

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2877436 Free Ammonia Chlorinating Solution**

Revision date: 02.08.2018

Product code: 2877436

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

2877436 Free Ammonia Chlorinating Solution

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Reagent for 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 Corr. 1A

Hazard Statements:

Causes severe skin burns and eye damage.

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

sodium hydroxide; caustic soda

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

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

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

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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.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

#### 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			>90 %
	231-791-2			
7758-11-4	di-potassium hydrogen phosphate			< 5,0 %
	231-834-5			
1310-73-2	sodium hydroxide; caustic soda			< 1,0 %
	215-185-5	011-002-00-6		
	Skin Corr. 1A; H314			
7681-52-9	sodium hypochlorite, solution ... % Cl active			< 0,1 %
	231-668-3	017-011-00-1		
	Skin Corr. 1B, Aquatic Acute 1; H314 H400 EUH031			

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.

If not breathing, give artificial respiration.

##### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.  
Take off all contaminated clothing immediately.  
If skin irritation persists, call a physician.

##### After contact with eyes

Immediately flush eye(s) with plenty of water. If eye irritation persists, consult a specialist.

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#### After ingestion

Drink plenty of water. If you feel unwell, seek medical advice (show the label where possible).

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

Irritation and corrosion, Cough, Shortness of breath, Spasm, headache

#### **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.

Extinguishing media: Water

##### **Unsuitable extinguishing media**

No Limit

#### **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.

#### **Additional information**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### 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**

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

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

13. Disposal considerations

### SECTION 7: Handling and storage

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

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

Do not get in eyes.

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

None known.

See also section 5

##### **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.

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**Hints on joint storage**

Do not store near acids.

**Further information on storage conditions**

no data available

**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 <sup>3</sup>	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

**Additional advice on limit values**

None known.

Contains no substances with occupational exposure limit values.

**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**

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: &gt;480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 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.

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.

**Skin protection**

Avoid contact with skin, eyes and clothing.

**Respiratory protection**

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so.

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**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):	12,5

**Changes in the physical state**

Melting point:	0 °C
Initial boiling point and boiling range:	100 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	not applicable
Sustaining combustion:	Not sustaining combustion

**Flammability**

Solid:	not applicable
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:	not applicable
Gas:	no data available

**Oxidizing properties**

no data available

The product has been shown not to be oxidising in a test following Directive 67/548/EEC ( Method A17, oxidising properties).

Vapour pressure:	no data available
Vapour pressure:	no data available
Density:	1 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility:	no data available

**Solubility in other solvents**

no data available  
soluble (Acid)

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

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Solvent separation test: no data available  
 Solvent content: no data available

#### 9.2. Other information

Solid content: not applicable  
 Corrosive in contact with metals (wenn pH Wert klein, bei Säuren)  
 no data available  
 Aluminium :  
 Mild steel: 204000 mm/a  
 Mild steel :  
 May be corrosive to metals.

### 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

Possibility of hazardous reactions: Acids, Metals, Peroxides

#### 10.4. Conditions to avoid

Heat.

#### 10.5. Incompatible materials

woven fabric, Organic materials, Metals

#### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

#### Further information

This information is not available.

### 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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7758-11-4	di-potassium hydrogen phosphate				
	oral	LD50 8000 mg/kg	rat		

##### Irritation and corrosivity

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

##### 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.

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#### STOT-repeated exposure

This information is not available.

#### Aspiration hazard

No aspiration toxicity classification

#### Specific effects in experiment on an animal

No toxicology information is available.

#### Additional information on tests

None known.

#### 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 information on ecology is available. No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1310-73-2	sodium hydroxide; caustic soda					
	Acute fish toxicity	LC50 mg/l	45,4	96 h	Onchorhynchus mykiss	
7681-52-9	sodium hypochlorite, solution ... % Cl active					
	Acute fish toxicity	LC50 mg/l	0,065	96 h		
	Acute crustacea toxicity	EC50 mg/l	0,032	48 h	Daphnia magna (Water flea)	

### 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.

#### Further information

Ecological injuries are not known or expected under normal use.

## 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

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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.

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)**

**14.1. UN number:** UN 1824  
**14.2. UN proper shipping name:** Sodium hydroxide solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8



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

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

Not tested

**Marine transport (IMDG)**

**14.1. UN number:** UN 1824  
**14.2. UN proper shipping name:** SODIUM HYDROXIDE, SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Hazard label: 8



Marine pollutant: -  
Special Provisions: -  
Limited quantity: 1 L  
Excepted quantity: E2  
EmS: F-A, S-B  
Segregation group: alkalis



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

**14.1. UN number:** UN 1824  
**14.2. UN proper shipping name:** SODIUM 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

#### 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

### 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): 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: 02.08.2018  
 Safety datasheet sections which have been updated: 2, 12, 15, 16  
 Revision: 27.03.2015  
 Safety datasheet sections which have been updated: 1-16

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

Classification	Classification procedure
Skin Corr. 1A; H314	Calculation method

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

H314 Causes severe skin burns and eye damage.  
 H400 Very toxic to aquatic life.

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EUH031 Contact with acids liberates toxic gas.

#### 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.

Training advice

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*