

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 1 of 11

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

1.1. Product identifier

Potassium thiocyanate solution 20 % pure in water

UFI: AF99-Y1M7-R002-F6X3

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: | Fa. Bernd Kraft GmbH | |
| Street: | Stempelstraße 6 | |
| Place: | D-47167 Duisburg | |
| Telephone: | 0203/5194-0 | Telefax: 0203/5194-290 |
| e-mail: | info@berndkraft.de | |
| Contact person: | Abteilung Produktsicherheit | Telephone: 0203/5194-107/117 |
| e-mail: | produktsicherheit@berndkraft.de | |
| Internet: | www.berndkraft.de | |
| Responsible Department: | Abteilung Produktsicherheit | |

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

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 2 of 11

P337+P313 present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

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

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

| CAS No | Chemical name | | | Quantity |
|----------|---|--------------|------------------|-------------|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 333-20-0 | potassium thiocyanate | | | 20 - < 25 % |
| | 206-370-1 | 615-004-00-3 | 01-2119543697-26 | |
| | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2, Aquatic Chronic 3; H332 H312 H302 H319 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 | 20 - < 25 % |
| | 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.

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.

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 3 of 11

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 liquids
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NOx)
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.

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

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 4 of 11

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.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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. Do not breathe vapour/aerosol.
- 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.

7.3. Specific end use(s)

- Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 5 of 11

DNEL/DMEL values

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

PNEC values

| CAS No | Substance | |
|--|-----------------------|--|
| Environmental compartment | Value | |
| 333-20-0 | potassium thiocyanate | |
| 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.

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 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

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).

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 6 of 11

Skin protection

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

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

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: | Liquid | |
| Colour: | colourless | |
| Odour: | odourless | |
| Odour threshold: | No data available | |
| Melting point/freezing point: | | No data available |
| Boiling point or initial boiling point and boiling range: | | No data available |
| Flammability | | |
| Solid/liquid: | | No data available |
| Gas: | | 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: | | No data available |
| pH-Value: | | 8,3 |
| Viscosity / kinematic: | | No data available |
| Water solubility: | | No data available |
| 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: | | No data available |
| Vapour pressure: | | No data available |
| Density: | | 1,103 g/cm ³ |
| Relative density: | | No data available |
| Bulk density: | | No data available |
| 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 |
| Self-ignition temperature | |
| Solid: | No data available |
| Gas: | No data available |
| Oxidizing properties | |
| No data available | |

Other safety characteristics

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 7 of 11

| | |
|--------------------------|-------------------|
| Evaporation rate: | No data available |
| Solvent separation test: | No data available |
| Solvent content: | No data available |
| Solid content: | 0 |
| 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

There are no data available on the preparation/mixture itself.

Acute toxicity

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

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

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 8 of 11

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

There are no data available on the preparation/mixture itself.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

Other information

There are no data available on the preparation/mixture itself.

Further information

Irritant

Agitation

Spasms

Cardiac arrhythmias

Circulatory collapse

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 9 of 11

| 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) EU Method C.1 |
| | Acute algae toxicity | ErC50 | 116 mg/l | 72 h | Pseudokirchneriella subcapitata | Study report (1999) OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 mg/l | 3,56 | 48 h | Daphnia magna | Study report (1999) OECD Guideline 202 |
| | Fish toxicity | NOEC mg/l | 1,84 | 124 d | Pimephales promelas | Study report (1994) Test was based on exposing juvenile fath |
| | Crustacea toxicity | NOEC mg/l | 1,25 | 21 d | Daphnia magna | Study report (2005) OECD Guideline 211 |

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

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

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

There are no data available on the mixture itself.

12.7. Other adverse effects

There are no data available on the mixture itself.

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.

SECTION 14: Transport information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 10 of 11

Land transport (ADR/RID)

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

Inland waterways transport (ADN)

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

Marine transport (IMDG)

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

Air transport (ICAO-TI/IATA-DGR)

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

Restrictions on use (REACH, annex XVII):

Entry 3

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): 1,9,12.

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

| | |
|--------------------|--------------------------|
| Classification | Classification procedure |
| Eye Irrit. 2; H319 | Calculation method |

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Potassium thiocyanate solution 20 % pure in water

Revision date: 05.08.2022

Product code: 14553

Page 11 of 11

Relevant H and EUH statements (number and full text)

| | |
|--------|--|
| H302 | Harmful if swallowed. |
| 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.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)