

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Sample cuvette; 1/4

Revision date: 31.10.2019

Product code: LCK360-1

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

1.1. Product identifier

LCK360 Zinc, Sample 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:

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Potassium cyanide

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Special labelling of certain mixtures

EUH032 Contact with acids liberates very toxic gas.

Additional advice on labelling

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

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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			>90 %
	231-791-2			
6132-04-3	tri-Sodium citrate dihydrate			<5 %
	200-675-3			
497-19-8	sodium carbonate			<5 %
	207-838-8	011-005-00-2		
	Eye Irrit. 2; H319			
144-55-8	Sodium hydrogen carbonate			<5 %
	205-633-8			
151-50-8	Potassium cyanide			0,12 %
	205-792-3	006-007-00-5		
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT SE 1, STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H310 H330 H300 H372 H400 H410 EUH032			

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.

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

After inhalation

Move to fresh air.

If eye irritation persists, consult a specialist.

After contact with skin

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

If eye irritation persists, consult a specialist.

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. Show this safety data sheet to the doctor in attendance.

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

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

Additional information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.
Do not breathe vapours/dust.
Wash thoroughly after handling.

Further information on handling

Use only in well-ventilated areas.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep tightly closed in a dry, cool and well-ventilated place.
Storage temperature: 15 - 25°C

Hints on joint storage

Do not store near acids.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
151-50-8	Potassium cyanide (as cyanide)	-	5		TWA (8 h)	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

Handle in accordance with good industrial hygiene and safety practice.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

The protective gloves to be used must comply with the specifications of EC directive 2016/425/EC and the resultant standard EN374. 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

Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Skin protection

Remove and wash contaminated clothing before re-use.

Respiratory protection

Provide adequate ventilation. Breathing apparatus only if aerosol or dust is formed.

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.

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):	8-11

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
:	no data available
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

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Explosive properties

no data available

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

Oxidizing properties

no data available

Vapour pressure:

15 hPa

(at 10 °C)

Vapour pressure:

no data available

Density (at 20 °C):

1,04 g/cm³

Water solubility:

completely soluble

(at 20 °C)

Solubility in other solvents

not applicable

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

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Contact with acids liberates toxic gas.

10.6. Hazardous decomposition products

Hydrogen cyanide (hydrocyanic acid)

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Further information

This information is not available.

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

No toxicology information is available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
6132-04-3	tri-Sodium citrate dihydrate				
	oral	LD50 >8000 mg/kg	rat		
497-19-8	sodium carbonate				
	oral	LD50 4090 mg/kg	Rat	IUCLID	
144-55-8	Sodium hydrogen carbonate				
	oral	LD50 4220 mg/kg	rat		
151-50-8	Potassium cyanide				
	oral	LD50 5 mg/kg	rat		
	dermal	LD50 14,29 mg/kg	rabbits	ECHA	
	inhalation (4 h) vapour	LC50 0,051 mg/l	rat		
	inhalation (4 h) aerosol	LC50 0,051 mg/l	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.

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.

Additional information on tests

None known.

Practical experience**Observations relevant to classification**

None known.

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Other observations

None known.

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
6132-04-3	tri-Sodium citrate dihydrate					
	Acute crustacea toxicity	EC50 736 mg/l	48 h			
497-19-8	sodium carbonate					
	Acute fish toxicity	LC50 300 mg/l	96 h	Lepomis macrochirus		
	Acute crustacea toxicity	EC50 265 mg/l	48 h	Daphnia magna	IUCLID	
144-55-8	Sodium hydrogen carbonate					
	Acute fish toxicity	LC50 7550 mg/l	96 h			
	Acute crustacea toxicity	EC50 2350 mg/l	48 h			
151-50-8	Potassium cyanide					
	Acute fish toxicity	LC50 0,068 mg/l	96 h			
	Acute crustacea toxicity	EC50 0,25 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

no data available

Further information

Ecological injuries are not known or expected under normal use.

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

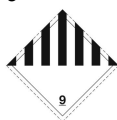
160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Contaminated packaging

Dispose of as unused product.

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

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3316

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

Hazard label: 9



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: Potassium cyanide

14.6. Special precautions for user

Use personal protective equipment.

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

Not relevant

Other applicable information

These transport data apply to the entire pack

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

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

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: 31.10.2019

Safety datasheet sections which have been updated: 2, 11

Revision: 19.09.2019

Safety datasheet sections which have been updated: 8

Revision: 02.04.2019

Safety datasheet sections which have been updated: 11, 15

Revision: 06.03.2018

Safety datasheet sections which have been updated: 2, 4, 11, 13, 15

Revision Date 21.03.2017

Safety datasheet sections which have been updated: 14

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Revision: 30.03.2016

Safety datasheet sections which have been updated: 7

Revision: 03.04.2013

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

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
EUH032	Contact with acids liberates very toxic gas.

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.)

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LCK360 Zinc, Reagent A; 2/4

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

LCK360 Zinc, Reagent A; 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**

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**

chloral hydrate; 2,2,2-trichloroethane-1,1-diol

Signal word: Warning**Pictograms:**

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Hazard statements

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

Precautionary statements

P264 Wash hands thoroughly after handling.
 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			87 %
	231-791-2			
302-17-0	chloral hydrate; 2,2,2-trichloroethane-1,1-diol			13 %
	206-117-5	605-014-00-6		
	Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2; H301 H315 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.
 Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air.

After contact with skin

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

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. Show this safety data sheet to the doctor in attendance.

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.

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

Additional information

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

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Use only in well-ventilated areas.
Avoid contact with skin and eyes.
Do not breathe vapours/dust.
Wash thoroughly after handling.
General industrial hygiene practice.

Advice on protection against fire and explosion

See also section 5

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep tightly closed in a dry, cool and well-ventilated place.
Storage temperature: 15 - 25°C

Hints on joint storage

None known.

7.3. Specific end use(s)

Reagent for analysis

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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.

Handle in accordance with good industrial hygiene and safety practice.

Protective and hygiene measures

Wash hands before breaks and after work.

General industrial hygiene practice.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

The protective gloves to be used must comply with the specifications of EC directive 2016/425/EC and the resultant standard EN374. 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

Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so.

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):		5

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
:	not applicable
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

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Explosive properties

no data available

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

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1,15 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:

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

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

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Further information

Stable under recommended storage conditions.

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

No toxicology information is available.

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 766,7 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
302-17-0	chloral hydrate; 2,2,2-trichloroethane-1,1-diol				
	oral	ATE mg/kg	100		

Irritation and corrosivity

The product causes irritation of eyes, skin and mucous membranes.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No data is available on the product itself.

Additional information on tests

None known.

Practical experience**Observations relevant to classification**

None known.

Other observations

None known.

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.

12.2. Persistence and degradability

No data is available on the product itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Reagent A; 2/4

Revision date: 31.10.2019

Product code: LCK360-2

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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 data available

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

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

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)

14.1. UN number:	UN 3316
14.2. UN proper shipping name:	CHEMICAL KIT

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Reagent A; 2/4

Revision date: 31.10.2019

Product code: LCK360-2

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14.3. Transport hazard class(es):

9

14.4. Packing group:

II

Hazard label:

9



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



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: no

14.6. Special precautions for user

Use personal protective equipment.

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

Not relevant

Other applicable information

These transport data apply to the entire pack

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

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 31.10.2019

Safety datasheet sections which have been updated: 2, 11

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Reagent A; 2/4

Revision date: 31.10.2019

Product code: LCK360-2

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Revision Date 19.09.2019

Safety datasheet sections which have been updated: 8

Revision Date 07.01.2019

Safety datasheet sections which have been updated: 2, 11, 15, 16

Revision Date 21.03.2017

Safety datasheet sections which have been updated: 14

Revision: 30.03.2016

Safety datasheet sections which have been updated: 7

Revision: 03.04.2013

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)

H301	Toxic if swallowed.
H302	Harmful if swallowed.
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

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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

LCK360 Zinc, DosiCap Zip; 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**

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

LCK360 Zinc, DosiCap Zip; 3/4

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Product code: LCK360-3

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
69-65-8	D(-)-Mannitol			>99 %
	200-711-8			
16593-81-0	4-(2-PYRIDYLAZO)RESORCINOL MONOSODIUM SALT MONOHYDRATE			<1 %
	236-339-8			
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; 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.

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

6.1. Personal precautions, protective equipment and emergency procedures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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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

Use mechanical handling equipment. Flush with water.

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.
General industrial hygiene practice.

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep in a dry, cool place.
Storage temperature: 15 - 25°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**

Handle in accordance with good industrial hygiene and safety practice.

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.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Wash hands before breaks and after work.

The protective gloves to be used must comply with the specifications of EC directive 2016/425/EC and the resultant standard EN374.

In case of full contact:

Glove material : Nitrile rubber

Layer thickness: 0,11 mm

Break through time: 480 min

In case of contact through splashing:

Glove material : Nitrile rubber

Layer thickness: 0,11 mm

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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Break through time: 60 min

Skin protection

Remove and wash contaminated clothing before re-use.

Respiratory protection

Provide adequate ventilation.

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.

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

Physical state:	solid (lyophilised)
Colour:	yellow
Odour:	odourless
pH-Value:	no data available
Changes in the physical state	
Melting point:	not applicable
Initial boiling point and boiling range:	not applicable
Sublimation point:	no data available
Softening point:	no data available
:	no data available
Flash point:	not applicable
Flammability	
Solid:	no data available
Gas:	not applicable
Explosive properties	
no data available	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available
Auto-ignition temperature	
Solid:	not applicable
Gas:	no data available
Decomposition temperature:	no data available
Oxidizing properties	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density:	no data available
Bulk density:	not applicable
Water solubility:	completely soluble
Solubility in other solvents	
no data available	
Partition coefficient:	no data available
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

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Flow time:	not applicable
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

None known.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

Further information

This information is not available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
69-65-8	D(-)-Mannitol				
	oral	LD50 mg/kg	135000	Ratte	

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.

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

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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.

Additional information on tests

None known.

Practical experience**Observations relevant to classification**

None known.

Other observations

None known.

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.

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 data available

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

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)**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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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

Other applicable information (land transport)

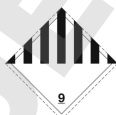
Not subject to transport regulations.

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

Not tested

Marine transport (IMDG)

14.1. 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



Special Provisions: A44 A163
 Limited quantity Passenger: 1 kg
 Passenger LQ: Y960
 Excepted quantity: E0

IATA-packing instructions - Passenger:

960

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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IATA-max. quantity - Passenger:	10 kg
IATA-packing instructions - Cargo:	960
IATA-max. quantity - Cargo:	10 kg

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

These transport data apply to the entire pack

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

The product does not need to be labelled in accordance with EC directives or respective national laws.

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 31.10.2019

Safety datasheet sections which have been updated: 11

Revision Date 19.09.2019

Safety datasheet sections which have been updated: 8

Revision Date 27.08.2019

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

Revision Date 02.04.2019

Safety datasheet sections which have been updated: 11, 15

Revision Date 21.03.2017

Safety datasheet sections which have been updated: 14

Revision: 30.03.2016

Safety datasheet sections which have been updated: 7

Revision: 27.10.2015

Safety datasheet sections which have been updated: 2, 9, 11

Revision: 03.04.2013

Relevant H and EUH statements (number and full text)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory 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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, DosiCap Zip; 3/4

Revision date: 31.10.2019

Product code: LCK360-3

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

DOMINIQUE DUTSCHER SAS

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Zero solution; 4/4

Revision date: 31.10.2019

Product code: LCK360-4

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

LCK360 Zinc, Zero solution; 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:

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Causes severe skin burns and eye damage.

Causes serious eye damage.

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

sulphuric acid 0,1 %

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

H314

Causes severe skin burns and eye damage.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Zero solution; 4/4

Revision date: 31.10.2019

Product code: LCK360-4

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Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face 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.
P310	Immediately call a POISON CENTER/doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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			>99 %
	231-791-2			
7664-93-9	sulphuric acid ... %			<0,1 %
	231-639-5			
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335			
7778-50-9	potassium dichromate			<0,05 %
	231-906-6	024-002-00-6		
	Ox. Sol. 2, Carc. 1B, Muta. 1B, Repr. 1B, Acute Tox. 2, Acute Tox. 2, Acute Tox. 4, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H272 H350 H340 H360FD H330 H300 H312 H314 H334 H317 H372 H400 H410			

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

Irritation and corrosion

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Zero solution; 4/4

Revision date: 31.10.2019

Product code: LCK360-4

Page 3 of 10

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.

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). Flush with water.

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

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a dry, cool place.

Storage temperature: 15 - 25°C

Hints on joint storage

None known.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Zero solution; 4/4

Revision date: 31.10.2019

Product code: LCK360-4

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8.1. Control parameters**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
-	Chromium (VI) compounds (as Cr)	-	0.05		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

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 after work.

General industrial hygiene practice.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Wash hands before breaks and after work.

The protective gloves to be used must comply with the specifications of EC directive 2016/425/EC and the resultant standard EN374. 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

Avoid breathing dust or vapour.

Provide adequate ventilation.

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so.

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

Physical state: liquid
 Colour: yellow
 Odour: odourless

pH-Value (at 20 °C): < 1

Changes in the physical state

Melting point: not applicable

Initial boiling point and boiling range: no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

LCK360 Zinc, Zero solution; 4/4

Revision date: 31.10.2019

Product code: LCK360-4

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Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
:	no data available
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

no data available

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
----------------------------	-------------------

Oxidizing properties

no data available

Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1 g/cm ³
Bulk density:	not applicable
Water solubility:	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:	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

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Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

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

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-93-9	sulphuric acid ... %				
	oral	LD50 mg/kg	2140	rat	
7778-50-9	potassium dichromate				
	oral	LD50	25 mg/kg	rat	
	dermal	LD50 mg/kg	1170	rat	
	inhalation (4 h) vapour	LC50 mg/l	0,094	Rat	
	inhalation (4 h) aerosol	LC50 mg/l	0,094	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.

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.

Further information

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

SECTION 12: Ecological information

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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
7778-50-9	potassium dichromate					
	Acute fish toxicity	LC50 mg/l	0,131	96 h	Lepomis macrochirus (Bluegill sunfish)	
	Acute algae toxicity	ErC50 0,59 mg/l	0,16 -	96 h	Chlorella vulgaris	
	Acute crustacea toxicity	EC50 mg/l	0,035	48 h	Daphnia magna (Water flea)	

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 data available

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

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

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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)

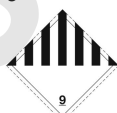
14.1. UN number: UN 3316
14.2. UN proper shipping name: CHEMICAL KIT
14.3. Transport hazard class(es): 9
14.4. Packing group: II
 Hazard label: 9



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



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: 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

These transport data apply to the entire pack

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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 dichromate

Restrictions on use (REACH, annex XVII):
Entry 28: potassium dichromate

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 31.10.2019
Safety datasheet sections which have been updated: 2, 4, 11, 15
Revision Date 19.09.2019
Safety datasheet sections which have been updated: 8
Revision Date 02.04.2019
Safety datasheet sections which have been updated: 2, 11, 15
Revision Date 21.03.2017
Safety datasheet sections which have been updated: 2, 14

Revision: 30.03.2016
Safety datasheet sections which have been updated: 7
Revision: 03.04.2013

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

Classification	Classification procedure
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H300 Fatal if swallowed.
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.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
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.
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

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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.)

DOMINIQUE DUTSCHER SAS