


1. Identification

Product identifier	Caustic Soda Liquid 46%	
Recommended use of the chemical and restrictions on use	Full strength caustic soda liquid.	
Details of manufacturer or importer	Company Name	Chemwell Pty Ltd ABN 94 155 544 040
	Address	3 Clive St, Springvale, VIC, 3171
	Phone	03 9558 5678
	Email	chemwell@chemwell.com.au
	Website	www.chemwell.com.au
Emergency phone number	Police, Fire & Ambulance	000
	Poisons Information Centre	13 11 26

2. Hazard(s) Identification

This material is hazardous according to criteria of Safe Work Australia.

Considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

Classification of the hazardous chemical	Corrosive to metals 1 Eye Damage/Irritation 1 Skin Corrosion/Irritation 1
Hazard symbols	
Signal word(s)	Danger
Hazard statement(s)	H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage

Precautionary statement(s)	Prevention	<p>P234 - Keep only in original container.</p> <p>P260 - Do not breathe dust/fumes/gas/mist/vapours/spray.</p> <p>P264 - Wash thoroughly after handling.</p> <p>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p>
	Response	<p>P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+361+353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P363 - Wash contaminated clothing before reuse.</p> <p>P304+340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 - Immediately call a POISON CENTER or doctor.</p> <p>P321 - Specific treatment (see ... on this label).</p> <p>P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.</p>
	Storage	<p>P405 - Store locked up.</p> <p>P406 - Store in a corrosive resistant container with a resistant inner liner.</p>
	Disposal	<p>P501 - Dispose of contents/container to in accordance with local regulation.</p>

3. Composition and Information on Ingredients

Name	Proportion
Sodium Hydroxide 46% Solution	>60%

Disclosure of ingredient names is not required by the WHS Regulations for those ingredients that meet only physicochemical and/or environmental hazard classifications, or for nonhazardous ingredients.

There is no requirement to disclose the identity of ingredients for the following GHS health hazard categories because they fall outside the scope of the WHS Regulations:

- Acute toxicity – Category 5 (oral, dermal and inhalation)
- Skin; corrosion / irritation – Category 3
- Serious eye damage / eye irritation – Category 2B
- Aspiration hazard – Category 2
- Aquatic toxicity (all categories)
- Flammable gas – Category 2
- Ozone depletion.

4. First Aid Measures

Swallowed	Immediately rinse mouth out thoroughly with water and give water to drink. DO NOT induce vomiting. Seek medical advice.
Eye	Immediately irrigate eyes with large amounts of water for at least 15 minutes with eyelids held open. Take care not to rinse contaminated water into the non-affected eye. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Seek medical advice.
Skin	Immediately wash affected area with large amounts of water. Remove any contaminated clothing and wash before re-use. Seek medical advice if pain or irritation persists.
Inhaled	For all but minor symptoms seek medical advice. Not considered a normal feature of use.
First Aid Facilities	Standard first aid facilities.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.

5. Fire Fighting Measures

Suitable extinguishing equipment	Use water spray, alcohol-resistant foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards arising from the chemical	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Hazardous products of combustion for each ingredient are: Sodium Hydroxide 46% Solution: Reacts with aluminium/ zinc producing flammable, explosive hydrogen gas. Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas. Reacts exothermically on dilution with water. Other combustion products include: caustic compounds.
Special protective equipment and precautions for fire fighters	Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant section. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. HazChem (EAC): 2R

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	<p>Personnel involved in the clean-up should wear protective clothing as listed in section 8. Use clean, non-sparking tools and equipment. Avoid breathing vapours and contact with skin and eyes. Remove contaminated clothing and wash before reuse.</p> <p>Eliminate all sources of ignition. Increase ventilation.</p> <p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. Clean up all spills immediately. Clear area of all unnecessary personnel.</p>
Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up	<p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. This may involve tipping container on its side. Clean up all spills immediately. Clear area of all unnecessary personnel. If safe to do so repack leaking container into new container.</p> <p>Place inert, absorbent, non-combustible material onto spillage. Wipe up. Place in a suitable, labelled container for waste disposal.</p>

7. Handling and Storage

Handling	<p>Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Check Section 8 for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the counteractingly workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.</p>
Storage	<p>Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination. Containers should be protected against any form of physical damage indeterminate goodness wellbeing always. Have appropriate fire extinguishers available in and near storage area. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.</p>

8. Exposure Controls and Personal Protection

Exposure standards	<p>No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for ingredient(s) are:</p> <p>Sodium Hydroxide 46% Solution: No Data Available</p>
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Biological limits	Biological limits for ingredient(s) are: Sodium Hydroxide 46% Solution: No information available on biological limit values for this product.
Engineering controls	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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. 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.
Personal protective equipment (PPE)	Safety glasses with side shields. Chemical protective gloves.

9. Physical and Chemical Properties

Appearance (physical state, colour etc.)	A clear liquid
Odour	Not specified
Odour threshold	Not specified
pH	12.5-13.5
Melting point/freezing point	Not specified
Initial boiling point and boiling range	Not specified
Flash point	Not flammable
Evaporation rate	Not specified
Flammability (solid, gas)	Not specified
Upper/lower flammability or explosive limits	Not specified
Rejonasus Factor	Not specified
Vapour pressure	Not specified
Vapour density	Not specified
Relative density	Not specified
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not specified
Auto-ignition temperature	Not specified
Decomposition temperature	Not specified
Viscosity	Not specified

10. Stability and Reactivity

Reactivity	Reacts exothermically with acids.
Chemical stability	Stable under normal ambient storage and handling conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	No data available.
Incompatible materials	No data available.
Hazardous decomposition products	See section 5.

11. Toxicological Information

Acute Toxicity, Dermal	Not Applicable
Acute Toxicity, Dusts And Mists	Not Applicable
Acute Toxicity, Gases	Not Applicable
Acute Toxicity, Inhalation	Not Applicable
Acute Toxicity, Oral	Not Applicable
Acute Toxicity, Vapours	Not Applicable
Skin Corrosion/Irritation	Category 1
Eye Damage/Irritation	Category 1
Respiratory Sensitization	Not Applicable
Skin Sensitization	Not Applicable
Germ Cell Mutagens	Not Applicable
Carcinogenicity	Not Applicable
Reproductive Toxicity	Not Applicable
Specific Target Organ Toxicity RE	Not Applicable
Specific Target Organ Toxicity SE	Not Applicable
Aspiration Hazard	Not Applicable

Toxicological Information for Sodium Hydroxide 46% Solution

General Information:

IRRITATION

Skin (rabbit):500 mg/24h SEVERE

Eye (rabbit):0.05 mg/24h SEVERE

Eye (rabbit):1 mg/24h SEVERE

Eye (rabbit):1 mg/30s rinsed- SEVERE

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the

epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

Eye Irritant: The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. Considered an unlikely route of entry in commercial/industrial environments.

Inhalation: Not normally a hazard due to non-volatile nature of product. The material may produce respiratory tract irritation. Symptoms of pulmonary irritation may include coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and a burning sensation. Unlike most organs, the lung can respond to a chemical insult or a chemical agent, by first removing or neutralising the irritant and then repairing the damage (inflammation of the lungs may be a consequence). The repair process (which initially developed to protect mammalian lungs from foreign matter and antigens) may, however, cause further damage to the lungs (fibrosis for example) when activated by hazardous chemicals. Often, this results in an impairment of gas exchange the primary function of the lungs. Therefore prolonged exposure to respiratory irritants may cause sustained breathing difficulties.

Skin Irritant: Bare unprotected skin should not be exposed to this material. The material may accentuate any pre-existing dermatitis condition. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (non allergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Historically there may be inter-cellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

Chronic

Other:

Principal routes of exposure are usually by skin contact with the material, eye contact with the material and accidental ingestion.

A prompt response to all contact is imperative to minimize damage. Reaction to contact with broken skin is prompt and intense. Reaction to contact with intact skin apart from initial soapy feeling may be delayed, but unless removed quickly will result in burns, which may proceed to deep ulceration with scarring.

Carcinogen Category: No Data Available

12. Ecological Information

Acute Aquatic Toxicity	Not Applicable
Chronic Aquatic Toxicity	Not Applicable

Ecological Information for Sodium Hydroxide 46% Solution

Ecotoxicity Fish LC50 (96h): 43mg/l. Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. Environmental processes (such as oxidation and the presence of acids or bases) may transform insoluble metals to more soluble ionic forms. Microbiological processes may also transform insoluble metals to more soluble forms. Such ionic species may bind to dissolved ligands or sorb to solid particles in

aquatic or aqueous media. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms.

Persistence/Degradability Even though many metals show few toxic effects at physiological pHs, transformation may introduce new or magnified effects. A metal ion is considered infinitely persistent because it cannot degrade further. Persistence: Water/ Soil : LOW

Mobility When released to dry soil most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. Environmental processes may also be important in changing solubilities. Mobility : HIGH

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

Bioaccumulation Potential The current state of science does not allow for an unambiguous interpretation of various measures of bioaccumulation. The counter-ion may also create health and environmental concerns once isolated from the metal. Under normal physiological conditions the counter-ion may be essentially insoluble and may not be bioavailable. Environmental processes may enhance bioavailability. Bioaccumulation : LOW

Environmental Impact No Data Available

13. Disposal considerations

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

14. Transport Information

Considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

UN Number	1824
Proper shipping name or Technical Name	Sodium hydroxide solution
Transport hazard class	8
Packing Group	I
Environmental hazards for Transport Purposes	Not classified as having an acute aquatic toxicity.
UFAC Code	TANZ 9E9A
Special Precautions for user	None specified
Additional Information	None specified
Hazchem or Emergency Action Code	2R

15. Regulatory Information

No information in this section.

16. Other information

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