

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

21223-49 Alkaline Cyanide Reagent

Revision date: 27.11.2017

Product code: 2122349

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

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

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

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

Hazard categories:

Acute toxicity: Acute Tox. 2

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Skin corrosion/irritation: Skin Corr. 1B

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Fatal in contact with skin.

Toxic if swallowed.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Very toxic to aquatic life with long lasting effects.

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

Sodium cyanide

sodium hydroxide; caustic soda

Signal word: Danger

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Pictograms:



Hazard statements

H301+H331	Toxic if swallowed or if inhaled.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P270	Do not eat, drink or smoke when using this product.
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
7732-18-5	Water	85-90 %
	231-791-2	
143-33-9	Sodium cyanide	1-7 %
	205-599-4	
	006-007-00-5	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Aquatic Acute 1, Aquatic Chronic 1; H310 H330 H300 H400 H410 EUH032	
1310-73-2	sodium hydroxide; caustic soda	1-5 %
	215-185-5	
	011-002-00-6	
	Skin Corr. 1A; H314	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information

Take off all contaminated clothing immediately.
Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation

Call a physician or poison control centre immediately. Show this safety data sheet to the doctor in attendance.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes. Consult a physician. Show this safety data sheet to the doctor in attendance.

After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

After ingestion

Call a physician or poison control centre immediately. Show this safety data sheet to the doctor in attendance.

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

Irritation and corrosion, Cough, Shortness of breath, Unconsciousness, Spasm

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours. (Cyanides)

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Do not breathe vapours/dust.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep tightly closed in a dry, cool and well-ventilated place. Accessible only for authorized persons.

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7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
143-33-9	Sodium cyanide (as cyanide)	-	5		TWA (8 h)	WEL
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and after work.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Skin protection

Remove and wash contaminated clothing before re-use.

Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	colourless
Odour:	odourless
pH-Value (at 20 °C):	12,3

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	92 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable

Flammability

Solid:	not applicable
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Gas: not applicable

Explosive properties

not applicable

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: not applicable

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not applicable

Oxidizing properties

not applicable

Vapour pressure: no data available

Density (at 20 °C): 1,112 g/cm³

Bulk density: not applicable

Water solubility:
(at 20 °C) completely soluble**Solubility in other solvents**

soluble

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate:
(at 20 °C) 0,57

Solvent separation test: no data available

Solvent content: no data available

9.2. Other information

Solid content: not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity Hazard: Acids

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Acids

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Acids, Oxidizing agents

10.6. Hazardous decomposition products

Contact with acids liberates toxic gas.

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SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity

H310 - Fatal in contact with skin.
Toxic by inhalation and if swallowed.

ATEmix calculated

ATE (oral) 73,5 mg/kg; ATE (dermal) 113,2 mg/kg; ATE (inhalation vapour) 7,35 mg/l; ATE (inhalation aerosol) 0,735 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
143-33-9	Sodium cyanide					
	oral	LD50	4,8 mg/kg	rat		
	dermal	LD50	7,7 mg/kg	rabbit		
	inhalation (1 h) vapour	LC50	0,16 mg/l	rat		
	inhalation aerosol	ATE	0,05 mg/l			

Irritation and corrosivity

Causes skin and eye burns.

Sensitising effects

No sensitisation responses were observed.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

STOT-single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No data is available on the product itself.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1. Toxicity

No data is available on the product itself.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
143-33-9	Sodium cyanide						
	Acute fish toxicity	LC50	0,083	96 h	Lepomis macrochirus (Bluegill sunfish)		
		mg/l					
1310-73-2	sodium hydroxide; caustic soda						
	Acute fish toxicity	LC50	45,4	96 h	Onchorhynchus mykiss		
		mg/l					

12.2. Persistence and degradability

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No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

May cause long-term adverse effects in the aquatic environment.
Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 2922

14.2. UN proper shipping name:

Corrosive liquid, toxic, n.o.s. (Sodium hydroxide/sodium cyanide solution)

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

8, 6.1



Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number:

UN 2922

14.2. UN proper shipping name:

Corrosive liquid, toxic, n.o.s. (Sodium hydroxide/sodium cyanide solution)/IATA*/

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

8, 6.1



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Marine pollutant: --
EmS: F-A,S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2922
14.2. UN proper shipping name: Corrosive liquid, toxic, n.o.s. (Sodium hydroxide/sodium cyanide solution)/IATA*
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8, 6.1



14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: Sodium cyanide

14.6. Special precautions for user

Use personal protective equipment.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P
These transport data apply to the entire pack

SECTION 15: Regulatory information

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

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils 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 contaminating class (D): 3 - highly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Revision: 27.11.2017
Safety datasheet sections which have been updated: 2, 11
Revision: 06.05.2015
Safety datasheet sections which have been updated: 2, 4, 11

Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.

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H301+H331	Toxic if swallowed or if inhaled.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
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 information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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