



# Sodium hydroxide 1N Solution

## ALPHA CHEMICALS PTY LTD

Chemwatch Hazard Alert Code: 3

Chemwatch: 4519-10

Version No: 7.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Issue Date: 23/12/2022

Print Date: 24/01/2024

S.GHS.AUS.EN

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### Product Identifier

|                               |                              |
|-------------------------------|------------------------------|
| Product name                  | Sodium hydroxide 1N Solution |
| Chemical Name                 | Not Applicable               |
| Synonyms                      | laboratory reagent           |
| Proper shipping name          | SODIUM HYDROXIDE SOLUTION    |
| Chemical formula              | Not Applicable               |
| Other means of identification | Not Available                |

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

|                          |                     |
|--------------------------|---------------------|
| Relevant identified uses | Laboratory reagent. |
|--------------------------|---------------------|

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

|                         |   |
|-------------------------|---|
| Registered company name | ALPHA CHEMICALS PTY LTD                         |
| Address                 | 4 ALLEN PLACE WETHERILL PARK NSW 2164 Australia |
| Telephone               | 61 (0)2 9982 4622                               |
| Fax                     | Not Available                                   |
| Website                 | ~   |
| Email                   | shane@alphachem.com.au                          |

#### Emergency telephone number

|                                   |                         |                                     |
|-----------------------------------|-------------------------|-------------------------------------|
| Association / Organisation        | ALPHA CHEMICALS PTY LTD | CHEMWATCH EMERGENCY RESPONSE (24/7) |
| Emergency telephone numbers       | 61 (0)418 237 771       | +61 1800 951 288                    |
| Other emergency telephone numbers | Not Available           | +61 3 9573 3188                     |

Once connected and if the message is not in your preferred language then please dial 01

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**


#### Chemwatch Hazard Ratings

|              | Min | Max |   |
|--------------|-----|-----|---|
| Flammability | 0   |     |   |
| Toxicity     | 0   |     |   |
| Body Contact | 3   |     | 0 = Minimum<br>1 = Low<br>2 = Moderate<br>3 = High<br>4 = Extreme |
| Reactivity   | 0   |     |   |
| Chronic      | 0   |     |   |

|                    |   |
|--------------------|---|
| Poisons Schedule   | S5  |
| Classification [1] | Corrosive to Metals Category 1, Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1                 |
| Legend:            | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

#### Label elements

## Sodium hydroxide 1N Solution

|                     |   |
|---------------------|---|
| Hazard pictogram(s) |  |
|---------------------|---|

|             |               |
|-------------|---------------|
| Signal word | <b>Danger</b> |
|-------------|---------------|

### Hazard statement(s)

|             |  |
|-------------|--|
| <b>H290</b> | May be corrosive to metals.              |
| <b>H314</b> | Causes severe skin burns and eye damage. |

### Precautionary statement(s) Prevention

|             |  |
|-------------|--|
| <b>P260</b> | Do not breathe mist/vapours/spray.   |
| <b>P264</b> | Wash all exposed external body areas thoroughly after handling.                  |
| <b>P280</b> | Wear protective gloves, protective clothing, eye protection and face protection. |
| <b>P234</b> | Keep only in original packaging.   |

### Precautionary statement(s) Response

|                       |  |
|-----------------------|--|
| <b>P301+P330+P331</b> | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| <b>P303+P361+P353</b> | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].                         |
| <b>P305+P351+P338</b> | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| <b>P310</b>           | Immediately call a POISON CENTER/doctor/physician/first aider.   |
| <b>P363</b>           | Wash contaminated clothing before reuse.   |
| <b>P390</b>           | Absorb spillage to prevent material damage.  |
| <b>P304+P340</b>      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |

### Precautionary statement(s) Storage

|             |                  |
|-------------|------------------|
| <b>P405</b> | Store locked up. |
|-------------|------------------|

### Precautionary statement(s) Disposal

|             |  |
|-------------|--|
| <b>P501</b> | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|-------------|--|

## SECTION 3 Composition / information on ingredients

### Substances

See section below for composition of Mixtures

### Mixtures

| CAS No    | %[weight] | Name                    |
|-----------|-----------|-------------------------|
| 1310-73-2 | 4         | <u>Sodium Hydroxide</u> |
| 7732-18-5 | 96        | <u>Distilled Water</u>  |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; \* EU IOELVs available

## SECTION 4 First aid measures

### Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul> |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>   |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> </ul>  |

Continued...

## Sodium hydroxide 1N Solution

- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- ▶ Seek medical advice.

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

Treat symptomatically.  
for corrosives:

#### BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ Monitor and treat, where necessary, for pulmonary oedema .
- ▶ Monitor and treat, where necessary, for shock.
- ▶ Anticipate seizures.
- ▶ Where eyes have been exposed, flush immediately with water and continue to irrigate with normal saline during transport to hospital.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Skin burns should be covered with dry, sterile bandages, following decontamination.
- ▶ **DO NOT attempt neutralisation as exothermic reaction may occur.**

#### ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

#### EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consider endoscopy to evaluate oral injury.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

## SECTION 5 Firefighting measures

### Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

#### Fire Incompatibility

- ▶ Reacts with aluminium / zinc producing flammable, explosive hydrogen gas

### Advice for firefighters

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>Do not approach containers suspected to be hot.</b></li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered to be a significant fire risk.</li> <li>▶ Expansion or decomposition on heating may lead to violent rupture of containers.</li> <li>▶ Decomposes on heating and may produce toxic/ irritating fumes.</li> <li>▶ May emit acrid smoke.</li> </ul> <p>May emit corrosive fumes.<br/>May emit poisonous fumes.</p>   |
| <b>HAZCHEM</b>               | 2R  |

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

## Sodium hydroxide 1N Solution

## Methods and material for containment and cleaning up

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>  |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Neutralise/decontaminate residue (see Section 13 for specific agent).</li> </ul> |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

## Precautions for safe handling

|                          |  |
|--------------------------|--|
| <b>Safe handling</b>     | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ <b>WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.</b></li> <li>▶ Avoid smoking, naked lights or ignition sources.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ When handling, <b>DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>  |

## Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ Glass container is suitable for laboratory quantities</li> <li>▶ Lined metal can, lined metal pail/ can.</li> <li>▶ Plastic pail.</li> <li>▶ Polyliner drum.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> <li>▶ <b>DO NOT use aluminium, galvanised or tin-plated containers</b></li> </ul> |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul>   |

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

| Source                       | Ingredient       | Material name    | TWA           | STEL          | Peak    | Notes         |
|------------------------------|------------------|------------------|---------------|---------------|---------|---------------|
| Australia Exposure Standards | Sodium Hydroxide | Sodium hydroxide | Not Available | Not Available | 2 mg/m3 | Not Available |

## Emergency Limits

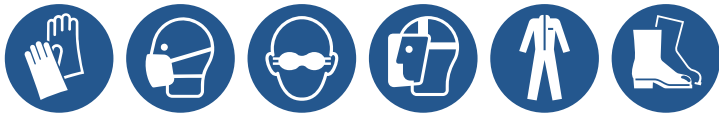
| Ingredient       | TEEL-1        | TEEL-2        | TEEL-3        |
|------------------|---------------|---------------|---------------|
| Sodium Hydroxide | Not Available | Not Available | Not Available |

| Ingredient       | Original IDLH | Revised IDLH  |
|------------------|---------------|---------------|
| Sodium Hydroxide | 10 mg/m3      | Not Available |
| Distilled Water  | Not Available | Not Available |

## Exposure controls

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>General exhaust is adequate under normal operating conditions.</p> |
|---|---|

## Sodium hydroxide 1N Solution

|   |   |
|---|---|
| Individual protection measures, such as personal protective equipment |   |
| Eye and face protection   | <ul style="list-style-type: none"> <li>▶ Chemical goggles.</li> <li>▶ Full face shield may be required for supplementary but never for primary protection of eyes.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.</li> </ul> |
| Skin protection   | See Hand protection below   |
| Hands/feet protection   | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</li> <li>▶ Elbow length PVC gloves</li> </ul>   |
| Body protection   | See Other protection below  |
| Other protection  | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> </ul>   |

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:  
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| Material          | CPI |
|-------------------|-----|
| BUTYL             | A   |
| NEOPRENE          | A   |
| NAT+NEOPR+NITRILE | C   |
| NATURAL RUBBER    | C   |
| NATURAL+NEOPRENE  | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | C   |
| PE                | C   |
| PE/EVAL/PE        | C   |
| PVA               | C   |
| PVC               | C   |
| SARANEX-23        | C   |
| SARANEX-23 2-PLY  | C   |
| TEFLON            | C   |
| VITON             | C   |
| VITON/CHLOROBUTYL | C   |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## Ansell Glove Selection

| Glove — In order of recommendation |
|------------------------------------|
| AlphaTec 02-100                    |
| AlphaTec® Solvex® 37-185           |
| AlphaTec® 38-612                   |
| AlphaTec® 58-008                   |
| AlphaTec® 58-530B                  |
| AlphaTec® 58-530W                  |

## Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

| Required minimum protection factor | Maximum gas/vapour concentration present in air p.p.m. (by volume) | Half-face Respirator | Full-Face Respirator |
|------------------------------------|--|----------------------|----------------------|
| up to 10                           | 1000   | -AUS / Class1 P2     | -                    |
| up to 50                           | 1000   | -                    | -AUS / Class 1 P2    |
| up to 50                           | 5000   | Airline *            | -                    |
| up to 100                          | 5000   | -                    | -2 P2                |
| up to 100                          | 10000  | -                    | -3 P2                |
| 100+                               |  |                      | Airline**            |

\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand  
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Sodium hydroxide 1N Solution

|                          |
|--------------------------|
| AlphaTec® 58-735         |
| AlphaTec® 79-700         |
| AlphaTec® Solvex® 37-675 |
| DermaShield™ 73-711      |

The suggested gloves for use should be confirmed with the glove supplier.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

|   |   |  |                |
|---|---|--|----------------|
| <b>Appearance</b>                                   | Colourless alkaline liquid with no odour; mixes with water. |  |                |
| <b>Physical state</b>                               | Liquid  | <b>Relative density (Water = 1)</b>            | ~1.0           |
| <b>Odour</b>  | Not Available   | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available   | <b>Auto-ignition temperature (°C)</b>          | Not Applicable |
| <b>pH (as supplied)</b>                             | >13   | <b>Decomposition temperature (°C)</b>          | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | < 0   | <b>Viscosity (cSt)</b>                         | 1823           |
| <b>Initial boiling point and boiling range (°C)</b> | > 100   | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | Not Applicable  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Applicable  | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Applicable  | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | Not Applicable  | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Available   | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water</b>                          | Miscible  | <b>pH as a solution (1%)</b>                   | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Applicable  | <b>VOC g/L</b>                                 | Not Available  |

SECTION 10 Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

SECTION 11 Toxicological information

Information on toxicological effects

|                     |   |
|---------------------|---|
| <b>Inhaled</b>      | Not normally a hazard due to non-volatile nature of product<br>Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane.  |
| <b>Ingestion</b>    | The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.  |
| <b>Skin Contact</b> | The material can produce chemical burns following direct contact with the skin.<br>The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.<br>Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.   |
| <b>Eye</b>          | The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.<br>If applied to the eyes, this material causes severe eye damage.<br>Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness. |
| <b>Chronic</b>      | Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.  |

|                                     |                 |                   |
|-------------------------------------|-----------------|-------------------|
| <b>Sodium hydroxide 1N Solution</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|                                     | Not Available   | Not Available     |

Sodium hydroxide 1N Solution

|                  |  |  |
|------------------|--|--|
| Sodium Hydroxide | <b>TOXICITY</b>  | <b>IRRITATION</b>  |
|                  | Dermal (rabbit) LD50: 1350 mg/kg <sup>[2]</sup>          | Eye (rabbit): 0.05 mg/24h SEVERE                         |
|                  | Oral (Rabbit) LD50; 325 mg/kg <sup>[1]</sup>             | Eye (rabbit):1 mg/24h SEVERE                             |
|                  |  | Eye (rabbit):1 mg/30s rinsed-SEVERE                      |
|                  |  | Eye: adverse effect observed (irritating) <sup>[1]</sup> |
|                  | Skin (rabbit): 500 mg/24h SEVERE                         |  |
|                  | Skin: adverse effect observed (corrosive) <sup>[1]</sup> |  |
| Distilled Water  | <b>TOXICITY</b>  | <b>IRRITATION</b>  |
|                  | Oral (Rat) LD50: >90000 mg/kg <sup>[2]</sup>             | Not Available  |

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

|                  |   |
|------------------|---|
| SODIUM HYDROXIDE | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p> <p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.</p> |
| DISTILLED WATER  | No significant acute toxicological data identified in literature search.  |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✗ | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✓ | Reproductivity           | ✗ |
| Serious Eye Damage/Irritation     | ✓ | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗ | Aspiration Hazard        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

|                              | Endpoint      | Test Duration (hr) | Species       | Value           | Source        |
|------------------------------|---------------|--------------------|---------------|-----------------|---------------|
| Sodium hydroxide 1N Solution | Not Available | Not Available      | Not Available | Not Available   | Not Available |
| Sodium Hydroxide             | EC50          | 48h                | Crustacea     | 34.59-47.13mg/l | 4             |
|                              | LC50          | 96h                | Fish          | 144-267mg/l     | 4             |
|                              | EC50(ECx)     | 48h                | Crustacea     | 34.59-47.13mg/l | 4             |
| Distilled Water              | Not Available | Not Available      | Not Available | Not Available   | Not Available |

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Prevent, by any means available, spillage from entering drains or water courses.  
**DO NOT discharge into sewer or waterways.**

Persistence and degradability

| Ingredient       | Persistence: Water/Soil | Persistence: Air |
|------------------|-------------------------|------------------|
| Sodium Hydroxide | LOW                     | LOW              |
| Distilled Water  | LOW                     | LOW              |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------|-----------------|
|------------|-----------------|

| Ingredient       | Bioaccumulation        |
|------------------|------------------------|
| Sodium Hydroxide | LOW (LogKOW = -3.8796) |

**Mobility in soil**

| Ingredient       | Mobility         |
|------------------|------------------|
| Sodium Hydroxide | LOW (KOC = 14.3) |

**SECTION 13 Disposal considerations****Waste treatment methods**

| Product / Packaging disposal |   |
|------------------------------|---|
|                              | <ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <li>▶ Treat and neutralise with dilute acid at an effluent treatment plant.</li> <li>▶ Recycle containers, otherwise dispose of in an authorised landfill.</li> </ul> |

**SECTION 14 Transport information****Labels Required**

|                  |   |
|------------------|---|
|                  |  |
| Marine Pollutant | NO  |
| HAZCHEM          | 2R  |

**Land transport (ADG)**

|                                    |                           |                |
|------------------------------------|---------------------------|----------------|
| 14.1. UN number or ID number       | 1824                      |                |
| 14.2. UN proper shipping name      | SODIUM HYDROXIDE SOLUTION |                |
| 14.3. Transport hazard class(es)   | Class                     | 8              |
|                                    | Subsidiary Hazard         | Not Applicable |
| 14.4. Packing group                | III                       |                |
| 14.5. Environmental hazard         | Not Applicable            |                |
| 14.6. Special precautions for user | Special provisions        | 223            |
|                                    | Limited quantity          | 5 L            |

**Air transport (ICAO-IATA / DGR)**

|                                    |   |                |
|------------------------------------|---|----------------|
| 14.1. UN number                    | 1824  |                |
| 14.2. UN proper shipping name      | Sodium hydroxide solution                                 |                |
| 14.3. Transport hazard class(es)   | ICAO/IATA Class   | 8              |
|                                    | ICAO / IATA Subsidiary Hazard                             | Not Applicable |
|                                    | ERG Code  | 8L             |
| 14.4. Packing group                | III   |                |
| 14.5. Environmental hazard         | Not Applicable  |                |
| 14.6. Special precautions for user | Special provisions  | A3 A803        |
|                                    | Cargo Only Packing Instructions                           | 856            |
|                                    | Cargo Only Maximum Qty / Pack                             | 60 L           |
|                                    | Passenger and Cargo Packing Instructions                  | 852            |
|                                    | Passenger and Cargo Maximum Qty / Pack                    | 5 L            |
|                                    | Passenger and Cargo Limited Quantity Packing Instructions | Y841           |
|                                    | Passenger and Cargo Limited Maximum Qty / Pack            | 1 L            |

**Sea transport (IMDG-Code / GGVSee)**

|                               |                           |
|-------------------------------|---------------------------|
| 14.1. UN number               | 1824                      |
| 14.2. UN proper shipping name | SODIUM HYDROXIDE SOLUTION |



## Sodium hydroxide 1N Solution

|                                    |                        |                |
|------------------------------------|------------------------|----------------|
| 14.3. Transport hazard class(es)   | IMDG Class             | 8              |
|                                    | IMDG Subsidiary Hazard | Not Applicable |
| 14.4. Packing group                | III                    |                |
| 14.5 Environmental hazard          | Not Applicable         |                |
| 14.6. Special precautions for user | EMS Number             | F-A , S-B      |
|                                    | Special provisions     | 223            |
|                                    | Limited Quantities     | 5 L            |

## 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name     | Group         |
|------------------|---------------|
| Sodium Hydroxide | Not Available |
| Distilled Water  | Not Available |

## 14.7.3. Transport in bulk in accordance with the IGC Code

| Product name     | Ship Type     |
|------------------|---------------|
| Sodium Hydroxide | Not Available |
| Distilled Water  | Not Available |

## SECTION 15 Regulatory information

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

## Sodium Hydroxide is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

## Distilled Water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

## Additional Regulatory Information

Not Applicable

## National Inventory Status

| National Inventory                              | Status  |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes   |
| Canada - DSL                                    | Yes   |
| Canada - NDSL                                   | No (Sodium Hydroxide; Distilled Water)  |
| China - IECSC                                   | Yes   |
| Europe - EINEC / ELINCS / NLP                   | Yes   |
| Japan - ENCS                                    | Yes   |
| Korea - KECI                                    | Yes   |
| New Zealand - NZIoC                             | Yes   |
| Philippines - PICCS                             | Yes   |
| USA - TSCA                                      | Yes   |
| Taiwan - TCSI                                   | Yes   |
| Mexico - INSQ                                   | Yes   |
| Vietnam - NCI                                   | Yes   |
| Russia - FBEPH                                  | Yes   |
| <b>Legend:</b>                                  | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

## SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 23/12/2022 |
| Initial Date  | 02/04/2006 |

## SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|------------------|
|---------|----------------|------------------|

Continued...

## Sodium hydroxide 1N Solution

| Version | Date of Update | Sections Updated  |
|---------|----------------|---|
| 6.1     | 30/12/2020     | Classification change due to full database hazard calculation/update. |
| 7.1     | 23/12/2022     | Classification review due to GHS Revision change.                     |

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

- ▶ PC - TWA: Permissible Concentration-Time Weighted Average
- ▶ PC - STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit,
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
  
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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