



Chemifloc Ltd.

SAFETY DATA SHEET **Sodium Hydroxide Solution**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

1: Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Product Name: Caustic Soda Solution

Chemical Name: Sodium Hydroxide Solution

Use of the preparation:

Used as a chemical for the treatment of drinking water, has received appropriate approval by the European Committee for Standardisation.

Company/Undertaking identification

Supplier: Chemifloc Ltd
Smithstown, Shannon,
Co. Clare,
Rep. of Ireland.
Tel: 00353 61 708699
Fax: 00353 61 708698
e-mail: info@chemifloc.ie

Emergency Telephone Number: 00353 61 708699

2: Hazards Identification

Hazard Class: **C: Corrosive**

Risk Phrase: R 35: Causes severe burns.

3: Composition/Information on Ingredients

Ingredient Name	CAS Number	%	EC Number	Classification	Risk Phrases
Sodium Hydroxide	1310-73-2	25 - 50	215-185-5	C	R35
Water		50 - 75		Not classified	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

4: First Aid Measures

- Inhalation: Remove from exposure. Keep warm and at rest. If there is respiratory distress, give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Seek medical attention if symptoms are severe.
- Eyes: Wash out thoroughly with water or saline solution for a minimum of 30 minutes; seek medical attention.
- Skin: Remove contaminated clothing, wash skin thoroughly with plenty of water for minimum 15 minutes. Obtain medical attention if irritation persists or if blistering occurs.
- Ingestion: If confined to the mouth area give large quantities of water as a mouthwash, ensure the water is not swallowed. If substance has been swallowed, give 250ml of water to dilute in stomach. Do not induce vomiting. In severe cases seek medical attention.

5: Fire-Fighting Measures

Sodium hydroxide solution is non flammable.
Adapt extinguishing measures to the conditions surrounding the fire. Keep away from water.
During fire-fighting a respirator with independent air-supply and airtight garment is required.
Use full acid-resistant protective clothing.
Use water to keep containers cool. Do not release runoff to sewers or waterways.

6: Accidental, Release Measures

Wear appropriate protective clothing.
Do not allow runoff to enter sewers or waterways.
Small spills of liquid, absorb with earth or sand, place into containers. Wash down contaminated area with water. Collect and treat all water used in the clean up.

7: Handling and Storage

- Transport: Delivered in 20/24 tonne, rubber lined, stainless-steel tankers, or plastic IBCs.
- Storage: Store in vessels suitable for solutions of high pH such as rubber-lined, mild steel, stainless steel, plastic, or glass reinforced plastic.
Sodium hydroxide solution should be stored in a closed vessel to avoid moisture absorption and contamination.
Store sodium hydroxide away from reactive materials.
There is a danger of freezing in cold weather and if the product temperature falls below the given recommendation it may be necessary to heat the product.
Product temperature must not exceed 50°C unless mild steel in contact with it has been stress relieved.

Recommended MINIMUM Storage Temperatures

30% and 47%:	20°C
50%:	25°C

- Handling: Handle with care as an acid.
Avoid contact with skin and eyes.
Wear appropriate acid-resistant protective clothing.

8: Exposure Controls/Personal Protection

EH40/2005 listing under – WEL short term exposure(15 minutes) 2 mg/m³.

Personal protective measures as appropriate to quantity used.

Respiratory: Respiratory protection where fumes are a problem.
For vapours up to 0.5% vol. use respirator with gas filter DIN 3181 B-P2 (ID colour grey/white). For vapours up to 1% vol. use respirator with gas filter DIN 3181 B-P3.
At higher concentrations a respirator with independent air supply must be used.

Hand Protection: Rubber or PVC gloves.

Eye protection: Goggles or face shield affording complete eye protection.

Other measures: Plastic apron, sleeves, boots – if handling large quantities

9: Physical and Chemical Properties

General information

Appearance	Clear Liquid
Colour	Colourless
Odour	Slight, characteristic.
Molecular Formula	NaOH

Important health, safety and environmental information

pH	>14 at 100 g/l water at 20 ^o C.
Boiling point	30%: 118 ^o C 47%: 140 ^o C 50%: 145 ^o C
Melting point	30%: +1 ^o C 47%: +8 ^o C 50%: +12 ^o C
Vapour pressure @ 20 ^o C	1.3mbar at 739 ^o C
Density g/cm ³	@ 20 ^o C 30%: 1.328 47%: 1.480 50%: 1.525
Solubility	Miscible in water..
Viscosity (mPa.s)	Not known

10: Stability and Reactivity

Stability

Sodium hydroxide if stored correctly will not decompose over time. The product is stable under normal conditions of storage and handling.

Conditions to Avoid Avoid low temperature storage and high temperatures.

Reaction with other Materials

-Water Mixture will become warm during initial dilution (exothermic reaction).

-Air No dangerous reaction. Slow absorption of carbon dioxide to form sodium carbonate.

-Acids Violent reactions.

-Bases/Alkalis No dangerous reaction.

-Oxidising Agents A violent reaction with chlorine. Otherwise no dangerous reaction with oxidising agents in aqueous solution.

-Hazardous Decomposition Products

Hydrogen gas may be liberated by contact with certain metals such as brass, zinc, aluminium, forming an explosive hazard.

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11: Toxicological Information

Potential acute health effects	
Ingestion	Harmful if swallowed. Ingestion may result in damage to mucous membranes, nausea, vomiting, sore throat, abdominal pain and diarrhoea.
Skin contact	May cause burns
Eye contact	Liquid: severe burns, even on short duration contact. Mist or spray: moderate to severe irritation, may cause injury at concentrations.
LDLo oral, rabbit:	500mg/kg

12: Ecological Information

Do not allow to escape into waterways, waste water or soil.

Toxic to fish and algae. Concentrations greater than 4mg/l as 100% may be lethal to fish. Increasing pH to 10 or more is lethal to aquatic life.

Acute fish toxicity: LC₅₀ = 25mg/l. Test species: *Gambusia affinis*.
Duration of test: 24hr.

Acute fish toxicity: LC₅₀ = 133-189mg/l. Test species: Golden orfe.
Duration of test: 48hr.

Acute toxicity for daphnia: EC₅₀ = >100mg/l. Test species: *Daphnia magna*.
Duration of test: 48hr.

Ecotoxic effects-biological effect:

Toxic effect on fish, plankton and on sedentary organisms, also through shifting of pH value. Causes no biological oxygen consumption. No inhibition of activity of waste bacteria after neutralisation.

The material should not be allowed to spill into controlled waters in large amounts, as sufficient quantities will affect aquatic life forms. In such cases the Environment Protection Agency or Local Authority should be contacted.

Once diluted and neutralised no lasting effects will occur. Material is not bio-accumulative.

13: Disposal Considerations

Do not dispose directly into rivers or drains.

Spillages Wear full protective clothing. See Exposure Controls/Personal Protection (Section 8).
See Accidental Release Measures (Section 6).

Waste Dispose of sodium hydroxide solutions or materials contaminated with sodium hydroxide in accordance with international, national and local laws.

14: Transport Information

Proper Shipping Name:	SODIUM HYDROXIDE SOLUTION
UN Number:	1824
RID/ADR:	Class 8
Hazard ID Number:	80
Classification Code:	C5
Packing Group:	PG II

15: Regulatory Information

Sodium Hydroxide Solution is classed as **Corrosive** for supply, and packaging will carry the following information:

EU Regulations:

Hazard Symbol or symbols: C : Corrosive

Risk Phrase: R 35: Causes severe burns.

Safety Phrases: . S 2: Keep out of reach of children.
S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 27: Take off immediately all contaminated clothing.
S 37/39: Wear suitable gloves and eye/face protection.

Contains EINECS number: 215-185-5

16: Other Information

References: Sodium Hydroxide solutions are used as chemicals for the treatment of drinking water, as approved by the European Committee for Standardisation under EN 896:2005. The Transport and Regulatory Information given are in accordance with EN 896:2005.

History: This data sheet was prepared in accordance with EC Regulation No. 1907/2006 concerning REACH.
This version replaces Version 2, May 2008.

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Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Chemifloc Ltd disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Safety Data Sheet.