

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3**

Revision date: 21.07.2021

Product code: LCK310-1

Page 1 of 9

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

LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3

UFI: F4E6-2FK3-S80K-PJ3V

**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. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

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

Potassium dihydrogen phosphate

N,N-Diethyl-1,4-phenylenediammonium sulfate

di-Sodium hydrogen phosphate

**Signal word:** Warning

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3**

Revision date: 21.07.2021

Product code: LCK310-1

Page 2 of 9

**Pictograms:**

**Hazard statements**

H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 If eye irritation persists: Get medical advice/attention.

**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 persistent, bioaccumulating nor toxic (PBT).

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7778-77-0	Potassium dihydrogen phosphate			<50 %
	231-913-4		01-2119490224-41	
	Acute Tox. 4, Eye Irrit. 2; H302 H319			
7558-79-4	di-Sodium hydrogen phosphate			<27 %
	231-448-7		01-2119489797-11	
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
6283-63-2	N,N-Diethyl-1,4-phenylenediammonium sulfate			<25 %
	228-500-6			
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H312 H302 H319			
6381-92-6	Ethylenedinitrilotetraacetic acid disodium salt dihydrate			<0,5 %
	205-358-3		01-2119486775-20	
	Eye Irrit. 2; H319			

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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3

Revision date: 21.07.2021

Product code: LCK310-1

Page 3 of 9

#### After inhalation

Move to fresh air.

#### After contact with skin

Wash off immediately with plenty of water.

In the case of skin irritation or allergic reactions see a physician.

#### After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### After ingestion

Clean mouth with water and drink afterwards plenty of water.

Consult a physician if necessary.

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

irritant effects

#### **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

None known.

#### **5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

#### **5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

#### **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. For personal protection see section 8.

#### **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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).

#### **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, eyes and clothing.

##### Advice on protection against fire and explosion

See also section 5

#### **7.2. Conditions for safe storage, including any incompatibilities**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3

Revision date: 21.07.2021

Product code: LCK310-1

Page 4 of 9

#### 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

##### 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

Breathing apparatus only if aerosol or dust is formed. Recommended Filter type: ABEK-filter

##### 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:	solid (lyophilised)
Colour:	white
Odour:	odourless
pH-Value:	6,5

##### Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	not applicable
Sublimation point:	no data available
Softening point:	no data available
Pour point:	not applicable
:	no data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3**

Revision date: 21.07.2021

Product code: LCK310-1

Page 5 of 9

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: no data available

Gas: no data available

Decomposition temperature: no data available

**Oxidizing properties**

not applicable

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1,02 g/cm<sup>3</sup>

Bulk density: no data available

Water solubility:  
(at 20 °C) 500 g/L**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

no data available

**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**

Possibility of hazardous reactions : Acids, Bases

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3**

Revision date: 21.07.2021

Product code: LCK310-1

Page 6 of 9

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

No decomposition if stored and applied as directed.

**Further information**

None known.

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

Harmful if swallowed.

**ATEmix calculated**

ATE (oral) 1292,6 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7778-77-0	Potassium dihydrogen phosphate				
	oral	LD50 mg/kg 1700	mouse		
	dermal	LD50 mg/kg 4640	rabbit		
7558-79-4	di-Sodium hydrogen phosphate				
	oral	LD50 mg/kg 17000	rat		
6283-63-2	N,N-Diethyl-1,4-phenylenediammonium sulfate				
	oral	LD50 mg/kg 497	rat		
	dermal	ATE mg/kg 1100			
6381-92-6	Ethylenedinitrotetraacetic acid disodium salt dihydrate				
	oral	LD50 mg/kg >2000	rat		

**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.

**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 data is available on the product itself.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3

Revision date: 21.07.2021

Product code: LCK310-1

Page 7 of 9

#### 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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7558-79-4	di-Sodium hydrogen phosphate					
	Acute crustacea toxicity	EC50 mg/l	1089	48 h Daphnia magna (Water flea)		
6381-92-6	Ethylenedinitrilotetraacetic acid disodium salt dihydrate					
	Acute fish toxicity	LC50	320 mg/l	96 h Poecilia reticulata (guppy)	IUCLID	
	Acute algae toxicity	ErC50 mg/l	10-100	72 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.

### 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3

Revision date: 21.07.2021

Product code: LCK310-1

Page 8 of 9

#### 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 subject to transport regulations.

### Inland waterways transport (ADN)

#### Other applicable information (inland waterways transport)

Not tested

### Marine transport (IMDG)

#### Other applicable information (marine transport)

Not subject to transport regulations.

### Air transport (ICAO-TI/IATA-DGR)

#### Other applicable information (air transport)

Not subject to transport regulations.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 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

no data available

## SECTION 15: Regulatory information

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

#### National regulatory information

Water hazard class (D): 3 - strongly hazardous to water

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

### Changes

Revision: 21.07.2021

Safety datasheet sections which have been updated: 2, 5, 6, 7

Revision: 24.09.2020

Safety datasheet sections which have been updated: 11, 15

Revision: 25.04.2018



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, Sample cuvette; 1/3**

Revision date: 21.07.2021

Product code: LCK310-1

Page 9 of 9

Safety datasheet sections which have been updated: 3, 4, 7, 8, 11, 16

Revision: 28.08.2017

Safety datasheet sections which have been updated: 3, 11

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

**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 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3

Revision date: 21.07.2021

Product code: LCK310-2

Page 1 of 8

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

##### 1.1. Product identifier

LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3

UFI: 05T6-XF6P-N80V-8APW

##### 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:

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

May cause damage to organs through prolonged or repeated exposure.

##### 2.2. Label elements

###### Regulation (EC) No. 1272/2008

###### Hazard components for labelling

Potassium iodide

Signal word: Warning

Pictograms:



###### Hazard statements

H373 May cause damage to organs through prolonged or repeated exposure.

###### Precautionary statements

P314 Get medical advice/attention if you feel unwell.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3**

Revision date: 21.07.2021

Product code: LCK310-2

Page 2 of 8

**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 persistent, bioaccumulating nor toxic (PBT).

**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			>90 %
	231-791-2			
7681-11-0	Potassium iodide			<10 %
	231-659-4			
	STOT RE 1; H372			

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.

**After contact with skin**

Wash off immediately with plenty of water.

In the case of skin irritation or allergic reactions see a physician.

**After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**After ingestion**

Clean mouth with water and drink afterwards plenty of water.

Consult a physician if necessary.

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

irritant effects

**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**

None known.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3

Revision date: 21.07.2021

Product code: LCK310-2

Page 3 of 8

#### **5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

#### **5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

#### **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. For personal protection see section 8.

#### **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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).

#### **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.

##### **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**

##### **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**

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3**

Revision date: 21.07.2021

Product code: LCK310-2

Page 4 of 8

**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: &gt;480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 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:	mild pink
Odour:	odourless
pH-Value (at 20 °C):	7

**Changes in the physical state**

Melting point:	not applicable
Initial boiling point and boiling range:	100 °C
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:	not applicable

**Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature: not applicable

**Oxidizing properties**

not applicable

Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1.07 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	completely soluble

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3

Revision date: 21.07.2021

Product code: LCK310-2

Page 5 of 8

#### 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:

no data available

no data available

### 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

Exothermic reaction: Oxidizing agents

#### 10.4. Conditions to avoid

None known.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

#### 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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-11-0	Potassium iodide				
	oral	LD50 mg/kg	2779	rat	

##### Irritation and corrosivity

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

##### Sensitising effects

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3**

Revision date: 21.07.2021

Product code: LCK310-2

Page 6 of 8

**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**

May cause damage to organs through prolonged or repeated exposure. (Potassium iodide)

**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.

**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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7681-11-0	Potassium iodide					
	Acute fish toxicity	LC50 mg/l	2190	96 h		
	Acute crustacea toxicity	EC50	2,7 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.

**12.4. Mobility in soil**

no data available

**12.5. Results of PBT and vPvB assessment**

no data available

**12.6. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

no data available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3

Revision date: 21.07.2021

Product code: LCK310-2

Page 7 of 8

#### 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 subject to transport regulations.

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

Not tested

#### Marine transport (IMDG)

**14.2. UN proper shipping name:** Not subject to transport regulations.

#### Air transport (ICAO-TI/IATA-DGR)

##### Other applicable information (air transport)

Not subject to transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 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

no data available

## 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

##### National regulatory information

Water hazard class (D): 1 - slightly hazardous to water



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone/Chlorine dioxide, LCK 310 A; 2/3**

Revision date: 21.07.2021

Product code: LCK310-2

Page 8 of 8

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Changes**

Revision: 21.07.2021

Safety datasheet sections which have been updated: 2, 5, 6, 7

Revision: 05.02.2021

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

Revision: 24.09.2020

Safety datasheet sections which have been updated: 15

Revision: 25.04.2018

Safety datasheet sections which have been updated: 4, 8 16

Revision: 22.09.2016

Safety datasheet sections which have been updated: 2, 11

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

Classification	Classification procedure
STOT RE 2; H373	Calculation method

**Relevant H and EUH statements (number and full text)**

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

**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 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 1 of 8

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

##### 1.1. Product identifier

LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

##### 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

None known.

#### SECTION 3: Composition/information on ingredients

##### 3.2. Mixtures

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3**

Revision date: 21.07.2021

Product code: LCK310-3

Page 2 of 8

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			<99,9 %
	231-791-2			
3567-69-9	Azorubin			<0,1 %
	222-657-4			

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.

**After contact with skin**

Wash off immediately with plenty of water.

**After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**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**

None known.

**5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

**5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**Additional information**

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

**SECTION 6: Accidental release measures**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 3 of 8

#### **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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).

#### **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.

##### **Advice on protection against fire and explosion**

See also section 5

##### **Further information on handling**

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

#### **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.

##### **Further information on storage conditions**

no data available

#### **7.3. Specific end use(s)**

Reagent for analysis

### SECTION 8: Exposure controls/personal protection

#### **8.1. Control parameters**

##### **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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3**

Revision date: 21.07.2021

Product code: LCK310-3

Page 4 of 8

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Provide adequate ventilation.

**Environmental exposure controls**

No special technical protective measures required.

**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):	7

**Changes in the physical state**

Melting point:	0 °C
Initial boiling point and boiling range:	100 °C
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:	not applicable

**Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not applicable

**Oxidizing properties**

not applicable

Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	0,99 g/cm <sup>3</sup>
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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 5 of 8

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:	no data available
no data available	

### **SECTION 10: Stability and reactivity**

#### **10.1. Reactivity**

None known.

#### **10.2. Chemical stability**

Stable under recommended storage conditions.

#### **10.3. Possibility of hazardous reactions**

No dangerous reaction known under conditions of normal use.  
Hazardous polymerisation does not occur.

#### **10.4. Conditions to avoid**

None known.

#### **10.5. Incompatible materials**

None known.

#### **10.6. Hazardous decomposition products**

No decomposition if stored and applied as directed.

#### **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.

##### **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.  
No known effect.

##### **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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 6 of 8

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

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.

### 12.2. Persistence and degradability

No data is available on the product itself.

### 12.3. Bioaccumulative potential

no data available

### 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 7 of 8

#### 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 subject to transport regulations.

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

Not tested

#### Marine transport (IMDG)

**14.2. UN proper shipping name:** Not subject to transport regulations.

#### Air transport (ICAO-TI/IATA-DGR)

##### Other applicable information (air transport)

Not subject to transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 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

no data available

### SECTION 15: Regulatory information

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

##### National regulatory information

Water hazard class (D): - - non-hazardous to water

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 21.07.2021

Safety datasheet sections which have been updated: 7

Revision: 19.03.2020

Safety datasheet sections which have been updated: 15

This data sheet contains changes from the previous version in section(s): 2, 5, 7-15

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

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of





Be Right™

HACH LANGE GmbH

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 310 Chlor/Ozon/Chlordioxid-Chlorine/Ozone, Zero Solution; 3/3

Revision date: 21.07.2021

Product code: LCK310-3

Page 8 of 8

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.)*