

Safety Data Sheet

according to UK REACH Regulation

Cyanide stock solution 1000 mg CN/I (ppm) KCN in sodium hydroxide solution 0.01 mol/I for determinat

Revision date: 18.09.2023 Product code: 24417 Page 1 of 12

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

1.1. Product identifier

Cyanide stock solution 1000 mg CN/I (ppm) KCN in sodium hydroxide solution 0.01 mol/I for determinat

UFI: 1AM5-H200-X00K-DJXG

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

Use of the substance/mixture

Laboratory chemical

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). No data available

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

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.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

inapplicable, this product is a mixture REACH registration number see section 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 3; H301 Acute Tox. 4; H332 Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

potassium cyanide

Signal word: Danger

Pictograms:







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Hazard statements

H301 Toxic if swallowed. H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P391 Collect spillage.

P501 Dispose of contents/container to Dispose of contents/container in accordance with

local/regional/national/international regulations..

2.3. Other hazards

No information 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 (GB CLP Regulation)			
151-50-8	potassium cyanide			< 1 %
	205-792-3 006-007-00-5 01-2119486407-29			
	Acute Tox. 1, Acute Tox. 1, Acute Tox. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H300 H372 H400 H410 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. L	Limits, M-factors and ATE			
151-50-8	205-792-3 potassium cyanide				
	inhalation: ATE = 0,05 mg/l (vapours); inhalation: ATE = 0,005 mg/l (dusts or mists); inhalation: LC50 = 63 ppm (gases); dermal: LD50 = ca. 11,28 mg/kg; oral: LD50 = >= 7,49 mg/kg Aquatic Chronic 1: H410: M=10				

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

No data available

After inhalation

Provide fresh air.

Call a physician immediately.

After contact with skin

Take off immediately all contaminated clothing and wash it before reuse.

Wash immediately with: Water



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Call a physician immediately.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

No data available

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

No data available

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: Hydrogen cyanide (hydrocyanic acid)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe vapour/aerosol.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

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 empty into drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.



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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.

Do not breathe vapour/aerosol.

Use extractor hood (laboratory).

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

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

Take off immediately all contaminated clothing and wash it before reuse.

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

Draw up and observe skin protection programme. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Store in a place accessible by authorized persons only.

Hints on joint storage

national regulations

Further information on storage conditions

Store in a dry place.

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

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters



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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
151-50-8	Potassium cyanide (as cyanide)	-	1		TWA (8 h)	WEL
		-	5		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance					
DNEL type		Exposure route	Effect	Value		
151-50-8	potassium cyanide					
Worker DNEL, long-term		inhalation	systemic	0,94 mg/m³		
Worker DNEL, acute		inhalation	systemic	12,5 mg/m³		
Worker DNEL, long-term		dermal	systemic	0,14 mg/kg bw/day		
Worker DNEL, acute		dermal	systemic	4,03 mg/kg bw/day		

PNEC values

CAS No	Substance	
Environmenta	al compartment	Value
151-50-8	potassium cyanide	
Freshwater		0,001 mg/l
Freshwater (i	intermittent releases)	0,0032 mg/l
Marine water		0,0002 mg/l
Freshwater s	ediment	0,004 mg/kg
Marine sedim	nent	0,0008 mg/kg
Micro-organis	sms in sewage treatment plants (STP)	0,05 mg/l
Soil		0,007 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 vapour/aerosol.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):



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By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended 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
Recommended 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).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Thermal hazards

No data available

Environmental exposure controls

Do not empty into 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:

Boiling point or initial boiling point and

No data available

No data available

boiling range:

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:

No data available
pH-Value:

11.8

Viscosity / kinematic:

Water solubility:

No data available

No data available

Solubility in other solvents

not determined

Dissolution rate:

Partition coefficient n-octanol/water:

Dispersion stability:

Vapour pressure:

Vapour pressure:

No data available

Vapour pressure:

No data available

No data available

No data available

Opensity:

0,9985 g/cm³



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No data available

Relative density:

Bulk density:

Relative vapour density:

No data available

No data available

No data available

Particle characteristics:

No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties not determined

Sustaining combustion: No data available

Self-ignition temperature

Solid: No data available
Gas: No data available

Oxidizing properties Not oxidising.

Other safety characteristics

Evaporation rate:

Solvent separation test:

No data available

Solvent content:

Solid content:

Sublimation point:

No data available

No data available

No data available

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flow time:

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Acid

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated: Hydrogen cyanide (hydrocyanic acid)

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation



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Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Toxic if swallowed.

Harmful if inhaled.

ATEmix calculated

ATE (oral) 200,0 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 20,00 mg/l; ATE (inhalation dust/mist) 2,000 mg/l

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
151-50-8	potassium cyanide						
	oral	LD50 mg/kg	>= 7,49	Rat	Clinical and Experimental Toxicology of	A reputable corporate laboratory	
	dermal	LD50 mg/kg	ca. 11,28	Rabbit	J Toxicol – Cut and Ocular Toxicol 13:24	Animals were exposed to a solution of cy	
	inhalation vapour	ATE	0,05 mg/l				
	inhalation dust/mist	ATE mg/l	0,005				
•	inhalation (1 h) gas	LC50	63 ppm	Rat	Study report (1981)	OECD Guideline 403	

Irritation and corrosivity

Based on available data, the classification criteria are not met. slightly irritant but not relevant for classification.

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 mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.



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Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

CAS No	Chemical name								
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method		
151-50-8	potassium cyanide								
	Acute fish toxicity	LC50 mg/l	0,1038	96 h	Gasterosteus aculeatus	Study report (2005)	other: ASTM E729-96. Standard Guide for		
	Acute algae toxicity	ErC50 mg/l	0,116	72 h	Pseudokirchneriella subcapitata	Journal of Hazardous Materials 197 (2011	ISO 8692		
	Acute crustacea toxicity	EC50 mg/l	0,21638	48 h	other aquatic crustacea: Acartia tonsa	Study report (2006)	other: ASTM E 729-96: Standard Guide for		
	Algae toxicity	NOEC	0,1 mg/l	10 d	Chlamydomonas sp.	Bulletin 106. Virginia Water resources R	Bartsch, A.F. 1971. Algal Assay Procedur		
	Acute bacteria toxicity	(EC50	2,3 mg/l)	0,5 h	activated sludge, domestic	Acta hydrochim. hydrobiol. 20, 3 (1992)	EU Method C.11		

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.

BCF

C.	AS No	Chemical name	BCF	Species	Source
15	51-50-8	potassium cyanide	3,162		United States Enviro

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 UK REACH.

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.

12.7. Other adverse effects

There are no data available on the mixture itself.

Further information

Discharge into the environment must be avoided.

Harmful effect due to pH shift.

SECTION 13: Disposal considerations

13.1. Waste treatment methods



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Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 3289

14.2. UN proper shipping name: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (potassium cyanide,

sodium hydroxide)

6.1 14.3. Transport hazard class(es): 14.4. Packing group: Ш Hazard label: 6.1+8 Classification code: TC3 Special Provisions: 274 Limited quantity: 100 mL Excepted quantity: E4 Transport category: 2 Hazard No: 68 Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 3289

14.2. UN proper shipping name: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (potassium cyanide,

sodium hydroxide)

14.3. Transport hazard class(es):6.114.4. Packing group:IIHazard label:6.1+8Classification code:TC3Special Provisions:274 802Limited quantity:100 mLExcepted quantity:E4

Marine transport (IMDG)

14.1. UN number or ID number: UN 3289

14.2. UN proper shipping name: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (potassium cyanide,

sodium hydroxide)

14.3. Transport hazard class(es):6.114.4. Packing group:IIHazard label:6.1+8Special Provisions:274Limited quantity:100 mLExcepted quantity:E4EmS:F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3289

14.2. UN proper shipping name: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (potassium cyanide,

sodium hydroxide)

14.3. Transport hazard class(es): 6.1 14.4. Packing group:



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Hazard label: 6.1+8
Special Provisions: A4 A137
Limited quantity Passenger: 0.5 L
Passenger LQ: Y640
Excepted quantity: E4

IATA-packing instructions - Passenger: 653
IATA-max. quantity - Passenger: 1 L
IATA-packing instructions - Cargo: 660
IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: potassium cyanide

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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, Entry 75

Information according to 2012/18/EU

E2 Hazardous to the Aquatic Environment

(SEVESO III):

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9.

Abbreviations and acronyms

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service LC50: Lethal concentration, 50%

LD50: Lethal dose, 50% Acute Tox: Acute toxicity

STOT RE: Specific target organ toxicity - repeated exposure

Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard



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Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 3; H301	Calculation method
Acute Tox. 4; H332	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H332	Harmful if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.
 Toxic 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 data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)