

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 614 CSB/COD/DCO

Revision date: 12.05.2021

Product code: LCK614

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

### 1.1. Product identifier

LCK 614 CSB/COD/DCO

UFI: HG8A-KFYW-H80G-423J

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

#### Use of the substance/mixture

Water analysis

#### Uses advised against

Consumer use

### 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:

Substance or mixture corrosive to metals: Met. Corr. 1

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

May be corrosive to metals.

Toxic in contact with skin.

Harmful if swallowed.

Harmful if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause damage to organs through prolonged or repeated exposure.

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Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

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

##### Hazard components for labelling

sulphuric acid ... %

Mercury(II) sulfate

##### Signal word:

Danger

##### Pictograms:



##### Hazard statements

H290

May be corrosive to metals.

H302+H332

Harmful if swallowed or if inhaled.

H311

Toxic in contact with skin.

H314

Causes severe skin burns and eye damage.

H373

May cause damage to organs through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P361+P364

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

P390

Absorb spillage to prevent material damage.

##### 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

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7664-93-9	Sulphuric acid ... %			90 %
	231-639-5	016-020-00-8	01-2119458838-20	
	Skin Corr. 1A; H314			
7732-18-5	Water			>8 %
	231-791-2			
7783-35-9	Mercury(II) sulfate			<1,7 %
	231-992-5	080-002-00-6		
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H310 H330 H300 H373 H400 H410			
10294-26-5	Silver sulfate			<0,5 %
	233-653-7			
	Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H318 H400 H410			
7778-50-9	potassium dichromate			<0,1 %
	231-906-6	024-002-00-6	01-2119454792-32	
	Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H272 H350 H340 H360FD H330 H301 H312 H314 H334 H317 H372 H400 H410			

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

**Specific concentration limits and M-factors**

CAS No	EC No	Chemical name	Quantity
	Specific concentration limits and M-factors		
7664-93-9	231-639-5	Sulphuric acid ... %	90 %
	Skin Corr. 1A; H314: $\geq 15 - 100$ Skin Irrit. 2; H315: $\geq 5 - < 15$ Eye Irrit. 2; H319: $\geq 5 - < 15$		
7783-35-9	231-992-5	Mercury(II) sulfate	<1,7 %
	STOT RE 2; H373: $\geq 0,1 - 100$		
10294-26-5	233-653-7	Silver sulfate	<0,5 %
	M akut; H400: M=100 M chron.; H410: M=100		
7778-50-9	231-906-6	potassium dichromate	<0,1 %
	STOT SE 3; H335: $\geq 5 - 100$		

**Further Information**

This product contains substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).  
potassium dichromate

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

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

**After inhalation**

Move to fresh air.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

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#### **After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes.  
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Show this safety data sheet to the doctor in attendance.

#### **After contact with eyes**

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

#### **After ingestion**

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

#### **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. 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. The following may develop in event of fire: sulfur oxides, mercury vapors.

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

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

#### **Additional information**

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

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. 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 and dispose of as hazardous waste.

#### **6.4. Reference to other sections**

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

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

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

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

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#### Requirements for storage rooms and vessels

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

#### 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 <sup>3</sup>	fibres/ml	Category	Origin
-	Chromium (VI) compounds (as Cr)	-	0.01		TWA (8 h)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

##### Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
-	Chromium VI	chromium (creatinine)	10 µmol/mol	urine	Post shift

#### 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 0.40 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

Do not flush into surface water or sanitary sewer system.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow-orange
Odour:	odourless

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pH-Value (at 20 °C): &lt; 1

**Changes in the physical state**

Melting point: not applicable

Initial boiling point and boiling range: 300 °C

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

**Auto-ignition temperature**

Solid: not applicable

Gas: not applicable

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1,89 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

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

Corrosive in contact with metals

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

Corrosive to metals

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**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**

To avoid thermal decomposition, do not overheat. Above 300 °C, hazardous fumes may be released.

**10.5. Incompatible materials**

Organic materials, Bases, Alkali metals, Metals, Ammonia, Reducing agents, Nitric acid.

Reacts violently with water.

**10.6. Hazardous decomposition products**

Sulphur trioxide

Chromium oxides

**Further information**

very reactive

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

Toxic in contact with skin.

Harmful if swallowed.

Harmful if inhaled.

**ATEmix calculated**

ATE (oral) 328,7 mg/kg; ATE (dermal) 328,7 mg/kg; ATE (inhalation aerosol) 3,287 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7783-35-9	Mercury(II) sulfate				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			
10294-26-5	Silver sulfate				
	oral	LD50 5000 mg/kg	rat		
7778-50-9	potassium dichromate				
	oral	ATE 100 mg/kg			
	dermal	ATE 1100 mg/kg			
	inhalation (4 h) vapour	LC50 0,094 mg/l	Rat		
	inhalation (4 h) aerosol	LC50 0,094 mg/l	Rat		

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.

**Sensitising effects**

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

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#### 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. (Mercury(II) sulfate)

#### Aspiration hazard

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

#### 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

May cause long-term adverse effects in the aquatic environment.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7783-35-9	Mercury(II) sulfate					
	Acute fish toxicity	LC50 mg/l	0,19	96 h		
10294-26-5	Silver sulfate					
	Acute crustacea toxicity	EC50 mg/l	0,0045	48 h	Crustaceans	
7778-50-9	potassium dichromate					
	Acute fish toxicity	LC50 mg/l	26,13	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50 0,59 mg/l	0,16 -	96 h	Chlorella vulgaris	

### 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

Discharge into the environment must be avoided.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

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

#### List of Wastes Code - residues/unused products



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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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

**14.1. UN number:** UN 3316  
**14.2. UN proper shipping name:** Chemical kit  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** II  
Hazard label: 9



Classification code: M11  
Special Provisions: 251 340  
Limited quantity: SP251  
Excepted quantity: SP340  
Transport category: 2  
Hazard No: -  
Tunnel restriction code: E

#### Inland waterways transport (ADN)

**Other applicable information (inland waterways transport)**  
Not tested

#### Marine transport (IMDG)

**14.1. UN number:** UN 3316  
**14.2. UN proper shipping name:** CHEMICAL KIT  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** II  
Hazard label: 9



Marine pollutant: -  
Special Provisions: 251, 340  
Limited quantity: See SP251  
Excepted quantity: SP340  
EmS: F-A, S-P

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

**14.1. UN number:** UN 3316  
**14.2. UN proper shipping name:** CHEMICAL KIT  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** II  
Hazard label: 9

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Special Provisions:	A44 A163
Limited quantity Passenger:	1 kg
Passenger LQ:	Y960
Excepted quantity:	E0
IATA-packing instructions - Passenger:	960
IATA-max. quantity - Passenger:	10 kg
IATA-packing instructions - Cargo:	960
IATA-max. quantity - Cargo:	10 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: Mercury(II) sulfate  
Silver sulfate**14.6. Special precautions for user**

Use personal protective equipment.

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

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**Authorisations (REACH, annex XIV):  
potassium dichromateRestrictions on use (REACH, annex XVII):  
Entry 3, Entry 28**National regulatory information**Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.  
Water 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 Date 12.05.2021  
Safety datasheet sections which have been updated: 1, 2, 3, 5, 6, 7  
Revision Date 03.06.2020  
Safety datasheet sections which have been updated: 11, 15, 16  
Revision Date 31.01.2018  
Safety datasheet sections which have been updated: 2  
Revision Date 20.03.2017  
Safety datasheet sections which have been updated: 14

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Revision: 07.04.2016

Safety datasheet sections which have been updated: 3

Revision: 21.05.2015

Safety datasheet sections which have been updated: 2, 14

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 3; H311	Calculation method
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
STOT RE 2; H373	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

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

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very 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.)*