

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 311 Chlorid/Chloride/Chlorure, Sample cuvette, 1/2**

Revision date: 15.08.2019

Product code: LCK311-1

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

LCK 311 Chlorid/Chloride/Chlorure, Sample cuvette, 1/2

**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:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 1

Hazard Statements:

Flammable liquid and vapour.

Toxic if swallowed.

Toxic in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Causes damage to organs.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

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#### Hazard components for labelling

methanol  
Nitric acid ... %

**Signal word:** Danger

#### Pictograms:



#### Hazard statements

H226 Flammable liquid and vapour.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H370 Causes damage to organs.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P310 Immediately call a POISON CENTER/doctor.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Additional advice on labelling

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

#### 2.3. Other hazards

no data available

### 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			
7732-18-5	Water			< 50 %
	231-791-2			
67-56-1	methanol			40-50 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
7697-37-2	Nitric acid ... %			< 6 %
	231-714-2	007-004-00-1	01-2119487297-23	
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071			
592-85-8	Mercury(II) thiocyanate			<0,1 %
	209-773-0	080-002-00-6		
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 100); H310 H330 H300 H373 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 contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.

**After inhalation**

Move to fresh air. Consult a physician.

**After contact with skin**

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

Take off all contaminated clothing immediately.

If skin irritation persists, call 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. Never give anything by mouth to an unconscious person. Consult a physician.

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

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

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

Treat symptomatically.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

 Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

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#### Unsuitable extinguishing media

No Limit

#### 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

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

Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

Do not breathe vapours, mist or gas.

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

##### Hints on joint storage

None known.

##### Further information on storage conditions

Keep refrigerated.

Storage temperature: 2 - 8°C

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

Reagent for analysis

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## 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
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

### 8.2. Exposure controls

#### Appropriate engineering controls

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

#### Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Smoking, eating and drinking should be prohibited in the application area.

#### 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

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 prolonged contact with eyes, skin and clothing. Wash contaminated clothing before re-use.

#### Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

#### 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:	beige, pale red-brown
Odour:	odourless
pH-Value (at 20 °C):	0,5
<b>Changes in the physical state</b>	
Melting point:	not applicable
Initial boiling point and boiling range:	65 °C
Sublimation point:	not applicable
Softening point:	not applicable
:	no data available
Flash point:	24 °C

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**Flammability**

Solid: no data available

Gas: no data available

**Explosive properties**

no data available

Lower explosion limits: no data available

Upper explosion limits: no data available

Ignition temperature: no data available

**Auto-ignition temperature**

Solid: no data available

Gas: no data available

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure:  
(at 20 °C) 128 hPa

Vapour pressure: no data available

Density (at 20 °C): 0,92 g/cm<sup>3</sup>

Bulk density: no data available

Water solubility:  
(at 20 °C) completely miscible**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**

Corrosive to metals

**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.

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Decomposes on heating.

#### 10.5. Incompatible materials

Oxidizing agents,  
Alkali metals

#### 10.6. Hazardous decomposition products

No dangerous reaction known under conditions of normal use.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No toxicology information is available.

##### Acute toxicity

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled.

##### ATEmix calculated

ATE (oral) 224,3 mg/kg; ATE (dermal) 673,0 mg/kg; ATE (inhalation vapour) 6,73 mg/l; ATE (inhalation aerosol) 1,122 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-56-1	methanol				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation aerosol	ATE 0,5 mg/l			
592-85-8	Mercury(II) thiocyanate				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

##### Irritation and corrosivity

Causes skin and eye burns.

##### 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 classified as specific target organ toxicant, single exposure, category 1.

##### 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 toxicology information is available.

##### Further information

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

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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
67-56-1	methanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus (Bluegill sunfish)	
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata (green algae)	
	Acute crustacea toxicity	EC50 mg/l	24500	48 h	Crustaceans	
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50	72 mg/l	96 h	Gambusia affinis	IUCLID
592-85-8	Mercury(II) thiocyanate					
	Acute fish toxicity	LC50 mg/l	0,15	96 h	Pimephales promelas (fathead minnow)	
	Acute crustacea toxicity	EC50 mg/l	0,0052	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.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
67-56-1	methanol	-0,77
7697-37-2	Nitric acid ... %	-0,21

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

Our local agencies will accept used cuvettes to ensure their proper disposal.

**Waste disposal number of waste from residues/unused products**

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



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#### Waste disposal number of used product

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

#### Waste disposal number of 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)

**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

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

This product forms part of a kit. Information in this section relates to the kit as a whole.

**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: Nitric acid ... %

Entry 69: methanol

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 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: 15.08.2019

Safety datasheet sections which have been updated: 11

Revision: 12.12.2018

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

Revision: 24.04.2018

Safety datasheet sections which have been updated: 2, 3, 8, 11, 13, 15, 16

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Revision Date 09.03.2017

Safety datasheet sections which have been updated: 14

Revision: 30.03.2016

Safety datasheet sections which have been updated: 7

Revision: 17.05.2013

Safety datasheet sections which have been updated: 4-16

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

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 3; H301	Calculation method
Acute Tox. 3; H311	Calculation method
Acute Tox. 3; H331	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	Calculation method
STOT SE 1; H370	Calculation method

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H370	Causes damage to organs.
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.
EUH071	Corrosive to the respiratory tract.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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

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**LCK 311 Chlorid/Chloride/Chlorure, Zero solution, 2/2**

Revision date: 15.08.2019

Product code: LCK311-2

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

LCK 311 Chlorid/Chloride/Chlorure, Zero solution, 2/2

**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:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 1

Hazard Statements:

Flammable liquid and vapour.

Toxic if swallowed.

Toxic in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Causes damage to organs.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

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#### Hazard components for labelling

methanol  
Nitric acid ... %

**Signal word:** Danger

#### Pictograms:



#### Hazard statements

H226 Flammable liquid and vapour.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H370 Causes damage to organs.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P310 Immediately call a POISON CENTER/doctor.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Additional advice on labelling

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

#### 2.3. Other hazards

no data available

### 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			
7732-18-5	Water			< 50 %
	231-791-2			
67-56-1	methanol			40-50 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
7697-37-2	Nitric acid ... %			< 6 %
	231-714-2	007-004-00-1	01-2119487297-23	
	Ox. Liq. 2, Skin Corr. 1A; H272 H314 EUH071			
592-85-8	Mercury(II) thiocyanate			<0,1 %
	209-773-0	080-002-00-6		
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 100); H310 H330 H300 H373 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 contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.

###### After inhalation

Move to fresh air. Consult a physician.

###### After contact with skin

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

Take off all contaminated clothing immediately.

If skin irritation persists, call 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. Never give anything by mouth to an unconscious person. Consult a physician.

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

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

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

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### Suitable extinguishing media

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

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#### Unsuitable extinguishing media

No Limit

#### 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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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.  
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. Keep locked up or in an area accessible only to qualified or authorised persons.

##### Hints on joint storage

None known.

##### Further information on storage conditions

Keep refrigerated.  
Storage temperature: 2-8 °C

#### 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 <sup>3</sup>	fibres/ml	Category	Origin
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

**8.2. Exposure controls**
**Appropriate engineering controls**

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

**Protective and hygiene measures**

Wash hands before breaks and at the end of workday.

Smoking, eating and drinking should be prohibited in the application area.

**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

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 prolonged contact with eyes, skin and clothing. Wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

**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:	beige, pale red-brown
Odour:	odourless
pH-Value (at 20 °C):	< 1

**Changes in the physical state**

Melting point:	not applicable
Initial boiling point and boiling range:	65 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	24 °C

**Flammability**

Solid:	no data available
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Gas: no data available

**Explosive properties**

no data available

Lower explosion limits: no data available

Upper explosion limits: no data available

Ignition temperature: no data available

**Auto-ignition temperature**

Solid: no data available

Gas: no data available

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure:  
(at 20 °C) 128 hPa

Vapour pressure: no data available

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

Bulk density: no data available

Water solubility:  
(at 20 °C) completely miscible**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**

Corrosive to metals

**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.

Decomposes on heating.

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**10.5. Incompatible materials**

Oxidizing agents,  
Alkali metals

**10.6. Hazardous decomposition products**

No dangerous reaction known under conditions of normal use.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled.

**ATEmix calculated**

ATE (oral) 224,3 mg/kg; ATE (dermal) 673,0 mg/kg; ATE (inhalation vapour) 6,73 mg/l; ATE (inhalation aerosol) 1,122 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-56-1	methanol				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation aerosol	ATE 0,5 mg/l			
592-85-8	Mercury(II) thiocyanate				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

**Irritation and corrosivity**

Causes skin and eye burns.

**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 classified as specific target organ toxicant, single exposure, category 1.

**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 toxicology information is available.

**Further information**

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

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**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
67-56-1	methanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus (Bluegill sunfish)	
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata (green algae)	
	Acute crustacea toxicity	EC50 mg/l	24500	48 h	Crustaceans	
7697-37-2	Nitric acid ... %					
	Acute fish toxicity	LC50	72 mg/l	96 h	Gambusia affinis	IUCLID
592-85-8	Mercury(II) thiocyanate					
	Acute fish toxicity	LC50 mg/l	0,15	96 h	Pimephales promelas (fathead minnow)	
	Acute crustacea toxicity	EC50 mg/l	0,0052	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.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
67-56-1	methanol	-0,77
7697-37-2	Nitric acid ... %	-0,21

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

Our local agencies will accept used cuvettes to ensure their proper disposal.

**Waste disposal number of waste from residues/unused products**

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

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#### Waste disposal number of used product

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

#### Waste disposal number of 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)

**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

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

This product forms part of a kit. Information in this section relates to the kit as a whole.

**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: Nitric acid ... %

Entry 69: methanol

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 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: 15.08.2019

Safety datasheet sections which have been updated: 11

Revision: 12.12.2018

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

Revision: 24.04.2018

Safety datasheet sections which have been updated: 2, 3, 8, 11, 13, 15, 16

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Revision Date 09.03.2017

Safety datasheet sections which have been updated: 14

Safety datasheet sections which have been updated: 4-16 Revision: 17.05.2013

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

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 3; H301	Calculation method
Acute Tox. 3; H311	Calculation method
Acute Tox. 3; H331	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	Calculation method
STOT SE 1; H370	Calculation method

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H370	Causes damage to organs.
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.
EUH071	Corrosive to the respiratory tract.

#### Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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