

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**21301H UniVer 3 Hardness Reagent**

Revision date: 02.07.2015

Product code: 21301H

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

21301H 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**

ammonium chloride

sodium carbonate

**Signal word:** Warning**Pictograms:****Hazard statements**

H319

Causes serious eye irritation.

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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.  
 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.

#### Special labelling of certain mixtures

EUH031 Contact with acids liberates toxic gas.

#### Additional advice on labelling

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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			60-70 %
	207-838-8	011-005-00-2		
	Eye Irrit. 2; 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.

##### After contact with skin

Wash off with soap and 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.

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#### 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.

#### 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.

#### 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.

##### 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)

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Laboratory chemicals

**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**

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.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream. Chemical resistant protective gloves

The protective gloves to be used must comply with the specifications of EC directive 2016/425/EC and the resultant standard DIN EN ISO 374-1.

**Skin protection**

Avoid contact with skin, eyes and clothing.

**Respiratory protection**

Provide adequate ventilation.

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

Physical state:	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
Flash point:	not applicable

**Flammability**

Solid:	not applicable
Gas:	not applicable

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**Explosive properties**

not applicable

Lower explosion limits:

not applicable

Upper explosion limits:

not applicable

Ignition temperature:

no data available

**Auto-ignition temperature**

Solid:

not applicable

Gas:

not applicable

Decomposition temperature:

no data available

**Oxidizing properties**

not applicable

Vapour pressure:

not applicable

Density (at 20 °C):

2,25 g/cm<sup>3</sup>

Bulk density:

no data available

Water solubility:

soluble

(at 20 °C)

**Solubility in other solvents**

no data available

Partition coefficient:

no data available

Viscosity / dynamic:

no data available

Viscosity / kinematic:

no data available

Flow time:

no data available

Vapour density:

no data available

Evaporation rate:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

**9.2. Other information**

Solid content:

no data available

**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**

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**

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**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 (inhalation aerosol) 1,904 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
497-19-8	sodium carbonate					
	oral	LD50 mg/kg	4090	Rat	IUCLID	
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 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.

**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.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
497-19-8	sodium carbonate					
	Acute fish toxicity	LC50	300 mg/l	96 h	Lepomis macrochirus	
	Acute crustacea toxicity	EC50	265 mg/l	48 h	Daphnia magna	IUCLID
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 known effect.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

In accordance with local and national regulations.

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

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

##### List of Wastes Code - used product

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

##### 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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

##### Other applicable information (land transport)

Not subject to transport regulations.

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**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

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Changes**

Revision: 2.07.2015

Safety datasheet sections which have been updated: 2, 11

Revision: 1.10.2014

Safety datasheet sections which have been updated: 2, 4, 6, 7-12, 14, 15, 16

**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.)*