SDS 47677 Sodium hydroxide 2.5M

Date of Issue:-2024.07.04 Expires 2032.08

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name	**ECP LTD**
Address:	39 Woodside Ave, Northcote, Auckland , New Zealand
Emergency Tel:	NZ: 0800 154 666 (24 h)
Telephone:	09 480 4386
Fax	09 480 4385
Product	Sodium Hydroxide 2.5M
Synonyms	Caustic soda
Tracked Substance?:	No

Regulatory Classification numbers

CAS Number:	1310-73-2
UN Number:	1823
HSNO Approval Number:	HSR001576
DG Class :	8
Secondary DG Class (if any):	N/A
Packing group:	II
Recomended use:	Laboratory Investigations

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Skin corrosion (Category A)
Serious eye damage (Category A)
Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word WARNING

Hazard statement(s)
H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.

Precautionary statement(s)
Prevention
P260 Do not breathe dust or mist.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
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.
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse.
Storage
P405 Store locked up.
Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazard Classification

Australia:
Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

New Zealand:
Classified as Hazardous according to the Hazardous Substances (Classification) Regulations 2001, New Zealand.
Classified as Dangerous Goods for transport according to the NZS 5433:1999 Transport of Dangerous Goods on Land.
HSNO Classification:
6.1D - Substance that is acutely toxic if swallowed.
8.1A - Substance that is corrosive to metals.
8.2B - Substance that is corrosive to dermal tissue.
8.3A - Substance that is corrosive to ocular tissue.
9.1D - Substance that is slightly harmful to the aquatic environment.
9.3C - Substance that is harmful to terrestrial vertebrates.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Sodium hydroxide	1310-73-2	4 %
	Water		89-91%

4. FIRST AID MEASURES

Inhalation	Remove the source of contamination or move the victim to fresh air. Seek medical attention.
Ingestion	Do NOT induce vomiting. Wash out mouth with large amounts of water. Seek immediate medical attention.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Seek immediate medical attention.
Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.
First Aid Facilities	Eye wash fountains and safety showers should be available for emergency use.
Advice to Doctor	Treat symptomatically.
Other Information	For advice in an emergency, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 POISON / 0800 764 766) or a doctor (at once).

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Extinguish fire with foam, dry chemical powder, carbon dioxide, water fog or water spray.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or corrosive fumes.
Special Protective Equipment for fire fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes or products of combustion. Water spray may be used to cool down heat-exposed containers. If safe to do so, remove containers from path of fire. Do not allow run-off from fire fighting to enter drains or water courses.
Specific Hazards	Solutions may react with aluminium and other soft metals to generate hydrogen which is flammable and/or explosive if ignited.
Hazchem Code	2X

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	Wear appropriate personal protective equipment and clothing to prevent exposure. Stop the leak if safe to do so. Increase ventilation. Evacuate all unnecessary personnel. If possible contain the spill. Where possible use dustless methods such as vacuum to collect the material and place into suitable labelled containers. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations. Dispose of waste according to applicable local and national regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Use in designated areas with adequate ventilation. Avoid breathing in dust or mist. Keep containers closed when not in use. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities.
Conditions for Safe Storage	Store in a cool, dry well-ventilated area away from extremes of temperature, heat, ignition sources and incompatible materials. Keep containers tightly closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks.
Corrosiveness	In the presence of moisture Sodium Hydroxide is corrosive to Al, Zn, Sn and Cu.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Australian National Occupational Health And Safety Commission (NOHSC) Exposure Standards: Substance TWA STEL NOTICES ppm mg/m3 ppm mg/m3 Sodium hydroxide - 2 (Peak Limitation) - New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards: Substance TWA STEL NOTICES ppm mg/m3 ppm mg/m3 Sodium hydroxide - 2 (Ceiling) -
Biological Limit Values	No biological limit allocated.
Other Exposure Information	TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday. 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. Ceiling: A concentration that should not be exceeded during any part of the working day.
Engineering Controls	Ensure ventilation is adequate and that air concentration of components are controlled below quoted exposure standards. A local exhaust ventilation system, drawing dust/mist away from workers' breathing zone, should be used.
Respiratory Protection	If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.
Eye Protection	Safety glasses with side shields, goggles or full-face shield as appropriate recommended.

	Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
Hand Protection	Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
Body Protection	Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White deliquescent solid, can be in the form of pellets, flakes, grains, beads, lumps, sticks or powder.
Melting Point	318°C
Boiling Point	1388°C
Solubility in Water	54% (approx.) at 20°C.
Specific Gravity	2.10
pH Value	14 (approx.) (20°C, 50 g/L)
Vapour Pressure	Not available
Specific Properties or Risk	Generates considerable heat when dissolved in water or acid solutions.
Flash Point	Not applicable
Flammability	Non-combustible solid.
Flammable Limits - Lower	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling, however can react with moisture in the air. It can also absorb carbon dioxide from air.
Incompatible Materials	Oxidising agents and strong acids, organic materials, aluminium, tin, zinc and nitro compounds.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	For Sodium Hydroxide: LD50 (Oral, Rat)> 2000 mg/kg (estimated value) LD50 (Dermal, Rabbit)> 1370 uL/kg (estimated value) LC50 (Inhalation, Rat)> 20 mg/L/h (estimated value) Skin (Rabbit): Severe irritation (550 mg/24h) Eye (Rabbit): Severe irritation (1 mg/30s rinse)
Inhalation	Inhalation of dusts and mist can cause severe irritation and chemical burns to the respiratory tract. It can also cause harmful corrosive effects including lesions of the nasal septum and pulmonary edema.
Ingestion	Ingestion of this product will cause severe chemical burns to the mouth, throat and stomach, resulting in extensive tissue damage and severe pain.
Skin	Corrosive to skin. Skin contact will cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Eye	Corrosive to eyes. Eye contact will cause stinging, blurring, tearing and severe pain. It can cause permanent eye damage and blindness.
Chronic Effects	Prolonged exposure to the dust may cause respiratory disorders.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not available
Persistence / Degradability	Not available
Mobility	Not available
Bioaccumulative Potential	Not available
Environment Protection	Do not allow product to enter drains, waterways or sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations	The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information	Australia: This material is classified as a Class 8 (Corrosive) Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following: - Class 1, Explosive

- Class 4.3, Dangerous When Wet Substance
- Class 5.1, Oxidising Agent
- Class 5.2, Organic Peroxide
- Class 6, Toxic and Infectious Substances, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids
- Class 7, Radioactive Substance
and are incompatible with food and food packaging in any quantity.

New Zealand:
This material is classified as a Class 8 - Corrosive Substance according to NZS 5433:1999 Transport of Dangerous Goods on Land.
Must not be loaded in the same freight container or on the same vehicle with:
- Class 1, Explosives
- Class 5.1, Oxidising substances
- Class 5.2, Organic peroxides
- Class 7, Radioactive materials unless specifically exempted
And are incompatible with food and food packaging in any quantity.
Note 1; Cyanides (Class 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).
Note 2; Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.
Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:
- Class 4.3, Dangerous when wet substances
Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:
- Class 4.3, Dangerous when wet substances
- Class 5.1, Oxidising substances
- Class 5.2, Organic peroxides
And are incompatible with food and food packaging in any quantity.

U.N. Number	1823
Proper Shipping Name	SODIUM HYDROXIDE, SOLID
DG Class	8
Hazchem Code	2X
Packaging Method	3.8.8
Packing Group	II
EPG Number	8A1
IERG Number	37

15. REGULATORY INFORMATION

Regulatory Australia:

Information	Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia. Classified as a Scheduled 6 Poison (S6) according to the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
Poisons Schedule	S6
National and or International Regulatory Information	New Zealand: Classified as Hazardous according to the Hazardous Substances (Classification) Regulations 2001. Group standard: HSNO Approval Number: HSR001547.
Hazard Category	Corrosive
AICS (Australia)	All constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. **Disclaimer:**

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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17.Date of issue 24.11.08

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