

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCW 032 Mangan/ Manganese/Manganèse, LCW 032 A; 1/3**

Revision date: 14.05.2019

Product code: LCW032-1

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

LCW 032 Mangan/ Manganese/Manganèse, LCW 032 A; 1/3

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Water analysis

**1.3. Details of the supplier of the safety data sheet**

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Toxic if inhaled.

Harmful if swallowed.

Harmful in contact with skin.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause respiratory irritation.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects .

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

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**Hazard components for labelling**ammonia ... %  
Potassium cyanide**Signal word:**

Danger

**Pictograms:****Hazard statements**

H302+H312	Harmful if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic 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.
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.
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.
P310	Immediately call a POISON CENTER/doctor.

**Special labelling of certain mixtures**

EUH032	Contact with acids liberates very toxic gas.
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**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			75-80 %
	231-791-2			
1336-21-6	ammonia ... %			15-20 %
	215-647-6	007-001-01-2		
	Skin Corr. 1B, Aquatic Acute 1; H314 H400			
151-50-8	Potassium cyanide			1 %
	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 H370 H372 H400 H410 EUH032			
6381-59-5	Potassium sodium tartrate tetrahydrate			1 %
	205-698-2			

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

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

## After ingestion

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

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

Irritation and corrosion, Breathing difficulties. May cause respiratory arrest.  
Dizziness, Nausea, Vomiting,  
Cardiac arrhythmias, Fatality

## 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; Foam

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**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. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.  
Do not breathe vapours, mist or gas. Ensure adequate ventilation.  
Remove all sources of ignition., Evacuate personnel to safe areas.

For personal protection see section 8.

**6.2. Environmental precautions**

Should not be released into the environment.  
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: 2-8 °C

**Hints on joint storage**

Do not store near acids.

**Further information on storage conditions**

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

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

Laboratory chemicals

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Reagent for analysis

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-41-7	Ammonia, anhydrous	25	18		TWA (8 h)	WEL
		35	25		STEL (15 min)	WEL
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**

Wash hands before breaks and after work.

General industrial hygiene practice.

Ensure that eye flushing systems and safety showers are located close to the working place.

Use only in area provided with appropriate exhaust ventilation.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream.

Wash hands before breaks and after work.

Chemical resistant protective gloves

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**

Provide adequate ventilation.

In the case of vapour formation use a respirator with an approved filter.

Recommended Filter type: ABEK-filter

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

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

Physical state:	liquid
Colour:	colourless
Odour:	ammoniacal
pH-Value (at 20 °C):	14

**Changes in the physical state**

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Melting point:	no data available
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available
<b>Flammability</b>	
Solid:	no data available
Gas:	no data available
<b>Explosive properties</b>	
no data available	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available
<b>Auto-ignition temperature</b>	
Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available
<b>Oxidizing properties</b>	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	0,95 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	completely soluble
<b>Solubility in other solvents</b>	
no data available	
Partition coefficient:	no data available
Viscosity / dynamic:	no data available 0 mPa·s
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
<b>9.2. Other information</b>	
Solid content:	no data available
no data available	

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

Reactivity Hazard

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**10.2. Chemical stability**

The product is chemically stable.

**10.3. Possibility of hazardous reactions**

Combustion/explosion hazards Toxic gases may be released if in contact with the following :

Oxidizing agents, Oxides of phosphorus, Phosgene,  
Mercury, Acids, nitrogen oxides (NOx),  
Peroxides, Heavy metals, Strong bases,  
Halogenated compounds

**10.4. Conditions to avoid**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**10.5. Incompatible materials**Aluminium, Lead, Copper,  
Metals, Nickel, Silver, Zinc**10.6. Hazardous decomposition products**Ammonia Hydrogen cyanide (hydrocyanic acid)  
See also section 5**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

Angaben zur Toxikologie liegen nicht vor.

**Acute toxicity**

Contact with acids liberates toxic gas.  
Toxic by inhalation.  
Harmful in contact with skin and if swallowed.

**ATEmix calculated**

ATE (oral) 476,2 mg/kg; ATE (dermal) 1361,0 mg/kg; ATE (inhalation vapour) 4,86 mg/l; ATE (inhalation aerosol) 4,857 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1336-21-6	ammonia ... %				
	oral	LD50 mg/kg	350	rat	
151-50-8	Potassium cyanide				
	oral	LD50	5 mg/kg	rat	
	dermal	LD50 mg/kg	14,29	rabbits	ECHA
	inhalation (4 h) vapour	LC50 mg/l	0,051	rat	
	inhalation (4 h) aerosol	LC50 mg/l	0,051	rat	

**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

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**STOT-single exposure**

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

**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.

**Further information**

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

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

May cause long-term adverse effects in the aquatic environment.  
Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1336-21-6	ammonia ... %					
	Acute fish toxicity	LC50 mg/l	0,53	96 h	Onchorhynchus mykiss	
	Acute crustacea toxicity	EC50	24 mg/l	48 h	Daphnia magna	
	Fish toxicity	NOEC	1,2 mg/l	61 d	Oncorhynchus gorbuscha	
151-50-8	Potassium cyanide					
	Acute fish toxicity	LC50 mg/l	0,068	96 h		
	Acute crustacea toxicity	EC50 mg/l	0,25	48 h		

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
1336-21-6	ammonia ... %	-1,38

**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**



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**Disposal recommendations**

In accordance with local and national regulations.

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

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

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

**List of Wastes Code - used product**

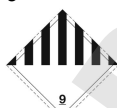
160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**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

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

<b>14.1. UN number:</b>	UN 3316
<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: yes



Danger releasing substance: ammonia ... %  
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****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3: ammonia ... %

**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): 3 - highly 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 14.04.2019

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Safety datasheet sections which have been updated: 2, 15

Revision Date 25.04.2017

Safety datasheet sections which have been updated: 9, 14

Revision: 19.10.2016

Safety datasheet sections which have been updated: 2, 3, 4, 11, 14

Revision: 17.09.2014

Safety datasheet sections which have been updated: 7, 14, 16

Revision: 04.09.2014

Safety datasheet sections which have been updated: 2

Revision: 08.07.2013

Safety datasheet sections which have been updated: 4-16

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

H300	Fatal if swallowed.
H302	Harmful if swallowed.
H302+H312	Harmful if swallowed or in contact with skin.
H310	Fatal in contact with skin.
H312	Harmful 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.
H335	May cause respiratory irritation.
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.
H411	Toxic 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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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

LCW 032 Mangan/Manganese/Manganése, LCW 032 B; 2/3

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Water analysis

**1.3. Details of the supplier of the safety data sheet**

Company name: HACH LANGE GmbH  
 Street: Willstätterstr. 11  
 Place: D-40549 Düsseldorf  
 Telephone: +49 (0)211 5288-383  
 e-mail: SDS@hach.com  
 Internet: www.de.hach.com  
 Responsible Department: HACH LANGE Ltd.  
 5, Pacific Way  
 Salford Manchester M50 1DL - United Kingdom  
 Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
 e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
 Unit 1, Chestnut Road Western Industrial Estate  
 IRL-Dublin 12  
 Tel. +353 (0)1 4602522  
 e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of causing cancer.

Toxic to aquatic life with long lasting effects .

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

hydroxylammonium chloride; hydroxylamine hydrochloride

Paraformaldehyde

**Signal word:** Danger

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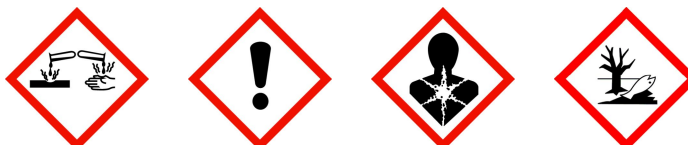
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## Pictograms:



## Hazard statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

## Precautionary statements

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

## 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	92 %
	231-791-2	
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride	6 %
	226-798-2	612-123-00-2
	Met. Corr. 1, Carc. 2, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H290 H351 H312 H302 H315 H319 H317 H373 H400 H410	
30525-89-4	Paraformaldehyde	2 %
	Flam. Sol. 2, Carc. 2, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, STOT SE 3; H228 H351 H332 H302 H315 H318 H317 H335	

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

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

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**General information**

Take off all contaminated clothing immediately.

**After inhalation**

Move to fresh air.

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

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

**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**

Irritation and corrosion, Allergic reactions

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

Treat symptomatically.

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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

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

Fire may liberate hazardous vapours.

**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. Do not breathe vapours/dust.

**Advice on protection against fire and explosion**

None known.

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#### 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: 2-8 °C

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

Reagent for analysis

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Additional advice on limit values

None known.

#### 8.2. Exposure controls

##### Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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.

Chemical resistant protective gloves

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

##### Skin protection

Remove and wash contaminated clothing before re-use.

##### Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

### 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):	1
----------------------	---

##### Changes in the physical state

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

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Flash point:	not applicable
Sustaining combustion:	No data available
<b>Flammability</b>	
Solid:	not applicable
Gas:	not applicable
<b>Explosive properties</b>	
not applicable	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable
<b>Auto-ignition temperature</b>	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not applicable
<b>Oxidizing properties</b>	
not applicable	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,09 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	completely soluble
<b>Solubility in other solvents</b>	
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
<b>9.2. Other information</b>	
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**

No dangerous reaction known under conditions of normal use.



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### LCW 032 Mangan/Manganese/Manganése, LCW 032 B; 2/3

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#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

Formaldehyde

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride				
	oral	LD50 mg/kg	141	rat	
	dermal	ATE mg/kg	1100		
30525-89-4	Paraformaldehyde				
	oral	LD50 mg/kg	592	rat	
	inhalation vapour	ATE	11 mg/l		
	inhalation (4 h) aerosol	LC50	1,07 mg/l	rat	

##### Irritation and corrosivity

Causes skin and eye burns.

##### Sensitising effects

May cause sensitisation by skin contact.

##### Carcinogenic/mutagenic/toxic effects for reproduction

H351 - Suspected of causing cancer.

##### 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 toxicology information is available.

##### Further information

Handle in accordance with good industrial hygiene and safety practice.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Do not flush into surface water or sanitary sewer system.

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## LCW 032 Mangan/Manganese/Manganése, LCW 032 B; 2/3

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride					
	Acute fish toxicity	LC50 mg/l	1-10	96 h	Leuciscus idus (Golden orfe)	
	Acute algae toxicity	ErC50 mg/l	0,21	72 h		Calculation method
30525-89-4	Paraformaldehyde					
	Acute fish toxicity	LC50 mg/l	46-78	96 h		

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

no data available

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

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

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

## Safety Data Sheet

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## LCW 032 Mangan/Manganese/Manganése, LCW 032 B; 2/3

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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)**

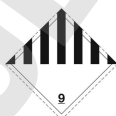
**14.1. UN number:** UN 3316  
**14.2. UN proper shipping name:** CHEMICAL KIT  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** II  
 Hazard label: 9



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: yes



Danger releasing substance: hydroxylammonium chloride; hydroxylamine hydrochloride

**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**

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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). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 3 - highly 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 25.04.2017

Safety datasheet sections which have been updated: 9, 14

Revision: 19.10.2016

Safety datasheet sections which have been updated: 2, 4, 8, 11, 14

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

H228	Flammable solid.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
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.
H411	Toxic to aquatic life with long lasting effects.

##### Further Information

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

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

**Safety Data Sheet**

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**LCW 032 Mangan/Manganese/Manganèse, LCW 032 C; 3/3**

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

LCW 032 Mangan/Manganese/Manganèse, LCW 032 C; 3/3

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Water analysis

**1.3. Details of the supplier of the safety data sheet**

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Harmful if swallowed.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

Toxic to aquatic life with long lasting effects .

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

hydroxylammonium chloride; hydroxylamine hydrochloride

**Signal word:** Warning

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## Pictograms:



## Hazard statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

## Precautionary statements

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

## 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			> 85 %
	231-791-2			
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride			8 %
	226-798-2	612-123-00-2		
	Met. Corr. 1, Carc. 2, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H290 H351 H312 H302 H315 H319 H317 H373 H400 H410			
6381-92-6	Ethylenedinitrilotetraacetic acid disodium salt dihydrate			< 4 %
	205-358-3			
	Eye Irrit. 2; H319			

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

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

Take off all contaminated clothing immediately.

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

**After ingestion**

Clean mouth with water and drink afterwards plenty of water.

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

irritant effects, Allergic reactions

**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>); Dry powder; Foam**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**

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

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

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

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

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

Storage temperature: 2-8 °C

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

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Reagent for analysis

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Additional advice on limit values

None known.

### 8.2. Exposure controls

#### Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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.

Chemical resistant protective gloves

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

#### Skin protection

Remove and wash contaminated clothing before re-use.

#### Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

## 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):		3

#### Changes in the physical state

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

#### Flammability

Solid:	not applicable
Gas:	not applicable

#### Explosive properties

not applicable



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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: not applicable

**Oxidizing properties**

not applicable

Vapour pressure: no data available

Vapour pressure: no data available

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

Bulk density: not applicable

Water solubility:  
 (at 20 °C) completely soluble

**Solubility in other solvents**

no data available

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

**9.2. Other information**

Solid content: 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**

No dangerous reaction known under conditions of normal use.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

No decomposition if used as directed.

**SECTION 11: Toxicological information**

## Safety Data Sheet

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

Harmful if swallowed.

**ATEmix calculated**

ATE (oral) 1603,5 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride				
	oral	LD50 mg/kg	141	rat	
	dermal	ATE mg/kg	1100		
6381-92-6	Ethylenedinitrilotetraacetic acid disodium salt dihydrate				
	oral	LD50 mg/kg	>2000	rat	

**Irritation and corrosivity**

May cause eye irritation.

**Sensitising effects**

May cause sensitisation by skin contact.

**Carcinogenic/mutagenic/toxic effects for reproduction**

H351 - Suspected of causing cancer.

**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 toxicology information is available.

**Additional information on tests**

None known.

**Further information**

Handle in accordance with good industrial hygiene and safety practice.

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

Do not flush into surface water or sanitary sewer system.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride					
	Acute fish toxicity	LC50 mg/l	1-10	96 h	Leuciscus idus (Golden orfe)	
	Acute algae toxicity	ErC50 mg/l	0,21	72 h		Calculation method
6381-92-6	Ethylenedinitrilotetraacetic acid disodium salt dihydrate					
	Acute fish toxicity	LC50	320 mg/l	96 h	Poecilia reticulata (guppy)	IUCLID
	Acute algae toxicity	ErC50 mg/l	10-100	72 h		

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

no data available

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

Discharge into the environment must be avoided.

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

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



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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)****14.2. UN proper shipping name:** Not tested**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: yes



Danger releasing substance: hydroxylammonium chloride; hydroxylamine hydrochloride

## Safety Data Sheet

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#### **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):

3 - highly 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 25.04.2017

Safety datasheet sections which have been updated: 9, 14

Revision: 19.10.2016

Safety datasheet sections which have been updated: 2, 8, 11, 14

Revision: 17.09.2014

Safety datasheet sections which have been updated: 7, 14

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

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
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 .
H411	Toxic to aquatic life with long lasting effects .

#### **Further Information**

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

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