

SAFETY DATA SHEET
SODIUM HYDROXIDE 0.1M

According to Regulation (EC) No 1907/2006, Annex II

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

Product name SODIUM HYDROXIDE 0.1M

Product number 1098

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

Identified uses Laboratory reagent.

Uses advised against No specific uses advised against are identified. Use only for intended applications.

1.3. Details of the supplier of the safety data sheet**Supplier**Reagent Chemical Services
11b - 13 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL
T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk**1.4. Emergency telephone number**Emergency telephone OHES Environmental Ltd 24-7
Tel. 0333 333 9939 (24 hour)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards Met. Corr. 1 - H290

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements**Pictogram**

Signal word Warning

Hazard statements H290 May be corrosive to metals.

Precautionary statements P234 Keep only in original container.
P390 Absorb spillage to prevent material damage.

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Supplementary precautionary statements P406 Store in corrosive resistant/... container with a resistant inner liner.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYDROXIDE			<1%
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27-XXXX	
Classification			
Met. Corr. 1 - H290			
Skin Corr. 1A - H314			
Eye Dam. 1 - H318			

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Show this Safety Data Sheet to the medical personnel.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.
Eye contact	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Spray/mists may cause respiratory tract irritation. Irritation of nose, throat and airway.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	May cause irritation. Itchiness. Redness.
Eye contact	May irritate eyes. Profuse watering of the eyes.

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

Notes for the doctor	Treat symptomatically.
Specific treatments	No specific chemical antidote is known to be required after exposure to this product.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Irritating gases or vapours.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of the following substances: Sodium.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Wash thoroughly after dealing with a spillage.

For emergency responders Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions The product is water-soluble and may spread in water systems. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if safe to do so. Small Spillages: Absorb spillage with non-combustible, absorbent material. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

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Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented. Wash promptly with soap and water if skin becomes contaminated. Clean equipment and the work area every day.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight. Store away from the following materials: Acids. Alkalis. Oxidising materials.

Storage class

Chemical storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

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Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

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DNEL

Workers - Inhalation; Long term local effects: 1 mg/m³

General population - Inhalation; Long term local effects: 1 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Wear eye protection. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. Nitrile rubber. Thickness: ≥ 0.11 mm The breakthrough time for any glove material may be different for different glove manufacturers. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands thoroughly after handling. Promptly remove any clothing that becomes wet or contaminated. Contaminated work clothing should not be allowed out of the workplace.

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Respiratory protection	No specific requirements are anticipated under normal conditions of use. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Wear a respirator fitted with the following cartridge: Particulate filter, type P2. Check that the respirator fits tightly and the filter is changed regularly. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	Not determined.
pH	pH (concentrated solution): 14
Melting point	Not determined. ~0°C
Initial boiling point and range	Not determined. ~ 100°C @ 760 mm Hg
Flash point	Scientifically unjustified.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Scientifically unjustified.
Upper/lower flammability or explosive limits	Scientifically unjustified.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Approx. 1.0 @ 20 @ °C
Bulk density	Not determined.
Solubility(ies)	Completely soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Scientifically unjustified.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Strong acids. Strong alkalis. Strong oxidising agents. Powdered metal.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May generate heat. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Avoid freezing.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents. Aluminium. Other metals or alloys. May be corrosive to metals.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) No specific test data are available.

Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Genotoxicity - in vivo Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

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Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

Inhalation May cause irritation.

Ingestion May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin contact May cause irritation. Itchiness. Redness.

Eye contact May irritate eyes. Redness.

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Toxicological effects Causes severe skin burns and eye damage.

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 325 mg/kg, Oral, Rabbit REACH dossier information.

Acute toxicity - dermal

Notes (dermal LD₅₀) Conclusive data but not sufficient for classification. REACH dossier information.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) 750 µg/L, Inhalation, Rat REACH dossier information.

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation Corrosivity to eyes is assumed. REACH dossier information.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

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Reproductive toxicity - fertility	Does not contain any substances known to be toxic to reproduction.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
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Inhalation	May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Burns can occur.
Ingestion	This product is strongly corrosive. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	This product is corrosive. Causes severe burns.
Eye contact	Causes severe burns. Causes serious eye damage. Immediate first aid is imperative.
Acute and chronic health hazards	This product is corrosive.
Route of entry	Skin and/or eye contact Ingestion
Target organs	Skin Eyes Respiratory system, lungs Gastro-intestinal tract
Medical symptoms	Chemical burns.

SECTION 12: Ecological Information

Ecotoxicity	The product is not expected to be hazardous to the environment.
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Ecotoxicity	The ecotoxicity of this substance has been assessed during REACH registration
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12.1. Toxicity

Acute toxicity - fish	No specific test data are available.
Acute toxicity - aquatic invertebrates	No specific test data are available.
Acute toxicity - aquatic plants	Scientifically unjustified.
Acute toxicity - microorganisms	Not determined.
Acute toxicity - terrestrial	Not determined.
Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.

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Chronic toxicity - aquatic invertebrates Scientifically unjustified.

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Acute toxicity - fish	LC ₅₀ , : 35 - 189 mg/l, Freshwater fish REACH dossier information.
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 40.4 mg/l, Freshwater invertebrates
Acute toxicity - aquatic plants	Scientifically unjustified.
Acute toxicity - microorganisms	Scientifically unjustified.
Chronic toxicity - fish early life stage	Scientifically unjustified.
Chronic toxicity - aquatic invertebrates	Technically not feasible.

12.2. Persistence and degradability

Persistence and degradability	The product contains only inorganic substances which are not biodegradable.
Phototransformation	No specific test data are available.
Biodegradation	Scientifically unjustified.
Biological oxygen demand	No specific test data are available.
Chemical oxygen demand	No specific test data are available.

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Persistence and degradability	The product contains inorganic substances which are not biodegradable.
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	Scientifically unjustified.

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	Not determined.

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Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	No specific test data are available.

12.4. Mobility in soil

Mobility	The product is miscible with water and may spread in water systems.
Adsorption/desorption coefficient	No specific test data are available.

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Henry's law constant	No specific test data are available.
Surface tension	No specific test data are available.

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Mobility	The product is water-soluble and may spread in water systems.
Adsorption/desorption coefficient	Scientifically unjustified.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.
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Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
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12.6. Other adverse effects

Other adverse effects	None known.
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Other adverse effects	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	The generation of waste should be minimised or avoided wherever possible. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.
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14.1. UN number

UN No. (ADR/RID)	1824
UN No. (IMDG)	1824
UN No. (ICAO)	1824
UN No. (ADN)	1824

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO)	SODIUM HYDROXIDE SOLUTION

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Proper shipping name (ADN) SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C5
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2R
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended). Health and Safety at Work etc. Act 1974 (as amended).
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EU legislation

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).
 Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance Workplace Exposure Limits EH40.

Authorisations (Title VII Regulation 1907/2006) No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006) No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 DNEL: Derived No Effect Level.
 DMEL: Derived Minimal Effect Level.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

Classification abbreviations and acronyms Met. Corr. = Corrosive to metals

General information Only trained personnel should use this material. This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data Source: European Chemicals Agency, <http://echa.europa.eu/>

Classification procedures according to Regulation (EC) 1272/2008 Met. Corr. 1 - H290: Calculation method.

Revision date 19/02/2020

Revision 6

Supersedes date 17/11/2017

SDS number 10712

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SDS status	Approved.
Risk phrases in full	Not classified.
Hazard statements in full	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.