

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** CAUSTIC SODA - LIQUID (46%-50%)

**Other name(s):** Sodium hydroxide - liquid (46%-50%), Soda lye solution (46%-50%), Caustic soda solution (46%-50%), Sodium hydroxide solution (46%-50%), Liquid caustic soda (46%-50%), LCS 46%, Algane C46, Caustic Soda 50% low chlorate.

**Recommended Use of the Chemical and Restrictions on Use** Chemical manufacture; neutralising agent; pulp and paper, aluminium, detergent, and textile processing; vegetable oil refining; reclaiming rubber; etching and electroplating; food additive.

**Supplier:** Ixom Operations Pty Ltd (Incorporated in Australia)  
**NZBN:** 9429041465226  
**Street Address:** 166 Totara Street  
Mt Maunganui South  
New Zealand

**Telephone Number:** +64 9 368 2700  
**Facsimile:** +64 9 368 2710  
**Emergency Telephone:** 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

**SIGNAL WORD:** DANGER

**Subclasses:**

Subclass 6.1 Category D - Substances which are acutely toxic.  
Subclass 8.1 Category A - Substances that are corrosive to metals.  
Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.  
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.  
Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.

Approval Number: HSR001576



**Hazard Statement(s):**

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H313 May be harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H402 Harmful to aquatic life.

# Safety Data Sheet



## Precautionary Statement(s):

### Prevention:

P102 Keep out of reach of children.

P103 Read label before use.

P234 Keep only in original container.

P260 Do not breathe mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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 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 First Aid Measures on the Safety Data Sheet).

P363 Wash contaminated clothing before re-use.

P390 Absorb spillage to prevent material damage.

### Storage:

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

### Disposal:

P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Sodium hydroxide	1310-73-2	46-50%	H290 H314 H318 H335
Water	7732-18-5	50-54%	-

## 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

### Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

### Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

# Safety Data Sheet



## Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

## Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

## Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Material is strongly alkaline and corrosive. Can cause corneal burns. Aspiration of vomitus may cause lung injury. No known specific antidote.

## 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

### Unsuitable Extinguishing Media:

Water jet.

**Hazchem or Emergency Action Code:** 2R

### Specific hazards arising from the chemical:

Non-combustible material. Corrosive chemical.

### Special protective equipment and precautions for fire-fighters:

Not combustible, however following evaporation of aqueous component residual material can decompose if involved in a fire, emitting toxic fumes. Contact with metals may liberate hydrogen gas which is extremely flammable. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

### Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Work up wind or increase ventilation. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

### Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Caution - heat may be evolved on contact with water.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid skin and eye contact and breathing in vapour, mists and aerosols. When using do not eat, drink or smoke. Wash hands thoroughly after handling. Keep out of reach of children.

# Safety Data Sheet



**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated place. Store away from foodstuffs. Do not store in aluminium or galvanised containers nor use die-cast zinc or aluminium bungs; plastic bungs should be used. At temperatures greater than 40°C, tanks must be stress relieved. Do not store in zinc containers. Do not store in tin containers. Do not store in copper, copper alloys, brass, bronze. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Workplace Exposure Standards:** No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):

Sodium hydroxide: Ceiling 2 mg/m<sup>3</sup>

As published by the New Zealand Workplace Health & Safety Authority.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace 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.

### Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

### Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Product Name: CAUSTIC SODA - LIQUID (46%-50%)  
Substance No: 000031006701

Issued: 18/07/2019  
Version: 7

# Safety Data Sheet



<b>Physical state:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless
<b>Solubility:</b>	Miscible with water.
<b>Specific Gravity:</b>	1.48-1.52 @20°C
<b>Relative Vapour Density (air=1):</b>	Not available
<b>Vapour Pressure (20 °C):</b>	1.34 mm Hg (calculated)
<b>Flash Point (°C):</b>	Not applicable
<b>Flammability Limits (%):</b>	Not applicable
<b>Autoignition Temperature (°C):</b>	Not applicable
<b>Boiling Point/Range (°C):</b>	ca. 145 (literature)
<b>pH:</b>	14 (literature)
<b>Freezing Point/Range (°C):</b>	ca. 12 (calculated)

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Reacts violently with acids. Reacts exothermically on dilution with water.
<b>Chemical stability:</b>	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Absorbs carbon dioxide from the air.
<b>Possibility of hazardous reactions:</b>	Reacts with ammonium salts, evolving ammonia gas. Reacts readily with various reducing sugars (i.e. fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. Take precautions including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.
<b>Conditions to avoid:</b>	Avoid exposure to moisture. Avoid exposure to direct sunlight.
<b>Incompatible materials:</b>	Incompatible with acids , ammonium salts , aluminium , tin , zinc, brass .
<b>Hazardous decomposition products:</b>	None known.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>Ingestion:</b>	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
<b>Eye contact:</b>	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury. May cause blindness.
<b>Skin contact:</b>	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
<b>Inhalation:</b>	Breathing in mists or aerosols may produce respiratory irritation.
<b>Acute toxicity:</b>	No LD50 data available for the product. For the constituent Sodium hydroxide :
<b>Skin corrosion/irritation:</b>	Severe irritant (rabbit).
<b>Serious eye damage/irritation:</b>	Severe irritant (rabbit).

# Safety Data Sheet



**Respiratory or skin sensitisation:** No information available.

**Chronic effects:**

**Mutagenicity:** Negative (In vitro chromosomal aberration test)  
**Carcinogenicity:** Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).  
**Reproductive toxicity:** No information available.  
**Specific Target Organ Toxicity (STOT) - single exposure:** May cause respiratory irritation.  
**Specific Target Organ Toxicity (STOT) - repeated exposure:** No information available.  
**Aspiration hazard:** Not classified.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Avoid contaminating waterways.  
**Persistence/degradability:** Biodegradation is not an applicable endpoint since the product is an inorganic chemical.  
**Bioaccumulative potential:** No information available.  
**Mobility in soil:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:**  
Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

## 14. TRANSPORT INFORMATION

### Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.



**UN No:** 1824  
**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SODIUM HYDROXIDE SOLUTION  
**Hazchem or Emergency Action Code:** 2R

### Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN No:** 1824

*Product Name: CAUSTIC SODA - LIQUID (46%-50%)  
Substance No: 000031006701*

*Issued: 18/07/2019  
Version: 7*

# Safety Data Sheet



**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SODIUM HYDROXIDE SOLUTION

**IMDG EMS Fire:** F-A  
**IMDG EMS Spill:** S-B

**Marine Pollutant** No

## Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN No:** 1824  
**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SODIUM HYDROXIDE SOLUTION

## 15. REGULATORY INFORMATION

### **Classification:**

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

### **Subclasses:**

Subclass 6.1 Category D - Substances which are acutely toxic.

Subclass 8.1 Category A - Substances that are corrosive to metals.

Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.

Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.

Approval Number: HSR001576

### **Hazard Statement(s):**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H402 Harmful to aquatic life.

## 16. OTHER INFORMATION

Supplier Safety Data Sheet; 07/ 2016.

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2019.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

# Safety Data Sheet



## **Reason(s) for Issue:**

5 Yearly Revised Primary SDS  
Change in Hazardous Chemical Classification  
Change in First Aid Measures

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.