

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH).

Reference No.: SDS32; Date of Issue.: 25/04/2024; Revision: 1



## CAUSTIC SODA 0.2% =< CONC. <0.5%

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

-Product Name : CAUSTIC SODA 0.2% =< CONC. <0.5%  
-Chemical Name : Sodium hydroxide solution  
-Synonym(s) : Lye soda, Sodium hydrate, Caustic lye  
-Product type : Mixture  
-Unique Formula Identifier (UFI) : 2300-C0GV-X00Y-GCN9

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

-Identified Use(s) :  
- Reagent  
- pH Regulating agent  
- Ion exchange resins regenerating agent  
- Catalyst  
- Etching agent  
- Cleaning agent  
- Uses Advised Against :  
- None

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

-Company : MICRO-BIO (IRELAND) LTD.  
-Address : Industrial Estate, Fermoy, Co Cork, Ireland  
-Telephone : +3532531388  
-Fax : +3532532458  
-E-Mail (competent person) : [dobrien@micro-bio.ie](mailto:dobrien@micro-bio.ie)

#### 1.4. Emergency telephone number

-Emergency telephone number : +3532531388 (Available 24/7)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

2.1.1. Regulation (EC) No. 1272/2008 (CLP).

*Classification according to Regulation (EC) No 1272/2008 [CLP]*

Hazard Class	Category	Exposure route	Hazard Statement(s)
Corrosive to: metal	Category 1		H290

#### 2.2. Label elements

2.2.1. Name(s) on label

Hazardous component(s) for labelling : -

2.2.2. Signal Word(s)

WARNING

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### 2.2.3. Hazard Symbol



### 2.2.4. Hazard Statement(s)

H290 - May be corrosive to metals.

### 2.2.5. Precautionary Statement(s)

Prevention P390 - Absorb spillage to prevent material damage.

### 2.3. Other hazards

Not classified as PBT or vPvB.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Not applicable.

### 3.2. Mixtures

Description: aqueous solution.

Dangerous components:

Hazardous Ingredient(s)	CAS No.	EC No.	REACH Registration No.	EC Classification and Hazard Statement(s)	%W/W
Sodium hydroxide	1310-73-2	215-185-5	01-2119457892-27-0086	Skin Corr. 1A; H314 Eye Dam. 1; H318 Met. Corr. 1; H290	≥ 0.2 - < 0.05%

### 3.3. Additional Information

For full text of H Statements see section 16.  
NaOH Specific Concentration Limits (SCLs)  
Skin Corr. 1A; H314:  $C \geq 5\%$   
Skin Corr. 1B; H314:  $2\% \leq C < 5\%$   
Skin Irrit. 2; H315:  $0,5\% \leq C < 2\%$   
Eye Irrit. 2; H319:  $0,5\% \leq C < 2\%$

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### 4.1.1. IF INHALED:

- Move person to fresh air.
- Consult a doctor in case of complaint.



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### 4.1.2. Eye Contact

- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Consult a doctor in case of complaint.

### 4.1.3. Skin Contact

- Wash affected skin with plenty of water.
- Take off contaminated clothing and wash it before reuse.
- Consult a doctor in case of complaint.

### 4.1.4. IF SWALLOWED:

- Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.
- Do NOT induce vomiting.
- Consult a doctor in case of complaint.

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

### 4.2.1. Inhalation

- May cause transient irritation

### 4.2.2. Skin Contact

- May cause transient irritation

### 4.2.3. Eye Contact

- May cause transient irritation

### 4.2.4. Ingestion

- May cause transient irritation

## 4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment and supportive therapy as indicated.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### 5.1.1. Suitable extinguishing media

- Use fire-extinguishing methods suitable to surrounding conditions.

#### 5.1.2. Unsuitable extinguishing media

- None.

### 5.2. Special hazards arising from the substance or mixture

- Non-flammable.
- Non-combustible.
- Hazardous decomposition products:
- Hydrogen may form upon contact with metals

### 5.3. Advice for fire-fighters

- Self-contained breathing apparatus to be worn if involved in fire.
- Use personal protective equipment as required.
- Wear chemical protection suit.
- Keep containers cool by spraying with water if exposed to fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES



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### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. Advice for non-emergency personnel

- Stop leak if safe to do so.
- Keep away from Incompatible products.

#### 6.1.2. Advice for emergency responders

- Evacuate the area and keep personnel upwind.
- Ventilate area.
- Wear suitable protective clothing.

### 6.2. Environmental precautions

- Avoid release to the environment.
- Do NOT wash away into sewer.
- If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities.

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

- Contain spillages.
- Adsorb spillages onto sand, earth or any suitable adsorbent material.
- Prevent entry into drains.
- Transfer to a container for disposal.

### 6.4. Reference to other sections

- Refer to Section 8 for protective measures when handling the spillage.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

- Use only in well-ventilated areas.
- Keep away from incompatible products.

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

#### 7.2.1. Storage

- Keep only in original container.
- Keep in a well ventilated place.
- Keep in properly labelled containers.
- Keep container closed.
- Keep in a banded area.
- Keep away from incompatible products.
- Regularly check the condition and temperature of the containers.
- Minimum storage temperature:; 0°C

The material can be stored at ambient or slightly elevated temperatures in mild steel tanks of welded construction. Where the liquor temperature is above 60°C, tanks must be stress relieved.

#### 7.2.2. Packaging

##### 7.2.2.1. *Suitable material/Suitable containers:*

- Stainless steel

##### 7.2.2.2. *Unsuitable material*

- No data.

### 7.3. Specific end use(s)

- Contact supplier for further information.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters

##### 8.1.1. Exposure limit values

###### **Sodium hydroxide**

- Ireland: Code of Practice for the Safety Health & Welfare at Work (Chemical Agents) Regulations 2018 (SI No. 623 of 2015) Occupational Exposure Limit Value(15 minute reference period) = 2 mg/m<sup>3</sup>
- US. ACGIH Threshold Limit Values 2009  
Ceiling Limit Value = 2 mg/m<sup>3</sup>

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

- Ensure adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

##### 8.2.2. Individual protection measures

###### 8.2.2.1. *Respiratory protection*

- Not normally required.

###### 8.2.2.2. *Hand protection*

- Impervious gloves (EN 374).
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The following list may be used for guidance but is not exhaustive:
- Nitrile rubber- NBR: thickness  $\geq 0,35\text{mm}$ ; Breakthrough time  $\geq 480\text{min}$ .
- Polyvinyl chloride- PVC: thickness  $\geq 0,5\text{mm}$ ; Breakthrough time  $\geq 480\text{min}$ .
- Butyl rubber: thickness  $\geq 0,5\text{mm}$ ; Breakthrough time  $\geq 480\text{min}$ .
- Dispose of contaminated gloves appropriately.
- Unsuitable material: Leather

###### 8.2.2.3. *Eye Protection*

- Chemical resistant goggles or full-face shield must be worn.
- If splashes are likely to occur, wear: Goggles giving complete protection to eyes. Tightly fitting safety goggles and Full-Face shield

###### 8.2.2.4. *Skin and Body protection*

- Wear suitable protective clothing and eye/face protection. Wear suitable protective clothing.
- If splashes are likely to occur, wear:
- Rubber or plastic boots
- Rubber apron.

###### 8.2.2.5. *Hygiene Measures*

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off immediately all contaminated clothing.
- Handle in accordance with good industrial hygiene and safety practice.

##### 8.2.3. Environmental Exposure Controls

- Dispose of rinse water in accordance with local and national regulations.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on basic physical and chemical properties

##### 9.1.1. General information

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Sodium hydroxide  $\geq 0.2$  -  $< 0.5\%$

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<input type="checkbox"/>	<b>Physical state</b>	Liquid
<input type="checkbox"/>	<b>Colour</b>	Colourless
<input type="checkbox"/>	<b>Odour</b>	Odourless
9.1.2. <u>Important health safety and environmental information</u>		
<input type="checkbox"/>	<b>pH</b>	> 12.5
<input type="checkbox"/>	<b>pKa</b>	No data
<input type="checkbox"/>	<b>Melting point/freezing point</b>	No data
<input type="checkbox"/>	<b>Boiling point/boiling range (°C):</b>	No data
<input type="checkbox"/>	<b>Flash Point</b>	Not applicable - Not flammable
<input type="checkbox"/>	<b>Evaporation rate</b>	No data
<input type="checkbox"/>	<b>Flammability (solid, gas)</b>	Not applicable
<input type="checkbox"/>	<b>Flammability</b>	Not flammable
<input type="checkbox"/>	<b>Explosive properties</b>	Not explosive, See Section: 10.
<input type="checkbox"/>	<b>Vapour pressure</b>	< 13.3 hPa, 20°C
<input type="checkbox"/>	<b>Vapour density</b>	No data
<input type="checkbox"/>	<b>Relative density</b>	1.000 – 1.004
<input type="checkbox"/>	<b>Bulk density</b>	No data
<input type="checkbox"/>	<b>Solubility(ies)</b>	Completely soluble in water.
<input type="checkbox"/>	<b>Solubility (Other)</b>	miscible with alcohol (Glycerol)
<input type="checkbox"/>	<b>Partition coefficient: n-octanol/water</b>	No data
<input type="checkbox"/>	<b>Auto-ignition temperature</b>	No data
<input type="checkbox"/>	<b>Decomposition Temperature</b>	No data
<input type="checkbox"/>	<b>Viscosity</b>	Not determined
<input type="checkbox"/>	<b>Oxidising properties</b>	Not oxidising.

### 9.2. Other information

Not available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

- May be corrosive to metals.

### 10.2. Chemical stability

- Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

- Reacts with metals liberating hydrogen.
- Exothermic reaction with: strong acids.

### 10.4. 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, livalose, lactose, maltose and dry whey powder.

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### 10.5. Incompatible materials

- metal, Oxidizing agents, Acids, Aluminium, other light metals and their alloys

### 10.6. Hazardous decomposition products

- Hydrogen

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

- Based upon the available data, the classification criteria are not met.

#### Skin corrosion/irritation

- Based upon the available data, the classification criteria are not met.
- May cause transient irritation

#### Serious eye damage/irritation

- Based upon the available data, the classification criteria are not met.
- May cause transient irritation

#### Respiratory/skin sensitization

- no observed effect

#### Germ cell mutagenicity

- Animal testing did not show any mutagenic effects. In vitro tests did not show mutagenic effects.

#### Carcinogenicity

- No data.

#### Reproductive toxicity

- Effect on fertility, foetotoxic effect, no observed effect

#### STOT - single exposure

- Based upon the available data, the classification criteria are not met.

#### STOT - repeated exposure

- Based upon the available data, the classification criteria are not met.

#### Aspiration hazard

- Based upon the available data, the classification criteria are not met.

### 11.2. Information on other hazards

Not applicable.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

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.

- Fish, various species, LC50, 96 h, 35 – 189 mg/l (Sodium hydroxide)
- Crustaceans, Ceriodaphnia sp., EC50, 48 h, 40.4 mg/l (Sodium hydroxide)

### 12.2. Persistence and degradability

#### 12.2.1. Abiotic Degradation

- Air: neutralization by natural alkalinity
- Water: ionization/neutralization  
Conditions: pH
- Soil: ionization/neutralization

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According to Regulation (EC) No. 1907/2006 (REACH).

### 12.3. Bioaccumulative potential

- Not relevant for this material.

### 12.4. Mobility

- Water: Considerable solubility and mobility
- Soil/sediments: Mobile, soluble, ionization/neutralization
- Air: Chemical degradation

### 12.5. Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

### 12.6. Endocrine disrupting properties

None.

### 12.7. Other adverse effects

- No data.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Product

- Dilute with a large volume of water.
- Solutions with high pH-value must be neutralized before discharge.
- Neutralize with: acid
- In accordance with: In accordance with local and national regulations.

#### Contaminated packaging

- Where possible recycling is preferred to disposal or incineration.
- Clean container with water.
- Dispose of as unused product.
- In accordance with local and national regulations.

## SECTION 14: TRANSPORT INFORMATION

	ADR / RID / ADN / IMDG / IATA-DGR
14.1. UN number or ID number	UN 1824
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	8
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not applicable
14.7. Maritime transport in bulk according to IMO instruments	Not applicable
14.8. Additional Information	
ADR/RID HIN/UN No.	80 / 1824
IMDG EmS	F-A S-B



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### SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, as amended.
- Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended.
- Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended.
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.

#### Notification status

Inventory Information	Status
Toxic Substance Control Act list (TSCA)	- In compliance with inventory
Australian Inventory of Chemical Substances (AICS)	- In compliance with inventory
Canadian Domestic Substances List (DSL)	- In compliance with inventory
Korean Existing Chemicals List (ECL)	- In compliance with inventory
EU list of existing chemical substances (EINECS)	- In compliance with inventory
Japanese Existing and New Chemical Substances (MITI List)	- In compliance with inventory
Inventory of Existing Chemical Substances (China) (IECS)	- In compliance with inventory
Philippine Inventory of Chemicals and Chemical Substances	- In compliance with inventory
New Zealand Inventory of Chemicals (NZIOC)	- In compliance with inventory

### SECTION 16: OTHER INFORMATION

#### 16.1. Full text of H-Statements referred to under section 3

- |      |   |  |
|------|---|--|
| H290 | - | May be corrosive to metals.              |
| H314 | - | Causes severe skin burns and eye damage. |
| H318 | - | Causes serious eye damage.               |

#### 16.2. Other information

- Distribute new edition to clients

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.