# Safety Data Sheet



Issue Date : February 2017 Revision due by January 2022

Product Name : **SODIUM HYDROXIDE**

Classified as hazardous and dangerous goods according to WHS and ADG regulations

## 1. Identification

**GHS Product Identifier** SODIUM HYDROXIDE

**Company Name** Wobelea Pty Ltd

**Address** 18 Embrey Court, Pakenham Victoria 3810

**Telephone/Fax Number** Tel: (03) 5940 1077
Fax: (03) 5940 2599

**Recommended use of the chemical and restrictions on use** Acid neutralisation, chemical manufacture, rayon, cellophane, petroleum refining, pulp and paper, aluminium, detergents, soap, cellulose, textile processing, vegetable oil refining, plastics, explosives, dyestuffs, paint and paint remover, metal cleaning, etching and electroplating, reclaiming rubber, regenerating ion exchange resins, organic fusions, peeling of fruits and vegetables in food industry, cleaning products, food additive and laboratory reagent.

**Other Names**

| Name | Product Code |
|---|---|
| SODIUM HYDROXIDE Mini Pearl LR | SL000 |
| SODIUM HYDROXIDE Pellet AR | SA178 |
| SODIUM HYDROXIDE Mini Pearl AR | SA000 |
| SODIUM HYDROXIDE Pellet LR | SL178 |
| Caustic soda, Sodium hydrate, Lye | |
| SODIUM HYDROXIDE Mini Pearl TG | ST000 |

**Other Information** EMERGENCY CONTACT NUMBER: +61 03 5997 1690
Business hours: 8:30am to 5:00pm, Monday to Friday.

## 2. Hazard Identification

**GHS classification of the substance/mixture** Corrosive to Metals: Category 1
Skin Corrosion/Irritation: Category 1A

**Signal Word (s)** DANGER

**Hazard Statement (s)** H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

**Pictogram (s)** Corrosion

**Precautionary statement ñ Prevention**
P234 Keep only in original container.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement ñ Response**
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.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 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.

Classified as hazardous

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| **Precautionary statement ñ Storage** | P363 Wash contaminated clothing before reuse.<br>Store locked up.<br>Store in corrosive resistant/... container with a resistant inner liner. |

## 3. Composition/information on ingredients

**Chemical Characterization** Solid

**Ingredients**

| Name | CAS | Proportion | Hazard Symbol | Risk Phrase |
|---|---|---|---|---|
| Sodium hydroxide | 1310-73-2 | 100 % | C | R35 |

## 4. First-aid measures

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| **Ingestion** | Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting. If vomiting occurs, have victim lean forward to reduce risk of aspiration. If vomiting occurs give further water to achieve effective dilution. Seek immediate medical assistance. |
| **Skin** | Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek urgent medical assistance.<br>Cover skin with an emollient. |
| **Eye contact** | Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.<br>If available, a neutral saline solution may be used to flush the contaminated eye/s an additional 30 minutes. |
| **First Aid Facilities** | Maintain eyewash fountain and safety shower in work area. |
| **Advice to Doctor** | Treat symptomatically as for strong alkalis. Consult Poisons Information Centre.<br>In severe cases, where excessive amounts of sodium hydroxide has been ingested, endoscopy should be performed to determine the severity of the oesophageal burns. |
| **Other Information** | For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. |

## 5. Fire-fighting measures

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| **Hazards from Combustion Products** | May librate toxic fumes in fire (sodium oxide). |
| **Specific Methods** | Use extinguishing media most appropriate for the surrounding fire.<br>Small fire: Use dry chemical, CO2 or water spray.<br>Large fire: Use water spray, fog or foam - Do NOT use water jets.<br>If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers. |
| **Specific hazards arising from the chemical** | Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. |
| **Hazchem Code** | 2W |
| **Precautions in connection with Fire** | Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials. |

## 6. Accidental release measures

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| **Personal Precautions** | Do not allow hot material to contact water or other liquids. Avoid contact with skin. Avoid contact with eyes. |
| **Personal Protection** | Wear protective clothing specified for normal operations (see Section 8) |
| **Clean-up Methods - Small Spillages** | Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations. |
| **Clean-up Methods - Large Spillages** | Seek expert advice on handling and disposal. |
| **Environmental Precautions** | Avoid release to the environment. |

## 7. Handling and storage

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| **Precautions for Safe Handling** | Avoid generation or accumulation of dusts. Contaminated clothing should be removed and washed before reuse. Application of skin-protective barrier cream is recommended. Wash hands and face thoroughly after working with material. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment. When diluting or preparing solution, |

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| | add caustic to water in small amounts to avoid boiling and splattering. |
| **Conditions for safe storage, including any incompatabilities** | Store in a cool,dry place. Store away from acids. Keep containers securely sealed and protected against physical damage. |
| **Corrosiveness** | Corrosive to aluminum, tin, zinc. Corrosive to steel at elevated temperatures. |
| **Storage Regulations** | Refer Australian Standard AS 3780 - 1994 'The Storage and Handling of Corrosive Substances'. |
| **Other Information** | Containers made of nickel alloys are preferred. Steel containers are acceptable if temperatures are not elevated. |

## 8. Exposure controls/personal protection

**Occupational exposure limit values**

| Name | STEL | | TWA | | |
|---|---|---|---|---|---|
| | mg/m3 | ppm | mg/m3 | ppm | Footnote |
| Sodium hydroxide | | | 2 | | Peak limitation |

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| **Other Exposure Information** | A time weighted average (TWA) has been established for Sodium hydroxide (Safe Work Australia) of 2 mg/m3. The corresponding STEL level is 2 mg/m3 - Peak Limitation - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. |
| **Appropriate engineering controls** | In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. |
| **Respiratory Protection** | Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-face piece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. |
| **Eye Protection** | The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. |
| **Hand Protection** | Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.<br>Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.<br>Recommendation: Rubber or plastic gloves. |
| **Personal Protective Equipment** | Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken. |
| **Footwear** | Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use. |
| **Body Protection** | Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. |
| **Hygiene Measures** | Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping. |

## 9. Physical and chemical properties

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| **Form** | Solid |
| **Appearance** | White, deliquescent flakes, pellets or minipeal. |
| **Odour** | Odourless. |
| **Melting Point** | 318 - 323 °C |
| **Boiling Point** | 1390 °C @ 760 mm Hg |
| **Solubility in Water** | Soluble. |
| **Solubility in Organic Solvents** | Soluble in alcohol and glycerol. Insoluble in acetone and ether. |

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| **Specific Gravity** | 2.130 @ 20 °C |
| **pH** | 12 (0.05% soln); 13 (1% soln); 14 (5% soln) |
| **Odour Threshold** | Odourless. |
| **Flammability** | Non-combustible. |
| **Molecular Weight** | 40.01 |
| **Other Information** | Absorbs water and carbon dioxide from the air. |

## 10. Stability and reactivity

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| **Chemical Stability** | Stable under normal use conditions. Hygroscopic<br>Slowly absorbs moisture from air, reacting with carbon dioxide and forming sodium carbonate. |
| **Conditions to Avoid** | Exposure to moisture. Exposure to air. Dust generation. Incompatibles. |
| **Incompatible Materials** | Strong acids, ally alcohol, ally chloride, phosphorous, metals (aluminium, magnesium, tin, zinc), nitro compounds (nitroethane, nitromethane, nitroparagins, nitropropane) and chloro organic compounds, organic halogen compounds (trichloroethylene), water. |
| **Hazardous Decomposition Products** | Sodium oxide. |
| **Possibility of hazardous reactions** | May react violently with strong acids. In contact with water, reaction may generate enough heat to ignite combustible materials. In contact with metals, reaction may produce flammable and explosive hydrogen gas. May react with organo halogen compounds to form spontaneously combustible compounds. May react explosively in contact with nitro and chloro organic compounds. May form explosive products with ammonia plus silver nitrate, benzene and benzene sulfonyl chloride, tetrahydrofuran, sodium tetra hydroborate, and trichloro phenol sodium salt plus methyl alcohol plus tichloro benzene plus heat. |
| **Hazardous Polymerization** | Will not occur. |

## 11. Toxicological Information

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| **Ingestion** | Corrosive. Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Similar symptoms may be experienced as for inhalation with, severe pain, severe scarring of tissue, diarrhea, bleeding, vomiting, fall in blood pressure, collapse and death. Damage may appear days after exposure. Risk of perforation in the oesophagus and stomach. |
| **Inhalation** | Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage or burns of the mucous membranes of the upper respiratory tract, depending on severity of exposure. Symptoms may include coughing, wheezing, laryngitis, shortness of breath, nausea, vomiting, sneezing, sore throat or runny nose. Severe chemical pneumonitis and pulmonary edema may occur. |
| **Skin** | Corrosive. Contact with skin causes severe burns and scarring. Can penetrate deeply. Burns are not immediately painful, onset of pain and irritation may be minutes to hours. |
| **Eye** | Corrosive. Causes severe burns. Can penetrate deeply. In severe cases, ulceration, permanent impairment of vision and permanent blindness may occur. |
| **Carcinogenicity** | Not listed in the IARC Monographs. |
| **Chronic Effects** | Prolonged contact with dilute solution or dust has destructive effects upon tissue. No |
| **Mutagenicity** | evidence of mutagenic properties. |

## 12. Ecological information

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| **Eco toxicity** | Toxic for aquatic organisms. Harmful effect due to pH shift. |
| **Persistence and degradability** | Methods for the determination of biodegradability are not applicable to inorganic substances. |
| **Acute Toxicity - Fish** | LC50 Gambusia affins (mosquito fish) - 125mg/L - 96 h. |
| **Acute Toxicity - Daphnia** | EC50 (Daphina magna): 76 mg/l/24h. |

## 13. Disposal considerations

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| **Disposal Considerations** | Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations. |

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| Phone: | 03 5940 1077 |

## 14.Transport Information

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| **Transport Information** | Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following: Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity. Not to be loaded on the same vehicle with strong acids. |
| **U.N. Number** | 1823 |
| **UN proper shipping name** | SODIUM HYDROXIDE, SOLID |
| **Transport hazard class(es)** | 8 |
| **Hazchem Code** | 2W |
| **Packaging Method** | 3.8.8 |
| **Packing Group** | II |
| **EPG Number** | 8A1 |
| **IERG Number** | 37 |

## 14. Regulatory information

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| **Regulatory Information** | Listed in the Australian Inventory of Chemical Substances (AICS). |
| **Poisons Schedule** | S6 |

## 15. Other Information

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| **Date of preparation or last revision of SDS** | September 2009. |
| **Literature References** | 'Standard for the Uniform Scheduling of Medicines and Poisons No. 4', Commonwealth of Australia, June 2013.<br>Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.<br>National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.<br>'Labelling of Hazardous Workplace Chemicals, Code of Practice' Safe Work Australia.<br>Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.<br>Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]'.<br>Safe Work Australia, 'Hazardous Substances Information System, 2005'.<br>Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.<br>Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]'. |
| **Contact Person/Point** | Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:<br>All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives. |
| **Empirical Formula & Structural Formula** | NaOH |

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