void</li> <li>· Desensitised explosives: Void</li> </ul>	

### SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability Stable when stored and handled properly.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Reacts with oxidising agents.
- 10.4 Conditions to avoid Protect from moisture.
- 10.5 Incompatible materials: Avoid contact with other chemicals.
- 10.6 Hazardous decomposition products: In case of fire: see section 5.

### SECTION 11: Toxicological information

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity Harmful if swallowed, in contact with skin or if inhaled.

#### · LD/LC50 values relevant for classification:

Oral	LD50	854 mg/kg (rat)
Dermal	LD50	1,100 mg/kg (ATE)

(Contd. on page 7)

E

# Safety data sheet

## according to 1907/2006/EC, Article 31

revised on: 12.10.2023

Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 6)

Inhalative	LC50	1.5 mg/l (ATE)
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- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** 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.
- **Subacute to chronic toxicity:** -
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**  
Observe local (country-specific) regulations and laws.  
This product and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Chemicals must be disposed of in accordance with the respective national regulations.

- **European waste catalogue**

HP6	Acute Toxicity
HP12	Release of an acute toxic gas
HP14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 8)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 5

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Trade name: Potassium thiocyanate

(Contd. of page 7)

### SECTION 14: Transport information

- |  |                 |
|--|-----------------|
| · 14.1 UN number or ID number<br>· ADR, ADN, IMDG, IATA                | not regulated   |
| · 14.2 UN proper shipping name<br>· ADR, ADN, IMDG, IATA               | not regulated   |
| · 14.3 Transport hazard class(es)<br>· ADR, ADN, IMDG, IATA<br>· Class | not regulated   |
| · 14.4 Packing group<br>· ADR, IMDG, IATA                              | not regulated   |
| · 14.5 Environmental hazards:  | Not applicable. |
| · 14.6 Special precautions for user                                    | Not applicable. |
| · 14.7 Maritime transport in bulk according to IMO instruments         | Not applicable. |
| · UN "Model Regulation":   | not regulated   |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Inventory of Hazardous Chemicals** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.  
The application, use and processing of our products are beyond our control and are therefore exclusively your responsibility.

- **Department issuing SDS:** Product management
- **Contact:** Product management

(Contd. on page 9)



# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 5

Creation Date: 03.03.2017

**Trade name: Potassium thiocyanate**

(Contd. of page 8)

**· Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**· \* Data compared to the previous version altered.**

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