Active Chemicals Pty Ltd

ABN 16 117 075 180
Professional Cleaning chemicals

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Alkaline Solution

Other Names
Caustic soda
Sodium hydroxide

Uses
To neutralise acids in water and waste water treatment. Make sodium salts and hydrolise fats to form soaps. Industrial cleaning applications

Company Details

Supplier: Active Chemicals Pty Ltd
Address: 4/20 Powdrill Road
Prestons NSW 2170

Telephone No.: (02) 9826 0201
Facsimile No.: (02) 9826 0208
Email: office@aquapac.com.au

Emergency Telephone No.:
Business Hours: 9826 0201
After Hours: Police or Fire 000
Poisons Information Centre: 131126

2. HAZARD IDENTIFICATION

U.N. Number:	**1824**	**Class:**	**8**
Hazchem:	**2R**	**Poisons Schedule:**	**6**
EPG:	**37**	**Packaging Group:**	**II**

Classified as hazardous according to criteria of NOHSC

HARMFUL IRRITANT
Risk Statement:
R35 causes severe burns
R41 Risk of serious damage to eyes.

Safety Statement:
S2 Keep out of reach of children
S26 In case of contact with eyes, rinse immediately with plenty of water and Seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Hazard Category: C
Corrosive

3.COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion
Sodium hydroxide	1310-73-2	10 - 30%
Sodium carbonate	497-19-8	< 5%
Water	7732-18-5	balance

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4. FIRST AID MEASURES

Swallowed Immediately rinse mouth thoroughly with water. Give large quantities of water to drink. Do NOT induce vomiting. If vomiting occur's place victim's head lower than hips to prevent vomit from entering lungs and give further water to achieve effective dilution. Seek immediate medical assistance.

Eye Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Transport to medical centre. Continue washing during transport if possible. Seek immediate medical assistance.

Skin Immediately wash contaminated skin with plenty of water and then wash with soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness or blistering occurs seek medical advice.

Inhalation Remove victim from exposure - avoid becoming a casualty. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible. If breathing is difficult have a trained person administer oxygen. If respiration stops comma, give mouth to mouth resuscitation. Seek medical advice.

Health Effects

Symptoms that may arise if the product is mishandled are:

Acute

Swallowed Ingested sodium hydroxide is extremely corrosive, causing dissolution of body tissue accompanied by severe burning sensation in mouth and oesophagus. May be fatal if swallowed.

Eye Will irritate and possibly damage eye tissue causing conjunctivitis, corneal burns, ulceration and could cause permanent injury and loss of sight.

Skin Contact with skin can cause burns or severe irritation. Repeated or prolonged contact may lead to irritant contact dermatitis. Pain may not be associated with contact; thus care is needed to avoid contaminating gloves and boots.

Inhaled Inhalation of mists of the solution will result in respiratory inhalation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema. Inhalation at elevated temperatures will increases these symptoms.

Chronic Effects

Repeated or prolonged skin contact may lead to irritant contact dermatitis.

As with any chemical - ingestion, inhalation, and prolonged or repeated skin contact should be avoided by good occupational work practice.

Poison Information Centres in each State capital city can provide additional assistance.

Advice to Doctor

Treat symptomatically and as for strong alkali materials, with neutralisation being attempted if necessary.

5. Fire Fighting Measures

Fire / Explosion Hazards

Not Combustible

Conditions to avoid:

Reaction with metals will produce flammable hydrogen gas.

Materials to avoid:

Acids. Water and ammonium salts

Hazardous Decomposition Products:

May produce hydrogen gas in contact with metal

Extinguishing Media:

Fire fighters should wear full protective clothing including self-contained breathing apparatus. In case of fire use water, foam, carbon dioxide, dry powder.

6. Accidental Release Measures

Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination including breathing apparatus.

Contain do not allow spill material to enter the environment. Contain material using inert absorbent material eg vermiculite. Place into suitable labelled containers and hold for waste disposal. Wash area down with excess water once removed.

CAUTION: Caustic Soda may react violenty with water and acids.

7. Handling and Storage

Classified as a Dangerous Good for the purposes of transport.

Correct shipping name: Caustic Soda Liquid
Packaging Group 11
UN Number 1824
Class 8 (Corrosive)

Refer to relevant regulations for storage and transport requirements.

Not to be loaded with:
Class 1 explosives
Class 4.3 dangerous when wet substances
Class 5.1 Oxidising agents
Food stuffs
Incompatible Class 8 chemicals (Strong acids)

Store according to relevant Poisons Storage Act (Schedule Poison S6)

Group Text Emergency Procedure Guide (GTEPG) card from AS2931
GTEPG : 8A1

Dangerous Goods – Initial Emergency Response Guide (SSA/SNZ HB76:1997)

Do not store in materials of tin, aluminium, galvanised, zinc or alloys of these materials. Store away from acids and ammonium salts.

Avoid contact with eyes and skin. Avoid prolonged or repeated exposure. Always wash hands before smoking, eating, drinking or using the toilet.

Personal Protection

Eyes: The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.
Skin: Rubber or PVC gloves, overalls or PVC suit, safety or rubber boots
Respiratory: If mist is generated the use of approved AS 1715/1716 half facepiece respirator is recommended.

Avoid contact with eyes and skin. Avoid prolonged or repeated exposure.
Always wash hands before smoking, eating, drinking or using the toilet.

Flammability

Not combustible material. Direct contact with water can cause a violent exothermic reaction. Use foam, carbon dioxide or dry chemical where the product is stored.

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PRECAUTIONS FOR USE

Exposure Standards (for atmospheric contaminants in the occupational environment)

No value assigned for this product by the NOHSC (Workcover). However, the exposure standard for the acid constituent is:

	TWA		STEL	
	ppm	mg/m^3	ppm	mg/m^3
Sodium hydroxide	2			

8 hr atmospheric TLV = 2mg/m3 – ceiling value for caustic soda (max instantaneous value).

Peak Limitation: A ceiling value that should not be exceeded over a measurement period that should be as short as possible but not exceed 15 minutes.

This exposure standard is a guide to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering Controls

Design and maintain pipework and storage systems to prevent leaks, and consider possible low temperature solidification effects. Maintain concentration below recommended exposure limit. Use in a well-ventilated area. Avoid generating and inhaling mists and aerosols. Keep containers closed when not in use. If risk of overexposure exists, wear SAA approved respirator to comply with Australian Standards, ensuring correct fit to obtain adequate protection.

Personal Protection

Eyes: The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.
Skin: Rubber or PVC gloves, overalls or PVC suit, safety or rubber boots
Respiratory: If mist is generated the use of approved AS 1715/1716 half facepiece respirator is recommended.

Avoid contact with eyes and skin. Avoid prolonged or repeated exposure.
Always wash hands before smoking, eating, drinking or using the toilet.

9. Physical Description / Properties

Appearance:	Transparent viscous liquid.		
Flash point:	N/A	**Specific Gravity:**	1.20
Boiling point (°C):	140	**ph (neat solution)**	> 12
Melting Point (°C):	N/A	**Solubility in Water (g/L):**	soluble
Vapour pressure:	1.5 mm Hg		

Other Properties

Odour:	**characteristic**
Solubility:	**Soluble in water**

10. Stability and Reactivity

Chemical Stability:
Product is stable under normal conditions of use, storage and temperature.

**** KEEP CONTAINERS WELL SEALED ****

Conditions to avoid:
Reaction with metals will produce flammable hydrogen gas.

Materials to avoid:
Acids. Water and ammonium salts

Hazardous Decomposition Products:
May produce hydrogen gas in contact with metal

11. Toxicological Information

Toxicity

Toxicology:

Oral lowest lethal dose (rabbit):	500mg/Kg	10% solution
Skin (rabbit):	500mg/24hr	severe irritation
Eye (rabbit);	1 mg/30 sec	severe irritation

Highly corrosive to any tissue in which it comes into contact. Produces burns, deep ulceration, and gelatinous necrotic areas at the site of contact. Low systemic toxicity.

Chronic Effects

Repeated or prolonged skin contact may lead to irritant contact dermatitis.

12. Ecological Information

Ecotoxicity

No data available.

Mobility No information available on mobility for this product. Completely Miscible with water.

Environmental Fate (Exposure) Do NOT allow product to enter waterways, drains or sewers.

13. Disposal Considerations

Disposal

Refer to State and Land Management Authority and relevant Environmental Protection Authority. All empty packaging should be disposed of in accordance with Local, Sate, and Federal Regulation or recycled/reconditioned at an approved facility.

14. Transport Information

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Use only plastic (PE, PP, PVC) or fibreglass containers/vessels – corrosive to mild and stainless steels. Other tanks should be lined with chloride resistant materials. Pumps should also be lined with chloride resistant materials.

15. Regulatory Information

Poisons Schedule S6

EPG 37

AICS Name No data available.

16. Other Information

Legend to Abbreviations and Acronyms

< less than **>** greater than

AICS Australian Inventory of Chemical Substances

CAS Chemical Abstracts Service (Registry Number)

CO2 Carbon Dioxide

COD Chemical Oxygen Demand

Deg C degrees Celsius

ERMA Environmental Risk Management Authority

g gram **g/cm3** grams per cubic centimetre **g/L** grams per litre

HSNO Hazardous Substance and New Organism

IDLH Immediately Dangerous to Life and Health

Immiscible liquids are insoluble in each other

Kg kilogram **Kg/m3** kilograms per cubic metre

LC 50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals

Ltr Litre **m3** cubic metre **mbar** millibar **mg** milligram **mg/24H**milligrams per 24 hours

Mg/Kgmilligrams per kilogram **mg/m3** milligrams per cubic metre

Misc miscible

miscible liquids form one homogeneous liquid phase regardless of the amount of either component present

mm millimetre **mPa.s**milli Pascal per second

N/A Not Applicable

NOHSC National Occupational Health and Safety Commission

OECDOrganization for Economic Co-operation and Development

PEL Permissible Exposure Limit

Ppb parts per billion **ppm** parts per million

Ppm/2h parts per million per 2 hours **ppm/6h** parts per million per 6 hours

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

Tne tonne

TWA **t**ime Weighted Average

Ug/24H micrograms per 24 hours

UN United Nations (number)

W weight

Company Disclaimer

All information contained in this data sheet is as accurate and up-to-date as possible. Since Aquapac Pty Ltd cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application.
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