

Sodium Hydroxide 0.1M ALPHA CHEMICALS PTY LTD

Chemwatch Hazard Alert Code: 2

Issue Date: **23/12/2022** Print Date: **24/01/2024** S.GHS.AUS.EN

Chemwatch: 4520-2 Version No: 13.1

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

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

Product Identifier				
Product name	Sodium Hydroxide 0.1M			
Chemical Name	Not Applicable			
Synonyms	laboratory reagent; natrium hydroxide			
Proper shipping name	SODIUM HYDROXIDE SOLUTION			
Chemical formula	Not Applicable			

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

Not Available

Relevant identified uses Laboratory reagent for volumetric analysis.

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

Other means of identification

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		0 = Minimum
Body Contact	2	1	1 = Low
Reactivity	0		2 = Moderate
Chronic	0		3 = High 4 = Extreme

Poisons Schedule	S5
Classification [1]	Corrosive to Metals 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

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Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

H290

May be corrosive to metals.

Precautionary statement(s) Prevention

P234

Keep only in original packaging.

Precautionary statement(s) Response

P390

Absorb spillage to prevent material damage.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name	
1310-73-2	0.4	Sodium Hydroxide	
7732-18-5	balance	<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

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh running water. 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. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. 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. Transport to hospital, or doctor.
Ingestion	If poisoning occurs, contact a doctor or Poisons Information Centre. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. 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.

SECTION 5 Firefighting measures

Extinguishing media

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

Special hazards arising from the substrate or mixture

-p					
Fire Incompatibility	Reacts with aluminium / zinc producing flammable, explosive hydrogen gas				
Advice for firefighters					
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use fire fighting procedures suitable for surrounding area. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use. 				
Fire/Explosion Hazard	 Non combustible. Not considered to be a significant fire risk. Expansion or decomposition on heating may lead to violent rupture of containers. Decomposes on heating and may produce toxic/ irritating fumes. May emit acrid smoke. 				
HAZCHEM	2R				

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Slippery when spilt. Clean up all spills immediately. Control personal contact with the substance, by using protective equipment Contain and absorb spill with sand, earth, inert material or vermiculite. Place spilled material in clean, dry, sealable, labelled container.
Major Spills	Slippery when spilt. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue (see Section 13 for specific agent).

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

SECTION 7 Handling and storage

Precautions for safe handling	
Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Other information	 Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	F Glass container is suitable for laboratory quantities Packs of 2.5 litres or less require a child-resistant closure.	
Storage incompatibility	Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.	

SECTION 8 Exposure controls / personal protection

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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	

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

Exposure controls

Appropriate engineering controls

General exhaust is adequate under normal operating conditions.

Individual protection measures, such as personal protective equipment





- Safety glasses with side shields; or as required,
- Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]

Eye and face protection

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. [CDC NIOSH Current Intelligence Bulletin 59].

Skin protection See Hand protection below ▶ Wear chemical protective gloves, e.g. PVC. Hands/feet protection Wear safety gumboots, e.g. Rubber. **Body protection**

See Other protection below

Other protection

- Overalls. ▶ Barrier cream
- ► Eyewash unit.

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 $\emph{computer-}$ generated selection:

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Material	СРІ
BUTYL	A
NEOPRENE	A
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PE	С
PE/EVAL/PE	С
PVA	С
PVC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
TEFLON	С
VITON	С
VITON/CHLOROBUTYL	С

^{*} CPI - Chemwatch Performance Index

NOTE: As a series of factors will influence the actual performance of the glove, a final

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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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.

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

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

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

mermation on textoological offocio		
Inhaled	Not normally a hazard due to non-volatile nature of product	
Ingestion	Ingestion may result in nausea, abdominal irritation, pain and vomiting	
Skin Contact	The material may cause 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.	

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Eye	The material may be irritating to the eye, with prolonged c conjunctivitis.	contact causing inflammation. Repeated or prolonged exposure to irritants may produce
Chronic	Long-term exposure to the product is not thought to produmodels); nevertheless exposure by all routes should be m	ace chronic effects adverse to the health (as classified by EC Directives using animal inimised as a matter of course.
Sodium Hydroxide 0.1M	TOXICITY Not Available	IRRITATION Not Available
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 1350 mg/kg ^[2]	Eye (rabbit): 0.05 mg/24h SEVERE
	Oral (Rabbit) LD50; 325 mg/kg ^[1]	Eye (rabbit):1 mg/24h SEVERE
Sodium Hydroxide		Eye (rabbit):1 mg/30s rinsed-SEVERE
		Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit): 500 mg/24h SEVERE
		Skin: adverse effect observed (corrosive) ^[1]
	тохісіту	IRRITATION
Distilled Water	Oral (Rat) LD50: >90000 mg/kg ^[2]	Not Available
Legend:	Nalue obtained from Europe ECHA Registered Substar specified data extracted from RTECS - Register of Toxic I	nces - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise Effect of chemical Substances
SODIUM HYDROXIDE	known as reactive airways dysfunction syndrome (RADS) criteria for diagnosing RADS include the absence of previ asthma-like symptoms within minutes to hours of a docum airflow pattern on lung function tests, moderate to severe lymphocytic inflammation, without eosinophilia. RADS (or the concentration of and duration of exposure to the irritat result of exposure due to high concentrations of irritating s disorder is characterized by difficulty breathing, cough and The material may produce severe irritation to the eye caus produce conjunctivitis.	sing pronounced inflammation. Repeated or prolonged exposure to irritants may ged or repeated exposure and may produce on contact skin redness, swelling, the
DISTILLED WATER	No significant acute toxicological data identified in literatu	re search.

Acute Toxicity Carcinogenicity × Skin Irritation/Corrosion Reproductivity Serious Eye Damage/Irritation × STOT - Single Exposure × Respiratory or Skin × × STOT - Repeated Exposure sensitisation 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

Tovicity

	Endpoint	Test Duration (hr)	Species		Value	Source
Sodium Hydroxide 0.1M	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Val	ue	Source
On Provide land	EC50	48h	Crustacea	34.	59-47.13mg/l	4
Sodium Hydroxide	LC50	96h	Fish	144	I-267mg/l	4
	EC50(ECx)	48h	Crustacea	34.	59-47.13mg/l	4
	Endpoint	Test Duration (hr)	Species		Value	Source
Distilled Water	Not Available	Not Available	Not Available		Not Available	Not Available
Legend:			A Registered Substances - Ecotoxicologica quatic Hazard Assessment Data 6. NITE (J.			

DO NOT discharge into sewer or waterways.

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

Bioaccumulative potential

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

- $\ ^{\blacktriangleright}$ Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- ► Treat and neutralise with dilute acid at an effluent treatment plant.
- ▶ Recycle containers, otherwise dispose of in an authorised landfill.

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 Subsidiary Hazard	8 Not Applicable	
14.4. Packing group	III		
14.5. Environmental hazard	Not Applicable		
14.6. Special precautions for user	Special provisions Limited quantity	223 5 L	

Air transport (ICAO-IATA / DGR)

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

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Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1824		
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION		
14.3. Transport hazard class(es)	IMDG Class IMDG Subsidiary Hazard	8 Td Not Applicable	
14.4. Packing group	III		
14.5 Environmental hazard	Not Applicable		
14.6. Special precautions for user	EMS Number F	F-A , S-B	
	Special provisions 2	223	
	Limited Quantities 5	5L	

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
Legend:	Yes = All CAS declared ingredients are on the inventory 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

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Initial Date

18/06/2004

SDS Version Summary

Version	Date of Update	Sections Updated
12.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
13.1	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 Limit₀
- 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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