

Cyanide standard solution 1000 µg/ml for

Revision: 24.04.2025

Product code: AC18.03023

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Cyanide standard solution 1000 µg/ml for

UFI: X88J-426Q-3WCD-MQ1C

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

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household). No data available

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

Company name: AnalytiChem Services, Unipessoal, Lda
Street: Rua de Júlio Dinis 676 7º
Place: N-4050-320 Porto
Telephone: +351 226002917
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: SDS service department

Supplier or manufacturer details

Company name: AnalytiChem Belgium NV
Street: Industriezone "De Arend" 2
Place: B-8210 Zedelgem
Telephone: +32 50 28 83 20
E-mail: info.be@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Responsible Department: AnalytiChem:
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

1.4. Emergency telephone**number:**

+44 20 3807 3798 (CHEMTREC)

Further Information

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

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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 3; H301

Acute Tox. 4; H332

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

Potassium cyanide

Signal word: Danger**Pictograms:****Hazard statements**

H301 Toxic if swallowed.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P264 Wash hands and face thoroughly after handling.

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 an appropriate recycling or disposal facility.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
151-50-8	Potassium cyanide			< 1 %
	205-792-3	006-007-00-5		
	Met. Corr. 1, Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H290 H310 H330 H300 H372 H400 H410 EUH032			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
151-50-8	205-792-3	Potassium cyanide	< 1 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 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**

First aider: Pay attention to self-protection!

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

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.

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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.

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.

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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 regulatory information

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****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
151-50-8	Potassium cyanide (as cyanide)	-	1		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
DNEL type				
151-50-8	Potassium cyanide			
Worker DNEL, long-term		inhalation	systemic	0,94 mg/m ³
Worker DNEL, acute		inhalation	systemic	12,5 mg/m ³
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	Value
Environmental compartment		
151-50-8	Potassium cyanide	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,0032 mg/l
Marine water		0,0002 mg/l
Freshwater sediment		0,004 mg/kg
Marine sediment		0,0008 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,05 mg/l
Soil		0,007 mg/kg

Additional advice on limit values

Observe in addition any national regulations!

8.2. Exposure controls

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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 protection/face protection.
Suitable eye protection: goggles.

Hand protection

Tested protective gloves must be worn
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.

Skin protection

Wear suitable protective clothing.
The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

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:	No data available
Boiling point or initial boiling point and boiling range:	No data available
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:	9
Viscosity / kinematic:	No data available
Water solubility:	No data available
Solubility in other solvents	
not determined	
Dissolution rate:	No data available

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Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,00 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

not determined

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

0

Solid content:

0

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

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 hazardous reaction when handled and stored according to provisions.

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)

SECTION 5: Firefighting measures

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Further information

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

Toxic if swallowed.

Harmful if inhaled.

ATEmix calculated

ATE (oral) 199,8 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 19,98 mg/l; ATE (inhalation dust/mist) 1,998 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	0,5 mg/l			
	inhalation dust/mist	ATE	0,05 mg/l			
	inhalation (1 h) gas	LC50	63 ppm	Rat	Study report (1981)	OECD Guideline 403

Irritation and corrosivity

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

Serious eye damage/eye irritation: 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

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.

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.

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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.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information**12.1. Toxicity**

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
151-50-8	Potassium cyanide					
	Acute fish toxicity	LC50 0,1038 mg/l	96 h	Gasterosteus aculeatus	Study report (2005)	other: ASTM E729-96. Standard Guide for
	Acute algae toxicity	ErC50 0,116 mg/l	72 h	Pseudokirchneriella subcapitata	Journal of Hazardous Materials 197 (2011)	ISO 8692
	Acute crustacea toxicity	EC50 0,21638 mg/l	48 h	other aquatic crustacea: <i>Acartia tonsa</i>	Study report (2006)	other: ASTM E 729-96: Standard Guide for
	Algae toxicity	NOEC 0,1 mg/l	10 d	<i>Chlamydomonas</i> 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

CAS No	Chemical name	BCF	Species	Source
151-50-8	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.

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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****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

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

<u>14.1. UN number or ID number:</u>	UN 3413
<u>14.2. UN proper shipping name:</u>	POTASSIUM CYANIDE SOLUTION
<u>14.3. Transport hazard class(es):</u>	6.1
<u>14.4. Packing group:</u>	II
Hazard label:	6.1
Classification code:	T4
Limited quantity:	100 mL
Excepted quantity:	E4
Transport category:	2
Hazard No:	60
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	UN 3413
<u>14.2. UN proper shipping name:</u>	POTASSIUM CYANIDE SOLUTION
<u>14.3. Transport hazard class(es):</u>	6.1
<u>14.4. Packing group:</u>	II
Hazard label:	6.1
Classification code:	T4
Special Provisions:	802
Limited quantity:	100 mL
Excepted quantity:	E4

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	UN 3413
<u>14.2. UN proper shipping name:</u>	POTASSIUM CYANIDE SOLUTION
<u>14.3. Transport hazard class(es):</u>	6.1
<u>14.4. Packing group:</u>	II
Hazard label:	6.1
Marine pollutant:	P
Special Provisions:	-
Limited quantity:	100 mL
Excepted quantity:	E4
EmS:	F-A, S-A
Segregation group:	6 - cyanides

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Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3413
14.2. UN proper shipping name:	POTASSIUM CYANIDE SOLUTION
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1
Special Provisions:	A3
Limited quantity Passenger:	1 L
Passenger LQ:	Y641
Excepted quantity:	E4
IATA-packing instructions - Passenger:	654
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	662
IATA-max. quantity - Cargo:	60 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

Information according to Directive
2012/18/EU (SEVESO III):

E2 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

SECTION 16: Other information

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Abbreviations and acronyms

Met. Corr. 1: Corrosive to metals, hazard category 1
Acute Tox. 1: Acute toxicity, hazard category 1
Acute Tox. 2: Acute toxicity, hazard category 2
Acute Tox. 3: Acute toxicity, hazard category 3
Acute Tox. 4: Acute toxicity, hazard category 4
STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1
Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2
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%

Classification for mixtures and used evaluation method

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)

H290 May be corrosive to metals.
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 (thyroid gland) through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 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.

Provide appropriate information, instructions and training to users

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