

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 1 of 8

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

1.1. Product identifier

21320H 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

Signal word: Warning

Pictograms:



Hazard statements

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 2 of 8

Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
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.
P337+P313 If eye irritation persists: Get medical advice/attention.

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			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.

After ingestion

Drink 1 or 2 glasses of water. Prevent vomiting if possible.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 3 of 8

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 (CO₂), nitrogen oxides (NO_x)

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.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 4 of 8

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	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

Explosive properties

not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 5 of 8

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 ³
Bulk density:	no data available
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
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 avoidProduct is sensitive to light and moisture.
Direct sources of heat.**10.5. Incompatible materials**

Oxidizing agents, Acids

10.6. Hazardous decomposition productsCarbon monoxide, Carbon dioxide (CO₂), Sulphur oxides, Ammonia, nitrogen oxides (NO_x)**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 6 of 8

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 4090 mg/kg	Rat	IUCLID	
7757-83-7	Sodium sulfite				
	oral	LD50 2610 mg/kg	rat		
	inhalation (4 h) aerosol	LC50 >5,5 mg/l	rat		
12125-02-9	ammonium chloride				
	oral	LD50 1650 mg/kg	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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 7 of 8

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)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21320H UniVer 3 Hardness Reagent

Revision date: 03.05.2017

Product code: 21320H

Page 8 of 8

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

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

Revision: 3.05.2017

Safety datasheet sections which have been updated: 2, 11

Revision: 28.05.2015

Safety datasheet sections which have been updated: 2, 11

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.)