



# Chemifloc Ltd.

## SAFETY DATA SHEET Sodium Hydroxide 25%

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

### Section 1: Identification of the substance and of the company/undertaking

#### Identification of the substance or mixture

**Product Name:** Sodium Hydroxide 25%  
**Chemical Name:** Sodium Hydroxide  
**Registration Number:** 01-2119457892-27  
**Synonyms:** Caustic Soda  
**Date of first issue:** 17 January 2011  
**Version number:** 04  
**Revision date:** 24-03-2016  
**Supersedes date:** 04-03-2016

#### Relevant identified uses of the substance or mixture and uses advised against:

**Identified uses:** Use in the treatment of raw water in the supply of either potable water or industrial process water

**Uses advised against:** None

#### Details of the supplier of the safety data sheet

**Manufacturer:** Chemifloc Ltd  
Smithstown, Shannon,  
Co. Clare,  
Rep. of Ireland.  
Tel: 00353 61 708699  
Fax: 00353 61 708698  
e-mail: [info@chemifloc.ie](mailto:info@chemifloc.ie)

**Emergency Telephone Number: National Poison Information Centre,  
00353 1 8379964**

### Section 2: Hazards Identification

#### Classification of the substance

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classificatory applies.

#### Classification according to Regulation (EC) no 1272/2008 as amended

##### Health hazards

Skin corrosion/irritation Category 1A H314 ó Causes severe skin burns and eye damage.  
Corrosion to metals Category 1 H290 ó May be corrosive to metals.

#### Hazard summary

##### Physical hazards

Not classified for physical hazards.

##### Health hazards

Causes severe burns. Occupational exposure to the substance or mixture may cause adverse health effects.

##### Environmental hazards

Not classified for hazards to the environment.

##### Specific hazards

Prolonged exposure may cause chronic effects.

##### Main symptoms

Contact with this material will cause burns to the skin, eyes and mucous membranes. Inhalation of vapours in high concentration may cause shortness of breath (lung oedema).

#### Label elements

**Label according to Regulation (EC) No. 1272/2008 as amended**

Contains: Sodium Hydroxide



<b>Signal word</b>	Danger
<b>Hazard statements</b>	H314 - Causes severe skin burns and eye damage. H290 ó May be corrosive to metals.
<b>Precautionary statements</b>	
<b>Prevention</b>	P260 - Do not breathe mist or vapour. P280 ó Wear eye/face protection
<b>Response</b>	P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+351+338 ó 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 or doctor/physician.
<b>Supplemental label information.</b>	Not applicable
<b>Other hazards</b>	Not assigned.

**Section 3: Composition/Information on Ingredients****Substance****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Sodium Hydroxide	25	1310-73-2 215-185-5	01-2119457892-27	-	#
Water	75	7732-18-5			

**Classification:** CLP: Skin Corr. 1A;H314, Mett. Corr. 1:H290.

#: This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

**Composition comments** The full text for all H-phrases is displayed in section 16.**Section 4: First Aid Measures**

<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Description of first aid measures</b>	
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Skin contact</b>	Get medical attention immediately. Wash clothing separately before reuse.
<b>Eye contact</b>	Important! Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If possible use lukewarm water. Consult a physician. Continue rinsing eyes during transport to hospital.
<b>Ingestion</b>	If material is ingested, immediately contact a physician or poison control centre. Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>Most important symptoms and effects, both acute and</b>	Corrosive effects, May cause irreversible eye damage.

delayed  
**Indication of any immediate medical attention and special treatment needed**

In case of shortness of breath, give oxygen. Keep victim warm.

## Section 5: Firefighting measures

<b>General fire hazards</b>	Non-combustible, substance itself does not burn. Do not inhale combustion gases.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing Media</b>	None known.
<b>Special hazards arising from the substance or mixture</b>	The product itself does not burn. Reacts with many metals to produce flammable and explosive hydrogen gas. Do not inhale combustion gases. Hazardous decomposition products formed under fire conditions.
<b>Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective clothing.
<b>Special firefighting procedures</b>	No unusual fire or explosion hazards noted.

## Section 6: Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Stay upwind.
<b>For emergency responders</b>	Not available.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
<b>Methods and material for containment and cleaning up</b>	Should not be released into the environment. Prevent entry into waterways, sewers, basements or confined areas. Large Spills: Dike the spilled material, where this is possible. Soak up with inert absorbent material. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Sweep up or gather material and place in appropriate container for disposal. Following product recovery, flush area with water. After removal flush contaminated area thoroughly with water. Clean up in accordance with all applicable regulations. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste. After removal flush contaminated area thoroughly with water. This material and its container must be disposed of as hazardous waste. For waste disposal, see Section 13.
<b>Reference to other sections</b>	Not available.

## Section 7: Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes. Avoid prolonged exposure. Wash hands thoroughly after handling. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep container tightly closed. Keep only in the original container. Store in corrosive resistant/container with a resistant inner liner. Keep out of the reach of children. Tanks should be vented and fitted with an overflow pipe. Tanks should be banded to contain spillage. Avoid freezing. Minimum storage temperature: 25°C for 50% solution; 5°C for 30% Solution

Keep away from incompatible materials. Store in a cool, dry, well-ventilated area away from sources of ignition.

**Materials for packaging:** Suitable material: plastic (PE, PP, PVC), fiberglass-reinforced polyester, proof or rubber-coated steel. The material can be stored at ambient or slightly elevated temperatures (these are needed in the case of concentrated solutions) in mild steel tanks of welded construction. Where the liquor temperature is above 40°C for concentrations of 30 % or more or above 60°C for lower concentrations, tanks must be stress relieved.

**Materials to avoid:**

**Other data:** Stable under recommended storage conditions.

**Specific end use(s)** The specified uses for this material are shown in section 1 of this document.

## Section 8: Exposure controls / personal protection

### Control parameters

#### Occupational exposure limits Ireland

Components	Type	Value	Form
Sodium Hydroxide (1310-73-2)	OEL(15min)	2.0 mg/m <sup>3</sup>	Sodium Hydroxide

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Not available.

**DNEL** Not available

**PNEC** Not available.

#### Exposure Controls

**Appropriate engineering controls** Ventilation should be sufficient to effectively remove and prevent build-up of any dusts or fumes that may be generated during handling or thermal processing. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

#### Individual protection measures, such as personal protective equipment.

**General information** Wear personal protective equipment. Eye wash fountain and emergency showers are recommended. Ensure that eyewash stations and safety showers are close to the workstation location. Use personal protective equipment as required.

Keep working clothes separately.

**Eye/face protection** Wear eye/face protection. (EN166)

#### Skin protection

**- Hand protection** PVC or other plastic material gloves. (EN374)

**- Other** Wear suitable protective clothing. (EN13034)

Chemical resistant apron.

If splashes are likely to occur, wear: Rubber or plastic boots.

#### Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

#### Thermal hazards

Not available

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

#### General information (Appearance, odour)

Physical State	Aqueous solution
Colour	Clear
Odour	Not significant

#### Important health safety and environmental information

pH	>13.0
Melting/freezing point	-10 °C
Boiling point	118°C
Flash point	not applicable, In accordance with column 2 of REACH Annex VII, the study does not need to be conducted., inorganic compound
Flammability (solid, gas)	does not sustain combustion.
Explosive properties	
- Lower explosive limit	not applicable
- Upper explosive limit	
Vapour Pressure	< 13.3 hPa, at 20°C
Density	1.28
Viscosity	12 ó 120 mPa.s, at 20°C
Solubility(ies)	
- Water solubility	miscible
Partition coefficient (n-octanol/water)	not applicable, inorganic compound.
Thermal Decomposition	Not available

#### Other information

## Section 10: Stability and reactivity

Reactivity	Potential for exothermic hazard. Corrodes base metals .
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Exothermic reaction with water (slight for dilutions from 40% down). Exothermic reaction with strong acids. Gives off hydrogen by reaction with metals.
Conditions to avoid	Keep away from direct sunlight. To avoid thermal decomposition, do not overheat. Exposure to moisture. Freezing. If electric arc welding or cutting, particular attention must be paid to the way the electrical circuit is completed to eliminate the possibility of producing Hydrogen through electrolysis of the liquor. A potential exists for the formation of carbon monoxide gas in closed equipment during cleaning with caustic soda solutions by reaction with certain sugars including fructose, galactose, arabinose, lovalose, lactose, maltose and dry whey powder.
Incompatible materials	Metals, Oxidizing agents, Acids, Aluminium, other light metals and their alloys.
Hazardous decomposition products	Hydrogen.
Thermal decomposition	Not available

## Section 11: Toxicological information

Acute toxicity	
Acute oral toxicity	no data available. Will immediately cause corrosion of and damage to gastrointestinal tract..
Acute inhalation toxicity	no data available. Mist is severe irritant to the respiratory tract.
Acute dermal toxicity	no data available. Corrosive.
Skin corrosion/irritation	Corrosive.
Respiratory or skin sensitization	No observed effects.

<b>Mutagenicity</b>	Animal testing did not show any mutagenic effects. In vitro tests did not show mutagenic effects.
<b>Carcinogenicity</b>	No data available.
<b>Toxicity for reproduction</b>	Effect on fertility, foetotoxic effect, no observed effect
<b>Repeated dose toxicity</b>	Not applicable

## Section 12: Ecological information

<b>Toxicity</b>	Large discharges may contribute to the alkalisation of water and may be fatal to fish and other aquatic life. Can cause severe damage to aquatic plants. <ul style="list-style-type: none"> <li>- Fishes, various species, LC50, 96 h, 35 ó 189 mg/l (Sodium hydroxide)</li> <li>- Crustaceans, Ceriodaphnia sp., EC50, 48 h, 40.4 mg/l (Sodium hydroxide)</li> </ul>
<b>Persistence and degradability</b>	
<b>Abiotic degradation</b>	Air Result: neutralization by natural alkalinity Water Result: ionization/neutralization. Conditions: pH Soil Result: ionization/neutralization
<b>Bioaccumulative potential</b>	Not relevant.
<b>Mobility</b>	
<b>Water, Soil/sediments:</b>	Considerable solubility and mobility
<b>Soil/sediments:</b>	Mobile, soluble, ionization/neutralization
<b>Air:</b>	Chemical degradation
<b>Other adverse effects</b>	No data available.

## Section 13: Disposal considerations

<b>Waste disposal methods</b>	Dilute with plenty of water. Solutions with high pH-value must be neutralized before discharge. Neutralise with acid.
<b>Contaminated packaging</b>	In accordance with local and national regulations. Where possible recycling is preferred to disposal or incineration. Classified as hazardous waste. Dispose of as unused product. Must be disposed of in accordance with local and national regulations.

## Section 14: Transport information

### ADR/RID:

<b>UN Number:</b>	1824
<b>Proper Shipping Name:</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Subsidiary class(es)</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>Labels required</b>	8
<b>Special precautions for user</b>	Not available.

### IATA

<b>UN Number:</b>	1824
<b>UN Proper Shipping Name:</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	Not available.

### IMDG

<b>UN number</b>	1824
<b>UN proper shipping name</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>Marine pollutant</b>	No
<b>EmS No.</b>	F-A, S-B
<b>Special precautions for user</b>	Not available.



ADR



IATA



IMDG

## Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

### EU Regulations

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V**

Not listed.

**Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registry (EPER)**

Not listed

**Regulation (EC) No. 1907/2006, Article 59(1). Candidate List**

Not listed.

**National regulations** Not available.

Other regulations This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. No restrictions identified other than those already covered in regulations.

### Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for the components of this mixture.

### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances(PICCS)	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## Section 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

H314	Causes severe skin burns and eye damage.
H290	May be corrosive to metals.

**Training advice** Not available

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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