

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**10649 Ammonium Hydroxide 500 mL**

Revision date: 27.04.2017

Product code: 10649

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

10649 Ammonium Hydroxide 500 mL

**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

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Acute 1

Hazard Statements:

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause respiratory irritation.

Very toxic to aquatic life.

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

ammonia ... %

**Signal word:** Danger

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**Pictograms:**

**Hazard statements**

- H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H335 May cause respiratory irritation.  
 H400 Very toxic to aquatic life.

**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.  
 P310 Immediately call a POISON CENTER/doctor.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Additional advice on labelling**

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

**2.3. Other hazards**

Provokes tears.

**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]			
1336-21-6	ammonia ... %			50 - 100 %
	215-647-6	007-001-01-2		
	Skin Corr. 1B, Aquatic Acute 1; H314 H400			
7732-18-5	Water			0 - 50 %
	231-791-2			

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

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

Take off all contaminated clothing immediately.  
 Consult a physician. Show this safety data sheet to the doctor in attendance.

**After inhalation**

Move to fresh air.  
 If not breathing, give artificial respiration.  
 If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Take off all contaminated clothing immediately. Call a physician immediately.

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#### **After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### **After ingestion**

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.

Never give anything by mouth to an unconscious person.

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

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

Irritation and corrosion, Cough, Shortness of breath, Unconsciousness, Control of circulatory system, shock therapy if needed., Blindness

#### **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**

Alcohol-resistant foam, Carbon dioxide (CO<sub>2</sub>), Water

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**

nitrogen oxides (NO<sub>x</sub>)

Fire may liberate hazardous vapours.

Vapours may form explosive mixtures with air.

### **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. See also section 8

Do not breathe vapours or spray mist. Avoid contact with skin and clothing. Ensure adequate ventilation.

### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

Should not be released into the environment.

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

Prevent product from entering drains. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### **6.4. Reference to other sections**

See also section 13

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

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#### Advice on safe handling

Observe label precautions.

Use only in well-ventilated areas.

Do not breathe vapours/dust.

Avoid contact with skin and eyes.

#### Advice on protection against fire and explosion

Fire may liberate hazardous vapours.

Vapours may form explosive mixtures with air.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

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

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

##### Hints on joint storage

Do not store near acids.

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

Reagent for analysis

Laboratory chemicals

## SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Additional advice on limit values

This information is not available.

#### 8.2. Exposure controls

##### Appropriate engineering controls

Use only with adequate ventilation. Provide sufficient air exchange and/or exhaust in work rooms. Ensure that eye flushing systems and safety showers are located close to the working place.

##### 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.

General hygiene considerations When using, do not eat, drink or smoke.

Wash hands before breaks and after work.

##### Eye/face protection

Safety glasses with side-shields conforming to EN166

##### Hand protection

Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

In case of full contact:

Glove material : butyl-rubber

Layer thickness: 0,3 mm

Break through time: 480 min

In case of contact through splashing:

Glove material : Nitrile rubber

Layer thickness: 0,11 mm

Break through time: 240 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

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supplier of the CE approved gloves.

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

ABEK-filter

**Environmental exposure controls**

Do not let product enter drains.

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

Physical state:	liquid
Colour:	colourless
Odour:	ammoniacal
pH-Value (at 20 °C):	11,7

**Changes in the physical state**

Melting point:	-60 °C
Initial boiling point and boiling range:	38 - 100 °C
Sublimation point:	no data available
Softening point:	no data available
Pour point:	no data available
:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available

**Flammability**

Solid:	not applicable
Gas:	no data available

**Explosive properties**

no data available

Lower explosion limits:	16 (NH <sub>3</sub> ) vol. %
Upper explosion limits:	27 (NH <sub>3</sub> ) vol. %
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 20 °C)	153 hPa
Vapour pressure:	no data available
Density (at 20 °C):	0,9 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	completely soluble

**Solubility in other solvents**

no data available

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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

Fire may liberate hazardous vapours.  
Vapours may form explosive mixtures with air.

#### 10.2. Chemical stability

The product is chemically stable.  
The product itself does not burn. Vapour/air-mixtures are explosive at intense warming.

#### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions: Oxidizing agents Acids Mercury Heavy metals

#### 10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use.  
To avoid thermal decomposition, do not overheat.

#### 10.5. Incompatible materials

Aluminium, Lead, Copper, Metals, Nickel, Zinc, Silver

#### 10.6. Hazardous decomposition products

Fire may liberate hazardous vapours. Ammonia

#### Further information

Stable under recommended storage conditions.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No data is available on the product itself.

##### Acute toxicity

No data is available on the product itself.

##### ATEmix calculated

ATE (oral) 636,4 mg/kg

##### Irritation and corrosivity

The product causes burns of eyes, skin and mucous membranes.

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

##### Sensitising effects

No known effect.

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

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**STOT-repeated exposure**

No known effect.

**Specific effects in experiment on an animal**

No data is available on the product itself.

**Additional information on tests**

No known effect.

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

None known.

**Other observations**

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

**Further information**

None known.

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

Do not flush into surface water or sanitary sewer system.

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

**12.2. Persistence and degradability**

Not readily biodegradable.

**12.3. Bioaccumulative potential**

Bioaccumulation is unlikely. (anhydrous substance)

**Partition coefficient n-octanol/water**

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

**12.4. Mobility in soil**

There is no data available for this product.

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

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

**12.6. Other adverse effects**

Toxic to aquatic organisms.

**Further information**

This information is not available.

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

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**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)**

**14.1. UN number:** UN 2672  
**14.2. UN proper shipping name:** Ammonia solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Classification code: C5  
Special Provisions: 543  
Limited quantity: 5 L  
Transport category: 3  
Hazard No: 80  
Tunnel restriction code: E

**Other applicable information (land transport)**

Excepted Quantities: E1

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

Not tested

**Marine transport (IMDG)**

**14.1. UN number:** UN 2672  
**14.2. UN proper shipping name:** Ammonia solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Marine pollutant: P  
Special Provisions: -  
Limited quantity: 5 L



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EmS: F-A, S-B  
Segregation group: alkalis

**Other applicable information (marine transport)**

Excepted Quantities: E1

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

**14.1. UN number:** UN 2672  
**14.2. UN proper shipping name:** Ammonia solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Special Provisions: A64 A803  
Limited quantity Passenger: 1 L  
IATA-packing instructions - Passenger: 852  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 856  
IATA-max. quantity - Cargo: 60 L

**Other applicable information (air transport)**

Excepted Quantities: E1

Passenger-LQ: Y841

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: ammonia ... %

**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**

These transport data apply to the entire pack

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 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**

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Safety datasheet sections which have been updated: 2, 7, 9, 14

Revision: 09.02.2015

Safety datasheet sections which have been updated: 2-16

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

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
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.)*