

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 1 of 7

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

14399-01 EDTA, 0.8M crtg

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:

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Causes serious eye damage.

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

tetrasodium ethylene diamine tetraacetate

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

H318 Causes serious eye damage.

Precautionary statements

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 2 of 7

P310 present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

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	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			> 70 %
	231-791-2			
64-02-8	tetrasodium ethylene diamine tetraacetate			20-30 %
	200-573-9	607-428-00-2		
	Acute Tox. 4, Eye Dam. 1; H302 H318			

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

After inhalation

not hazardous by inhalation

After contact with skin

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

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

Drink plenty of water. Call a physician immediately.

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

Irritation and corrosion

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

Treat symptomatically.

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

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

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 3 of 7

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

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.

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 or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

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)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

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

Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Skin protection

Avoid contact with skin, eyes and clothing.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 4 of 7

Respiratory protection

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

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):	10,2

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	100 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

not applicable

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	no data available
----------------------------	-------------------

Oxidizing properties

no data available

Vapour pressure:	no data available
------------------	-------------------

Density (at 20 °C):	1,160 g/cm ³
---------------------	-------------------------

Bulk density:	not applicable
---------------	----------------

Water solubility: (at 20 °C)	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
-------------------	-------------------

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 5 of 7

Solvent separation test:

no data available

Solvent content:

no data available

9.2. Other information

Solid content:

not applicable

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. To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition products: Carbon dioxide (CO₂), Carbon monoxide,

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.

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-02-8	tetrasodium ethylene diamine tetraacetate				
	oral	LD50 mg/kg	1658	rat	

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: 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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 6 of 7

Specific effects in experiment on an animal

No toxicology information is available.

Additional information on tests

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.

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

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

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

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

Not subject to transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

14399-01 EDTA, 0.8M crtg

Revision date: 03.01.2019

Product code: 1439901

Page 7 of 7

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)**Other applicable information (air transport)**

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

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: 03.01.2019

Safety datasheet sections which have been updated: 11, 15

Revision: 08.12.2016

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

Revision: 27.08.2015

Safety datasheet sections which have been updated: 3

Revision: 26.05.2015

Safety datasheet sections which have been updated: 2, 11

Safety datasheet sections which have been updated: 15

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H318 Causes serious eye damage.

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.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 1 of 8

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

2449-32 Sulfuric Acid, 5.25 N

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:

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

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

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 ... %

Signal word: Danger**Pictograms:**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 2 of 8

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 Immediately call a POISON CENTER/doctor.
P362 Take off contaminated clothing.
P390 Absorb spillage to prevent material damage.

Additional advice on labelling

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

2.3. Other hazards

no data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			70-80 %
	231-791-2			
7664-93-9	sulphuric acid ... %			20-30 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			

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.
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. Consult a physician.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Show this safety data sheet to the doctor in attendance.

After contact with eyes

Rinse immediately with plenty of water for at least 15 minutes. Call a physician immediately.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 3 of 8

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water.
Never give anything by mouth to an unconscious person.
Call a physician immediately.

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

Irritation and corrosion

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.
Gives off hydrogen by reaction with metals. Reacts violently with water.
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 or spray mist. Use only in well-ventilated areas.

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Hints on joint storage

Protect against Bases, Oxidizing agents, Metals

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 4 of 8

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		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 at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0.40 mm, Breakthrough time: > 30 min

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Ensure adequate ventilation, especially in confined areas.

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):	< 0,5

Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	100 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 5 of 8

Explosive properties

not applicable

Lower explosion limits:

not applicable

Upper explosion limits:

not applicable

Ignition temperature:

not applicable

Auto-ignition temperature

Solid:

not applicable

Gas:

not applicable

Decomposition temperature:

not applicable

Oxidizing properties

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1,047 g/cm³

Bulk density:

not applicable

Water solubility:

soluble

Solubility in other solvents

no data available

Partition coefficient:

no data available

Viscosity / dynamic:

not applicable

Viscosity / kinematic:

not applicable

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:

not applicable

Corrosive in contact with metals

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

Reacts with the following substances: Strong bases, Oxidizing agents

10.4. Conditions to avoid

Extremes of temperature and direct sunlight. Decomposes on heating.

10.5. Incompatible materials

Bases, Oxidizing agents

10.6. Hazardous decomposition products

Gives off hydrogen by reaction with metals.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 6 of 8

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data is available on the product itself.

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 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

sulphuric acid ... %:

LD50/oral/rat = 2140 mg/kg

LC50/inhalation/1h/rat = 347ppm/1hr

Practical experience

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.

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

no data available

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 7 of 8

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 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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 3264
14.2. UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (<45% Sulphuric acid solution)
14.3. Transport hazard class(es): 8
14.4. Packing group: III

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)
Not tested

Marine transport (IMDG)

14.1. UN number: UN 3264
14.2. UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (<45% Sulphuric acid solution)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Marine pollutant: --
EmS: F-A,S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3264
14.2. UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (<45% Sulphuric acid solution)
14.3. Transport hazard class(es): 8
14.4. Packing group: III

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

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P
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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

2449-32 Sulfuric Acid, 5.25 N

Revision date: 31.10.2018

Product code: 244932

Page 8 of 8

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): 1 - slightly 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: 31.10.2018
Safety datasheet sections which have been updated: 2, 15, 16

Revision: 27.05.2015
Safety datasheet sections which have been updated: 2, 4, 11
Safety datasheet sections which have been updated: 11

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

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.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 1 of 9

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

282-32H Potassium Hydroxide Standard Solution 8.0N

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:

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

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

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

potassium hydroxide; caustic potash

Signal word: Danger**Pictograms:**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 2 of 9

Hazard statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary statements

P234	Keep only in original packaging.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

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	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			55-65 %
	231-791-2			
1310-58-3	potassium hydroxide; caustic potash			35-45 %
	215-181-3	019-002-00-8		
	Acute Tox. 4, Skin Corr. 1A; H302 H314			

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

After inhalation

Move to fresh air. Consult a physician. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

After contact with skin

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

After contact with eyes

Rinse immediately with plenty of water for at least 15 minutes. Call a physician immediately.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 3 of 9

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water.
Never give anything by mouth to an unconscious person.
Call a physician immediately.

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

Irritation and corrosion

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

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 or spray mist. Use only in well-ventilated areas.

Advice on protection against fire and explosion

See also section 5

Further information on handling

Observe label precautions.
Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 4 of 9

7.3. Specific end use(s)

Reagent for analysis, Standard solution

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

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1310-58-3	Potassium hydroxide	-	2		STEL (15 min)	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 at the end of workday.

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 contact with skin, eyes and clothing.

Respiratory protection

Ensure adequate ventilation, especially in confined areas.

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

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

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

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	> 100 °C
Sublimation point:	no data available
Softening point:	no data available
Pour point:	not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 5 of 9

:	no data available
Flash point:	not applicable
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
not applicable	
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 100 °C)	450,5 hPa
Vapour pressure:	no data available
Density (at 20 °C):	1,3 g/cm ³
Bulk density:	no data available
Water solubility:	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 reactionsReacts with the following substances: Acids, Metals, Organic peroxides
Keep away from combustible material.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 6 of 9

10.4. Conditions to avoid

Extremes of temperature and direct sunlight. Decomposes on heating.

10.5. Incompatible materials

Acids, Alcohols, Metals, Peroxides

10.6. Hazardous decomposition products

Contact with metals liberates hydrogen gas.

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

No toxicology information is available.

Acute toxicity

No data is available on the product itself.

ATEmix calculated

ATE (oral) 964,9 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1310-58-3	potassium hydroxide; caustic potash				
	oral	LD50 mg/kg	333	Rat	Merck

Irritation and corrosivity

Causes 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 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

Harmful by ingestion. Gastrointestinal discomfort, Vomiting

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 7 of 9

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
1310-58-3	potassium hydroxide; caustic potash					
	Acute fish toxicity	LC50	80 mg/l	96 h	Gambusia affinis	IUCLID

12.2. Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

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 data available

Further information

no data available

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

In accordance with local and national regulations.

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

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:	UN1814
14.2. UN proper shipping name:	Potassium hydroxide solution
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 8 of 9



Classification code: C5
Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2
Hazard No: 80
Tunnel restriction code: E

Other applicable information (land transport)

Excepted Quantities: E2

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number: UN1814
14.2. UN proper shipping name: POTASSIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Special Provisions: -
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-A, S-B

Other applicable information (marine transport)

Excepted Quantities: E2

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN1814
14.2. UN proper shipping name: POTASSIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Special Provisions: A3 A803
Limited quantity Passenger: 0.5 L
Passenger LQ: Y840
Excepted quantity: E2
IATA-packing instructions - Passenger: 851
IATA-max. quantity - Passenger: 1 L
IATA-packing instructions - Cargo: 855
IATA-max. quantity - Cargo: 30 L

Other applicable information (air transport)

Excepted Quantities: E2

Safety Data Sheet

according to Regulation (EC) No 1907/2006

282-32H Potassium Hydroxide Standard Solution 8.0N

Revision date: 23.04.2018

Product code: 28232H

Page 9 of 9

Passenger-LQ: Y840

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no
Danger releasing substance: Not relevant

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

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): 1 - slightly 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: 23.04.2018
Safety datasheet sections which have been updated: 3, 12, 13, 16
Revision: 24.09.2015
This data sheet contains changes from the previous version in section(s): 11
Revision: 19.05.2015
This data sheet contains changes from the previous version in section(s): 2, 4, 11
Revision: 23.01.2013
This data sheet contains changes from the previous version in section(s): 4,6,7,8, 911,12,14,

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 4; H302	Calculation method
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 1 of 9

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

1.1. Product identifier

424-32 Hardness 1 Buffer

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 Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

2-amino-2-methylpropanol

Signal word: Warning

Pictograms:



Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 2 of 9

Hazard statements

- H315 Causes skin irritation.
H319 Causes serious eye irritation.
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.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/container in accordance with local regulation.

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

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
124-68-5	2-amino-2-methylpropanol			50-60 %
	204-709-8	603-070-00-6		
	Eye Irrit. 2, Skin Irrit. 2, Aquatic Chronic 3; H319 H315 H412			
7732-18-5	Water			35-45 %
	231-791-2			
64-19-7	acetic acid ... %			1-10 %
	200-580-7	607-002-00-6		
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			
14402-88-1	Diaminoethane tetra-acetic acid Magnesium-disodium salt			<1 %
	238-372-3			

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.
If symptoms persist, call a physician.

After contact with skin

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 3 of 9

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. Consult a physician.

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

irritant effects

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

No Limit

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

5.3. Advice for firefighters

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

In the event of fire, wear self-contained breathing apparatus.

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

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.

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.

Advice on protection against fire and explosion

None known.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 4 of 9

See also section 5

Further information on handling

Observe label precautions.

Avoid contact with skin, eyes and clothing.

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

Keep in a dry, cool place.

Hints on joint storage

Do not store together with Oxidizing agents

7.3. Specific end use(s)

Reagent for analysis

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

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
64-19-7	Acetic acid	10	25		TWA (8 h)	EU
		15	37		STEL (15 min)	EU

Additional advice on limit values

None known.

8.2. Exposure controls**Appropriate engineering controls**

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

Protective and hygiene measures

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

Wash hands before breaks and after work.

General industrial hygiene practice.

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

Remove and wash contaminated clothing before re-use.

Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

Environmental exposure controls

Should not be released into the environment.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 5 of 9

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

Physical state:	liquid
Colour:	yellow
Odour:	vinegar-like
pH-Value (at 20 °C):	10 (2 % solution)

Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	104,5 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	>97,2 °C

Flammability

Solid:	no data available
Gas:	no data available

Explosive properties

no data available

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available

Auto-ignition temperature

Solid:	no data available
Gas:	no data available

Decomposition temperature: no data available

Oxidizing properties

no data available

Vapour pressure:	no data available
Vapour pressure:	no data available

Density (at 20 °C):	1,033 g/cm ³
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: (at 20 °C)	0,36
Solvent separation test:	no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 6 of 9

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

Reactivity Hazard: Oxidizing agents

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Oxidizing agents

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

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	
124-68-5	2-amino-2-methylpropanol					
	oral	LD50 mg/kg	2900	Rat	IUCLID	
	dermal	LD50 mg/kg	> 2000	Rabbit	IUCLID	
64-19-7	acetic acid ... %					
	oral	LD50 mg/kg	3310	Rat	GESTIS	

Irritation and corrosivity

Irritating to eyes and skin.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 7 of 9

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

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
124-68-5	2-amino-2-methylpropanol					
	Acute fish toxicity	LC50	190 mg/l	96 h	Lepomis macrochirus	IUCLID
	Acute algae toxicity	ErC50	520 mg/l	72 h	Desmodesmus subspicatus	
64-19-7	acetic acid ... %					
	Acute crustacea toxicity	EC50	65 mg/l	48 h	Daphnia magna	Janssen et al

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
124-68-5	2-amino-2-methylpropanol	-0,74
64-19-7	acetic acid ... %	-0,17

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

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

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

Contaminated packaging

Dispose of as unused product.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 8 of 9

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

Not subject to transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

Other applicable information (air transport)

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

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: 23.04.2018

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

Revision: 23.04.2015

Safety datasheet sections which have been updated: 2

Revision: 25.02.2015

Safety datasheet sections which have been updated: 2, 10

Revision: 06.11.2013

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

424-32 Hardness 1 Buffer

Revision date: 23.04.2018

Product code: 42432

Page 9 of 9

H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

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.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Revision date: 06.02.2017

928-99 ManVer 2

Product code: 92899

Page 1 of 8

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

928-99 ManVer 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:

Acute toxicity: Acute Tox. 4

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Harmful if swallowed.

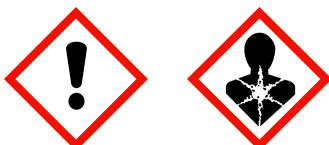
May cause an allergic skin reaction.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

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

hydroxylammonium chloride; hydroxylamine hydrochloride

Signal word: Warning**Pictograms:**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 2 of 8

Hazard statements

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Additional advice on labelling

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

2.3. Other hazards

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
		REACH No
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
7647-14-5	Sodium chloride	85-95 %
	231-598-3	
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride	5-10 %
	226-798-2	612-123-00-2
	Met. Corr. 1, Carc. 2, Acute Tox. 4, Acute Tox. 4, STOT RE 2, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1; H290 H351 H312 H302 H373 ** H319 H315 H317 H400	
7631-86-9	Silica gel	1-5 %
	231-545-4	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

Move to fresh air. Consult a physician for severe cases.

After contact with skin

Wash off with soap and water. 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. Show this safety data sheet to the doctor in attendance.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 3 of 8

After ingestion

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

Never give anything by mouth to an unconscious person.

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

Irritation and corrosion, Vomiting Spasm, Diarrhoea, Circulatory collapse

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.

Sodium oxides, Hydrogen chloride gas, nitrogen oxides (NO_x)

5.3. Advice for firefighters

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

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.

Do not breathe vapours, mist or gas. Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

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

Advice on protection against fire and explosion

See also section 5

Further information on handling

Observe label precautions.

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 4 of 8

Requirements for storage rooms and vessels

Store at room temperature in the original container.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

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

Protective and hygiene measures

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.

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 contact with skin and eyes.

Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: powder

Colour: red

Odour: none

pH-Value (at 20 °C): 3,3 (5 % solution)

Changes in the physical state

Melting point: 151 °C

Initial boiling point and boiling range: not applicable

Sublimation point: not applicable

Softening point: not applicable

Pour point: not applicable

Flash point: not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 5 of 8

Sustaining combustion: No data available

Flammability

Solid: no data available

Gas: no data available

Explosive properties

not applicable

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

not applicable

Vapour pressure: no data available

Density (at 20 °C): 2,12 g/cm³

Bulk density: no data available

Water solubility:
(at 20 °C) soluble**Solubility in other solvents**

no data available

Partition coefficient: not applicable

Viscosity / dynamic: not applicable

Viscosity / kinematic: not applicable

Flow time: not applicable

Vapour density: not applicable

Evaporation rate: not applicable

Solvent separation test: not applicable

Solvent content: not applicable

9.2. Other information

Solid content: no data available

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

Reacts with the following substances: Oxidizing agents

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

None known.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 6 of 8

10.6. Hazardous decomposition products

Sodium oxides, Hydrogen chloride gas, nitrogen oxides (NOx)

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

No toxicology information is available.

Acute toxicity

No data is available on the product itself.

ATEmix calculated

ATE (oral) 1586,1 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7647-14-5	Sodium chloride				
	oral	LD50 mg/kg	3000	Ratte	
	dermal	LD50 mg/kg	>10000	Kaninchen	
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride				
	oral	LD50 mg/kg	141	rat	
	dermal	ATE mg/kg	1100		

Irritation and corrosivity

No known effect.

Sensitising effects

May cause sensitisation by skin contact. (hydroxylammonium chloride; hydroxylamine hydrochloride)

Carcinogenic/mutagenic/toxic effects for reproduction

H351 - Suspected of causing cancer. (hydroxylammonium chloride; hydroxylamine hydrochloride)

STOT-single exposure

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

STOT-repeated exposure

H373 - May cause damage to organs through prolonged or 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.

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 7 of 8

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7647-14-5	Sodium chloride					
	Acute fish toxicity	LC50 mg/l	7650	96 h	Pimephales promelas	
	Acute crustacea toxicity	EC50 mg/l	1000	48 h	Daphnia magna	
5470-11-1	hydroxylammonium chloride; hydroxylamine hydrochloride					
	Acute fish toxicity	LC50 mg/l	1-10	96 h	Leuciscus idus (Golden orfe)	

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Contaminated packaging

Dispose of as unused product.

The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

Not subject to transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

Other applicable information (air transport)

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

928-99 ManVer 2

Revision date: 06.02.2017

Product code: 92899

Page 8 of 8

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

Not relevant

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: 6.02.2017
Safety datasheet sections which have been updated: 2, 11
Revision: 22.04.2015
Safety datasheet sections which have been updated: 2
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.

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.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Revision date: 23.04.2018

947-99 CalVer 2

Product code: 94799

Page 1 of 7

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

947-99 CalVer 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**

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

947-99 CalVer 2

Revision date: 23.04.2018

Product code: 94799

Page 2 of 7

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
7647-14-5	Sodium chloride	>99 %
	231-598-3	
63451-35-4	Hydroxynaphthol	0,1 - 1,0 %
	264-197-7	
	Carc. 2, STOT SE 3; H351 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. Consult a physician for severe cases.

After contact with skin

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician. Show this safety data sheet to the doctor in attendance.

After ingestion

If conscious, drink plenty of water. Consult a physician if necessary.

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.

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 case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Additional information

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

SECTION 6: Accidental release measures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

947-99 CalVer 2

Revision date: 23.04.2018

Product code: 94799

Page 3 of 7

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

Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections

Avoid dust formation.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

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

Protective and hygiene measures

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

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream. Wash hands before breaks and at the end of workday. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection

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

Environmental exposure controls

Should not be released into the environment.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

947-99 CalVer 2

Revision date: 23.04.2018

Product code: 94799

Page 4 of 7

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

Physical state:	powder
Colour:	dark blue
Odour:	amine-like
pH-Value (at 20 °C):	7,9 (5 % solution)

Changes in the physical state

Melting point:	274 °C
Initial boiling point and boiling range:	not applicable
Sublimation point:	no data available
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

not applicable

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not applicable
----------------------------	----------------

Oxidizing properties

not applicable

Vapour pressure:	not applicable
Vapour pressure:	not applicable

Density (at 20 °C):	2,12 g/cm ³
Bulk density:	no data available

Water solubility: (at 20 °C)	soluble
---------------------------------	---------

Solubility in other solvents

no data available

Partition coefficient:	not applicable
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
Flow time:	not applicable
Vapour density:	not applicable
Evaporation rate:	not applicable
Solvent separation test:	not applicable
Solvent content:	not applicable

9.2. Other information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Revision date: 23.04.2018

947-99 CalVer 2

Product code: 94799

Page 5 of 7

Solid content:

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

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

None known.

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

LD50/oral/rat = 3000 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7647-14-5	Sodium chloride				
	oral	LD50 mg/kg	3000	Ratte	
	dermal	LD50 mg/kg	>10000	Kaninchen	

Irritation and corrosivity

No known effect.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

No known effect.

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

rabbit eye: 100mg/24hr Mild eye irritation

rabbit skin: 500mg/24hr Mild skin irritation

Further information

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

947-99 CalVer 2

Revision date: 23.04.2018

Product code: 94799

Page 6 of 7

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
7647-14-5	Sodium chloride					
	Acute fish toxicity	LC50 mg/l	7650	96 h	Pimephales promelas	
	Acute crustacea toxicity	EC50 mg/l	1000	48 h	Daphnia magna	

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

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

In accordance with local and national regulations.

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

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

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**Land transport (ADR/RID)****Other applicable information (land transport)**

Not subject to transport regulations.

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

Not tested

Marine transport (IMDG)**Other applicable information (marine transport)**

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

947-99 CalVer 2

Revision date: 23.04.2018

Product code: 94799

Page 7 of 7

Other applicable information (air transport)

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

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): 1 - slightly 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: 23.04.2018

Safety datasheet sections which have been updated: 8, 11 - 13

Revision: 24.05.2017

Safety datasheet sections which have been updated: 2, 3, 4, 8, 11

Revision: 05.08.2015

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

Revision: 26.01.2015

Safety datasheet sections which have been updated: 2

Relevant H and EUH statements (number and full text)

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

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.)