

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**426-32 Hardness 3 Solution**

Revision date: 23.04.2018

Product code: 42632

Page 1 of 8

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

426-32 Hardness 3 Solution

**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

**426-32 Hardness 3 Solution**

Revision date: 23.04.2018

Product code: 42632

Page 2 of 8

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			70-80 %
	231-791-2			
57-55-6	1,2-Propanediol			20-30 %
	200-338-0			
-	hydrochloric acid ... %			< 1 %
	231-595-7	017-002-01-X		
	Skin Corr. 1B, STOT SE 3; H314 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.

If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with plenty of water.

In the case of skin irritation or allergic reactions see 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.

Call a physician immediately.

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

No known effect.

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

Treat symptomatically.

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

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

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

Fire may liberate hazardous vapours.

**5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**Additional information**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 426-32 Hardness 3 Solution

Revision date: 23.04.2018

Product code: 42632

Page 3 of 8

regulations.

#### SECTION 6: Accidental release measures

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

Use personal protective equipment.

##### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

##### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

##### 6.4. Reference to other sections

13. Disposal considerations

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

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

Use only in well-ventilated areas.

###### **Advice on protection against fire and explosion**

See also section 5

###### **Further information on handling**

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**

None known.

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

Reagent for analysis

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL
57-55-6	Propane-1,2-diol, particulates	-	10		TWA (8 h)	WEL

###### **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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**426-32 Hardness 3 Solution**

Revision date: 23.04.2018

Product code: 42632

Page 4 of 8

**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: &gt;480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 30 min

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

**Environmental exposure controls**

Should not be released into the environment.

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

Physical state:	liquid
Colour:	colourless, clear
Odour:	odourless
pH-Value (at 20 °C):	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
:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available

**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:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,026 g/cm <sup>3</sup>

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 426-32 Hardness 3 Solution

Revision date: 23.04.2018

Product code: 42632

Page 5 of 8

Bulk density: not applicable

Water solubility:  
(at 20 °C) soluble

#### **Solubility in other solvents**

soluble

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

#### **9.2. Other information**

Solid content: not applicable

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**

None known.

#### **10.5. Incompatible materials**

None known.

#### **10.6. Hazardous decomposition products**

No hazardous decomposition products are known.

#### **Further information**

None known.

### **SECTION 11: Toxicological information**

#### **11.1. Information on toxicological effects**

##### **Acute toxicity**

No data is available on the product itself.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 426-32 Hardness 3 Solution

Revision date: 23.04.2018

Product code: 42632

Page 6 of 8

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
57-55-6	1,2-Propanediol				
	oral	LD50 mg/kg 20000	rat	Toxicology and Appli	
	dermal	LD50 mg/kg 20800	rabbit	Raw Material Data Ha	
-	hydrochloric acid ... %				
	dermal	LD50 mg/kg >5010			

#### Irritation and corrosivity

No known effect.

#### Sensitising effects

No known effect.

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

Contains no ingredient listed as a carcinogen

#### STOT-single exposure

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

#### STOT-repeated exposure

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

#### Aspiration hazard

No aspiration toxicity classification

#### Specific effects in experiment on an animal

No data is available on the product itself.

#### Additional information on tests

no data available

#### Practical experience

#### Observations relevant to classification

no data available

#### Other observations

no data available

#### Further information

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

## SECTION 12: Ecological information

### 12.1. Toxicity

No data is available on the product itself.

Do not flush into surface water or sanitary sewer system.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**426-32 Hardness 3 Solution**

Revision date: 23.04.2018

Product code: 42632

Page 7 of 8

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
57-55-6	1,2-Propanediol					
	Acute fish toxicity	LC50 mg/l	51600	96 h	Oncorhynchus mykiss (rainbow trout)	OECD 203
	Acute crustacea toxicity	EC50 mg/l	34400	48 h	Daphnia magna (Water flea)	Information taken from reference works and the literature.
-	hydrochloric acid ... %					
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus	

**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
57-55-6	1,2-Propanediol	-0,92

**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.

**Further information**

no data available

**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

**List of Wastes Code - 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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 426-32 Hardness 3 Solution

Revision date: 23.04.2018

Product code: 42632

Page 8 of 8

#### 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

#### Other applicable information

no data available

### SECTION 15: Regulatory information

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

##### National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Changes

Revision: 23.04.2018

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

Revision: 22.04.2015

Safety datasheet sections which have been updated: 2

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

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

#### Further Information

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

*(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

**962-99 UniVer 3 Hardness Reagent**

Revision date: 30.03.2017

Product code: 96299

Page 1 of 9

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

962-99 UniVer 3 Hardness Reagent

**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

Hazard Statements:

Causes serious eye irritation.

Harmful if inhaled.

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

sodium carbonate

Sodium sulfite

ammonium chloride

**Signal word:** Warning**Pictograms:**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**962-99 UniVer 3 Hardness Reagent**

Revision date: 30.03.2017

Product code: 96299

Page 2 of 9

**Hazard statements**

H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.

**Precautionary statements**

P261 Avoid breathing 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.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.

**Special labelling of certain mixtures**

EUH031 Contact with acids liberates toxic gas.

**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			
497-19-8	sodium carbonate			55-65 %
	207-838-8	011-005-00-2		
	Acute Tox. 4, Eye Irrit. 2; H332 H319			
7757-83-7	Sodium sulfite			15-25 %
	231-821-4			
	EUH031			
12125-02-9	ammonium chloride			10-20 %
	235-186-4	017-014-00-8		
	Acute Tox. 4, Eye Irrit. 2; H302 H319			
14402-88-1	Diaminoethane tetra-acetic acid Magnesium-disodium salt			1-5 %
	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 all contaminated clothing immediately.

**After inhalation**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 962-99 UniVer 3 Hardness Reagent

Revision date: 30.03.2017

Product code: 96299

Page 3 of 9

#### After contact with skin

Wash off with soap and water. If symptoms persist, call a physician.  
Take off all contaminated clothing immediately.

#### After contact with eyes

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### After ingestion

Drink 1 or 2 glasses of water. Prevent vomiting if possible.  
Call a physician immediately. Show this safety data sheet to the doctor in attendance.

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

irritant effects

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

Treat symptomatically.

### 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**

None known.

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

Fire may liberate hazardous vapours.

The following may develop in event of fire: sulfur oxides., Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>)

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

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

#### **Additional information**

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

### SECTION 6: Accidental release measures

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

Use personal protective equipment.

For personal protection see section 8.

#### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

#### **6.3. Methods and material for containment and cleaning up**

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**

None known.

See also section 5

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**962-99 UniVer 3 Hardness Reagent**

Revision date: 30.03.2017

Product code: 96299

Page 4 of 9

**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**

Store at room temperature in the original container.  
Protect from light, moisture and damage.

**Hints on joint storage**

Do not store near acids.

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

Reagent for analysis

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

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
12125-02-9	Ammonium chloride, fume	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

**Additional advice on limit values**

None known.

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

Handle in accordance with good industrial hygiene and safety practice.

**Protective and hygiene measures**

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

Wash hands before breaks and after work.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream.

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

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

material: nitrile rubber, Layer thickness 0,20 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**

Provide adequate ventilation.

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**962-99 UniVer 3 Hardness Reagent**

Revision date: 30.03.2017

Product code: 96299

Page 5 of 9

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

Physical state:	solid, powder
Colour:	light red
Odour:	odourless
pH-Value (at 20 °C):	10,1 (1,6 % solution)

**Changes in the physical state**

Melting point:	95 °C
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	no data available
Pour point:	no data available
:	no data available
Flash point:	not applicable

**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):	2,25 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	no data available

**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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 962-99 UniVer 3 Hardness Reagent

Revision date: 30.03.2017

Product code: 96299

Page 6 of 9

#### 9.2. Other information

Solid content: no data available  
no data available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

None known.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

#### 10.4. Conditions to avoid

Product is sensitive to light and moisture.  
Direct sources of heat.

#### 10.5. Incompatible materials

Oxidizing agents, Acids

#### 10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Sulphur oxides, Ammonia, nitrogen oxides (NO<sub>x</sub>)

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No toxicology information is available.

##### Acute toxicity

Harmful by inhalation.

##### ATEmix calculated

ATE (inhalation aerosol) 1,907 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
497-19-8	sodium carbonate				
	oral	LD50 mg/kg	4090	rat	IUCLID
	inhalation vapour	ATE	11 mg/l		
	inhalation (4 h) aerosol	LC50	1,15 mg/l	rat	
7757-83-7	Sodium sulfite				
	oral	LD50 mg/kg	2610	rat	
	inhalation (4 h) aerosol	LC50	>5,5 mg/l	rat	
12125-02-9	ammonium chloride				
	oral	LD50 mg/kg	1650	Rat	IUCLID

#### Irritation and corrosivity

May cause eye irritation.

#### Sensitising effects

No sensitisation responses were observed.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**962-99 UniVer 3 Hardness Reagent**

Revision date: 30.03.2017

Product code: 96299

Page 7 of 9

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

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No data is available on the product itself.

**Additional information on tests**

None known.

**Practical experience**
**Observations relevant to classification**

None known.

**Other observations**

None known.

**Further information**

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

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

No data is available on the product itself.

Do not let product enter drains.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7757-83-7	Sodium sulfite					
	Acute fish toxicity	LC50	315 mg/l	96 h		
12125-02-9	ammonium chloride					
	Acute fish toxicity	LC50	209 mg/l	96 h	Cyprinus carpio	IUCLID
	Acute crustacea toxicity	EC50	> 100 mg/l	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.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
12125-02-9	ammonium chloride	-4,37

**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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 962-99 UniVer 3 Hardness Reagent

Revision date: 30.03.2017

Product code: 96299

Page 8 of 9

#### Further information

Ecological injuries are not known or expected under normal use.

### 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

##### List of Wastes Code - 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)

##### 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 hazard class (D): 2 - obviously hazardous to water



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 962-99 UniVer 3 Hardness Reagent

Revision date: 30.03.2017

Product code: 96299

Page 9 of 9

#### **15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

#### **SECTION 16: Other information**

##### **Changes**

Revision: 30.03.2017

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

Revision: 20.04.2015

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

Revision: 08.04.2013

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

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
EUH031	Contact with acids liberates 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.)*