

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 1 of 9

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

1.1. Product identifier

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

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:

Serious eye damage/eye irritation: Eye Dam. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes serious eye damage.

Toxic to aquatic life with long lasting effects .

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

zinc sulphate, heptahydrate

Signal word: Danger

Pictograms:



Hazard statements

H318

Causes serious eye damage.

H411

Toxic to aquatic life with long lasting effects .

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 2 of 9

Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 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	
	GHS Classification			
877-24-7	Potassium hydrogen phthalate			45-50 %
	212-889-4			
	Acute Tox. 4, Eye Irrit. 2; H312 H319			
7446-20-0	zinc sulphate, heptahydrate			< 25 %
	231-793-3	030-006-00-9		
	Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H318 H400 H410			
7773-06-0	Ammonium amidosulfonate			< 10 %
	231-871-7			
	Acute Tox. 4; H302			
7681-82-5	Sodium iodide			< 5 %
	231-679-3			
	Skin Irrit. 2, Eye Irrit. 2A, Aquatic Acute 1; H315 H319 H400			

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

- Take off contaminated clothing and shoes immediately.
 Show this safety data sheet to the doctor in attendance.

After inhalation

- Move to fresh air.
 If symptoms persist, call a physician.

After contact with skin

- Wash off immediately with plenty of water for at least 15 minutes.
 If skin irritation persists, call a physician.

After contact with eyes

- In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

- Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 3 of 9

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

Irritation and corrosion

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.

The following may develop in event of fire: sulfur oxides.

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the event of fire, wear self-contained breathing apparatus.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal.

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.

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry and well-ventilated place.

Storage temperature: 2-8 °C

Further information on storage conditions

Keep locked up or in an area accessible only to qualified or authorised persons.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 4 of 9

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7773-06-0	Ammonium sulphamidate	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls**Appropriate engineering controls**

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

Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Avoid contact with skin, eyes and clothing.

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:	solid (lyophilised)
Colour:	light yellow
Odour:	odourless
pH-Value (at 20 °C):	4

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable
Sustaining combustion:	No data available

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

not applicable

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 5 of 9

Ignition temperature:	no data available
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	no data available
Oxidizing properties	
not applicable	
Vapour pressure:	not applicable
Density:	no data available
Bulk density:	no data available
Water solubility: (at 20 °C)	soluble
Solubility in other solvents	
no data available	
Partition coefficient:	not applicable
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
Flow time:	not applicable
Vapour density:	not applicable
Evaporation rate:	not applicable
Solvent separation test:	not applicable
Solvent content:	not applicable

9.2. Other information

Solid content:	no data available
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SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity Hazard: Oxidizing agents

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Oxidizing agents

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Metals

10.6. Hazardous decomposition products

Under fire conditions: Sulphur oxides

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No toxicology information is available.

Acute toxicity

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 6 of 9

Based on available data, the classification criteria are not met.
No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
877-24-7	Potassium hydrogen phthalate				
	oral	LD50 mg/kg	3200	rat	RTECS
	dermal	LD50 mg/kg	>1000	guinea pig	
7446-20-0	zinc sulphate, heptahydrate				
	oral	LD50 mg/kg	1260	@N11.0018550	RTECS
7773-06-0	Ammonium amidosulfonate				
	oral	LD50 mg/kg	2000	rat	
7681-82-5	Sodium iodide				
	oral	LD50 mg/kg	4340	rat	

Irritation and corrosivity

Causes serious eye damage.

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.

Specific effects in experiment on an animal

No toxicology information is available.

Additional information on tests

None known.

Further information

Handle in accordance with good industrial hygiene and safety practice.

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

No information on ecology is available.

Do not flush into surface water or sanitary sewer system.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7446-20-0	zinc sulphate, heptahydrate					
	Acute fish toxicity	LC50	0,11 mg/l	96 h	Oncorhynchus mykiss (rainbow trout)	Ecotox
7773-06-0	Ammonium amidosulfonate					
	Acute fish toxicity	LC50	203 mg/l	96 h		Ecotox
7681-82-5	Sodium iodide					
	Acute fish toxicity	LC50	860 mg/l	96 h		
	Acute crustacea toxicity	EC50	0,17 mg/l	48 h		

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
877-24-7	Potassium hydrogen phthalate	-2,73

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations. Our local agencies will accept used cuvettes to ensure their proper disposal.

List of Wastes Code - 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

List of Wastes Code - 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

List of Wastes Code - contaminated packaging

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)****Other applicable information (land transport)**

Not classified as dangerous in the meaning of transport regulations.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 8 of 9

Special Provisions: 375

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Special Provisions: 375

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

Special Provisions: 197

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: zinc sulphate, heptahydrate

14.6. Special precautions for user

no data available

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

Not relevant

Other applicable information

Not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 2 - clearly 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 Date 05.04.2018

Safety datasheet sections which have been updated: 9

Revision Date 23.04.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 23.01.2015

Safety datasheet sections which have been updated: 14

Revision: 8.04.2014

Safety datasheet sections which have been updated: 2, 4, 6, 8, 10, 11, 12

Revision: 17.09.2014

Safety datasheet sections which have been updated: 7, 14

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Aufschlussküvette/Digestion Cuvette; 1/4

Revision date: 05.04.2018

Product code: LCK319-1

Page 9 of 9

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.

Further Information

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 1 of 9

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

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

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**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements**Additional advice on labelling**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3. Other hazards

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 2 of 9

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			> 97 %
	231-791-2			
110-15-6	Succinic acid			< 0,5 %
	203-740-4			
	Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H315 H318 H335			
7697-37-2	Nitric acid ... %			< 0,2 %
	231-714-2	007-004-00-1		
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071			
10377-60-3	Magnesium nitrate			< 0,1%
	233-826-7			
	Ox. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H272 H315 H319 H335			

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off all contaminated clothing immediately.

After inhalation

Move to fresh air.

If symptoms persist, call a physician.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.

If skin irritation persists, call a physician.

After contact with eyes

Immediately flush eye(s) with plenty of water.

If eye irritation persists, consult a specialist.

After ingestion

Clean mouth with water and drink afterwards plenty of water.

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

No known effect.

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. The product itself does not burn.

Unsuitable extinguishing media

No Limit

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 3 of 9

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

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

For personal protection see section 8.

Only qualified personnel equipped with suitable protective equipment may intervene.

Immediately evacuate personnel to safe areas.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

General industrial hygiene practice.

Advice on protection against fire and explosion

See also section 5

Further information on handling

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a dry, cool place.

Storage temperature: 2-8 °C

Hints on joint storage

None known.

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
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 4 of 9

Additional advice on limit values

None known.

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

Provide adequate ventilation.

Environmental exposure controls

Should not be released into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	blue
Odour:	odourless
pH-Value (at 20 °C):	7
Changes in the physical state	
Melting point:	- 32 °C
Initial boiling point and boiling range:	no data available
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
not applicable	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 5 of 9

Auto-ignition temperature

Solid:

not applicable

Gas:

not applicable

Decomposition temperature:

no data available

Oxidizing properties

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1 g/cm³

Bulk density:

not applicable

Water solubility:

completely soluble

(at 20 °C)

Solubility in other solvents

no data available

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:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

9.2. Other information

Solid content:

not applicable

no data available

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

See also section 10.3

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Oxidizing agents

Alkali metals

Alkaline earth metals

Metals

10.6. Hazardous decomposition products

Nitrous acid and other nitrosating agents

Further information

None known.

SECTION 11: Toxicological information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 6 of 9

11.1. Information on toxicological effects**Acute toxicity**

Based on available data, the classification criteria are not met.
No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-15-6	Succinic acid				
	oral	LD50 mg/kg	2260	Ratte	
10377-60-3	Magnesium nitrate				
	oral	LD50 mg/kg	5440	rat	

Irritation and corrosivity

Based on available data, the classification criteria are not met.
No known effect.

Sensitising effects

Based on available data, the classification criteria are not met.
Contains no substance or substances classified as sensitising.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Contains no ingredient listed as a carcinogen

STOT-single exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.
No aspiration toxicity classification

Specific effects in experiment on an animal

No data is available on the product itself.

Additional information on tests

no data available

Practical experience**Observations relevant to classification**

no data available

Other observations

no data available

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.
Do not flush into surface water or sanitary sewer system.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
110-15-6	Succinic acid					
	Acute crustacea toxicity	EC50	374 mg/l	48 h		
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50	72 mg/l	96 h	Gambusia affinis	IUCLID

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
110-15-6	Succinic acid	-0,59
7697-37-2	Nitric acid ... %	-0,21

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

Further information

no data available

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations. Our local agencies will accept used cuvettes to ensure their proper disposal.

List of Wastes Code - 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

List of Wastes Code - 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

List of Wastes Code - contaminated packaging

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

Contaminated packaging

Dispose of as unused product.

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

Not classified as dangerous in the meaning of transport regulations.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 8 of 9

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

no data available

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

Not relevant

Other applicable information

Not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water contaminating class (D): -- not 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 Date 05.04.2018

Safety datasheet sections which have been updated: 2, 3, 4, 6, 7, 8, 11, 15

Revision Date 23.04.2015

Safety datasheet sections which have been updated: 2

Revision: 26.01.2015

Safety datasheet sections which have been updated: 14

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

Revision: 8.04.2014; Safety datasheet sections which have been updated: 2

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Indikator Küvette/Indicator Cuvette; 2/4

Revision date: 05.04.2018

Product code: LCK319-2

Page 9 of 9

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
EUH071	Corrosive to the respiratory tract.

Further Information

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 1 of 9

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

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

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**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements**Additional advice on labelling**

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

2.3. Other hazards

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 2 of 9

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			> 97 %
	231-791-2			
110-15-6	Succinic acid			< 0,5 %
	203-740-4			
	Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H315 H318 H335			
7697-37-2	Nitric acid ... %			< 0,2 %
	231-714-2	007-004-00-1		
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071			
10377-60-3	Magnesium nitrate			< 0,1%
	233-826-7			
	Ox. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H272 H315 H319 H335			

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off all contaminated clothing immediately.

After inhalation

Move to fresh air.

If symptoms persist, call a physician.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.

If skin irritation persists, call a physician.

After contact with eyes

Immediately flush eye(s) with plenty of water.

If eye irritation persists, consult a specialist.

After ingestion

Clean mouth with water and drink afterwards plenty of water.

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

No known effect.

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. The product itself does not burn.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 3 of 9

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.
In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

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

For personal protection see section 8.
Only qualified personnel equipped with suitable protective equipment may intervene.
Immediately evacuate personnel to safe areas.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.
Do not breathe vapours/dust.
General industrial hygiene practice.

Advice on protection against fire and explosion

See also section 5

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a dry, cool place.
Storage temperature: 2-8 °C

Hints on joint storage

None known.

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
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 4 of 9

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

Provide adequate ventilation.

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

Physical state:	liquid	
Colour:	blue	
Odour:	odourless	
pH-Value (at 20 °C):		7

Changes in the physical state

Melting point:		- 32 °C
Initial boiling point and boiling range:		no data available
Sublimation point:		not applicable
Softening point:		not applicable
Pour point:		not applicable
:		no data available
Flash point:		not applicable
Sustaining combustion:		No data available

Flammability

Solid:		not applicable
Gas:		not applicable

Explosive properties

not applicable

Lower explosion limits:		not applicable
Upper explosion limits:		not applicable
Ignition temperature:		no data available

Auto-ignition temperature

Solid:		not applicable
Gas:		not applicable

Decomposition temperature:		no data available
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Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 5 of 9

Oxidizing properties

not applicable

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1 g/cm³

Bulk density: not applicable

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

no data available

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: no data available

Solvent separation test: no data available

Solvent content: no data available

9.2. Other information

Solid content: not applicable

no data available

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

See also section 10.3

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Oxidizing agents

Alkali metals

Alkaline earth metals

Metals

10.6. Hazardous decomposition products

Nitrous acid and other nitrosating agents

Further information

None known.

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

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

No data is available on the product itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 6 of 9

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-15-6	Succinic acid				
	oral	LD50 mg/kg	2260	Ratte	
10377-60-3	Magnesium nitrate				
	oral	LD50 mg/kg	5440	rat	

Irritation and corrosivity

Based on available data, the classification criteria are not met.
No known effect.

Sensitising effects

Based on available data, the classification criteria are not met.
Contains no substance or substances classified as sensitising.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Contains no ingredient listed as a carcinogen

STOT-single exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.
No aspiration toxicity classification

Specific effects in experiment on an animal

No data is available on the product itself.

Additional information on tests

no data available

Practical experience**Observations relevant to classification**

no data available

Other observations

no data available

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.
Do not flush into surface water or sanitary sewer system.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
110-15-6	Succinic acid					
	Acute crustacea toxicity	EC50	374 mg/l	48 h		
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50	72 mg/l	96 h	Gambusia affinis	IUCLID

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
110-15-6	Succinic acid	-0,59
7697-37-2	Nitric acid ... %	-0,21

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

Further information

no data available

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations. Our local agencies will accept used cuvettes to ensure their proper disposal.

List of Wastes Code - 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

List of Wastes Code - 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

List of Wastes Code - contaminated packaging

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

Contaminated packaging

Dispose of as unused product.

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

Not classified as dangerous in the meaning of transport regulations.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 8 of 9

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

no data available

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

Not relevant

Other applicable information

Not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water contaminating class (D): -- not 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 Date 05.04.2018

Safety datasheet sections which have been updated: 2, 3, 4, 5, 6, 7, 8, 11, 15

Revision Date 23.04.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 26.01.2015

Safety datasheet sections which have been updated: 14

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

Revision: 8.04.2014; Safety datasheet sections which have been updated: 2

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Nullküvette/Zero Cuvette; 3/4

Revision date: 05.04.2018

Product code: LCK319-3

Page 9 of 9

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
EUH071	Corrosive to the respiratory tract.

Further Information

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 1 of 8

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

1.1. Product identifier

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

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:

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

zinc sulphate, heptahydrate

Signal word: Warning

Pictograms:



Hazard statements

H319

Causes serious eye irritation.

H412

Harmful to aquatic life with long lasting effects.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 2 of 8

Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P337+P313 If eye irritation persists: Get medical advice/attention.

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	
	GHS Classification			
7732-18-5	Water			< 95 %
	231-791-2			
877-24-7	Potassium hydrogen phthalate			< 3 %
	212-889-4			
	Acute Tox. 4, Eye Irrit. 2; H312 H319			
7446-20-0	zinc sulphate, heptahydrate			< 2 %
	231-793-3	030-006-00-9		
	Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H318 H400 H410			
7773-06-0	Ammonium amidosulfonate			< 1 %
	231-871-7			
	Acute Tox. 4; H302			
7681-82-5	Sodium iodide			< 0,5 %
	231-679-3			
	Skin Irrit. 2, Eye Irrit. 2A, Aquatic Acute 1; H315 H319 H400			

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

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off contaminated clothing and shoes immediately.
 Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air.
 If symptoms persist, call a physician.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.
 If skin irritation persists, call a physician.

After contact with eyes

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 3 of 8

After ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

May cause eye irritation.

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.

The following may develop in event of fire: sulfur oxides.

5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the event of fire, wear self-contained breathing apparatus.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal.

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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry and well-ventilated place.

Storage temperature: 2-8 °C

Further information on storage conditions

Keep locked up or in an area accessible only to qualified or authorised persons.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 4 of 8

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7773-06-0	Ammonium sulphamidate	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls**Appropriate engineering controls**

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

Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Avoid contact with skin, eyes and clothing.

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:	green
Odour:	odourless
pH-Value (at 20 °C):	7
Changes in the physical state	
Melting point:	not applicable
Initial boiling point and boiling range:	no data available
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
not applicable	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 5 of 8

Auto-ignition temperature

Solid:

not applicable

Gas:

not applicable

Decomposition temperature:

no data available

Oxidizing properties

not applicable

Vapour pressure:

no data available

Density (at 20 °C):

1 g/cm³

Bulk density:

not applicable

Water solubility:

soluble

(at 20 °C)

Solubility in other solvents

no data available

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:

no data available

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**

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No toxicology information is available.

Acute toxicity

No data is available on the product itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 6 of 8

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
877-24-7	Potassium hydrogen phthalate					
	oral	LD50 mg/kg	3200	rat	RTECS	
	dermal	LD50 mg/kg	>1000	guinea pig		
7446-20-0	zinc sulphate, heptahydrate					
	oral	LD50 mg/kg	1260	@N11.0018550	RTECS	
7773-06-0	Ammonium amidosulfonate					
	oral	LD50 mg/kg	2000	rat		
7681-82-5	Sodium iodide					
	oral	LD50 mg/kg	4340	rat		

Irritation and corrosivity

Severe eye irritation

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No toxicology information is available.

Additional information on tests

None known.

Further information

Handle in accordance with good industrial hygiene and safety practice.

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

No information on ecology is available.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7446-20-0	zinc sulphate, heptahydrate					
	Acute fish toxicity	LC50	0,11 mg/l	96 h	Oncorhynchus mykiss (rainbow trout)	Ecotox
7773-06-0	Ammonium amidosulfonate					
	Acute fish toxicity	LC50	203 mg/l	96 h		Ecotox
7681-82-5	Sodium iodide					
	Acute fish toxicity	LC50	860 mg/l	96 h		
	Acute crustacea toxicity	EC50 mg/l	0,17	48 h		

12.2. Persistence and degradability

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 7 of 8

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
877-24-7	Potassium hydrogen phthalate	-2,73

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations. Our local agencies will accept used cuvettes to ensure their proper disposal.

List of Wastes Code - 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

List of Wastes Code - 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

List of Wastes Code - contaminated packaging

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)****Other applicable information (land transport)**

Not classified as dangerous in the meaning of transport regulations.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not classified as dangerous in the meaning of transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK 319 Cyanid/Cyanide/Cyanure, Vergleichslösung/Reference Cuvette; 4/4

Revision date: 05.04.2018

Product code: LCK319-4

Page 8 of 8

ENVIRONMENTALLY HAZARDOUS: yes

**14.6. Special precautions for user**

no data available

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

Not relevant

Other applicable information

Not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water contaminating class (D): 1 - slightly 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 Date 05.04.2018

Revision Date 23.04.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 26.01.2015

Safety datasheet sections which have been updated: 14

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

Revision: 8.04.2014

Safety datasheet sections which have been updated: 2, 4, 6, 8, 10, 11, 12

Relevant H and EUH statements (number and full text)

- | | |
|------|---|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Further Information

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