



Section 1: Identification of the Material and Supplier

Product Name: Commercial Liquid Alkali

Other Names: Aqueous solution of sodium and potassium hydroxide.

Proper shipping name (ADG Code): Caustic alkali liquid, n.o.s.
(contains sodium hydroxide, potassium hydroxide)

Recommended use: As a strong alkali.
Use as directed on the product label.

Supplier: Hunters Products (TAS) Pty. Ltd.,
A.C.N. 004 601 263

HEAD OFFICE

60 Gleadow Street,
INVERMAY TAS 7248
Tel: 03 6331 4755
Fax: 03 6334 1065

HOBART OFFICE

105 Albert Road,
MOONAH TAS 7009
Tel: 03 6228 7955
Fax: 03 6228 7988

BURNIE OFFICE

22 Pearl Street,
WIVENHOE TAS 7320
Tel: 03 6431 9627
Fax: 03 6432 2083

Emergency Phone Numbers:

Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia.

Dangerous goods.

Risk Phrases: R: 35 Causes severe burns.

Safety Phrases: S: 1/2 Keep locked up and out of the reach of children.
S: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S: 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S: 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 3: Composition/Information on Ingredients

Ingredients:

Sodium hydroxide	[1310-73-2]	10 - 30 %
Potassium hydroxide	[1310-58-3]	10 - 30 %
Other ingredients deemed not to be hazardous		< 10 %
Water	[7732-18-5]	to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: If swallowed, do NOT induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: 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.

Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

Mandatory: Eye wash. Hand wash basin.

Recommended: Emergency shower if handling industrial quantities.

Advice to Doctor:

Product is a strong aqueous solution of sodium and potassium hydroxide. Corrosive by all routes. Causes severe burns. Risk of serious eye damage. If swallowed, may cause holes in stomach and intestines; gastric lavage may be contraindicated. Contact Poisons Information Centre.

Aggravated medical conditions:

No data found.

Section 5: Fire Fighting Measures

HAZCHEM Code: 2 R

Evacuate: No.

Extinguishant: Water fog or fine water spray.

Risk of violent reaction or explosion: No.

Products of combustion: Water vapour, oxides of sodium and potassium, oxides of carbon.

Protective Equipment: Full protective clothing, including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Dilute.

For large spills:

Contain spillages with sand or earth. Transfer both liquid and solids to suitable container(s). Treat residues as for small spills.

For small spills:

If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise, absorb on inert absorbent and transfer to suitable closed container. Wash site of spillage thoroughly with water and detergent.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.
Avoid breathing aerosols.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a banded dangerous goods store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from acids and acidic materials, active metals, ammonium compounds, organic halides, wood and paper products. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Acids, acidic salts, aluminium, tin and zinc, ammonium compounds, flammable liquids, metal salts, nitro compounds, organic halides, wood and wood products.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Sodium hydroxide	2 mg/m ³
	Potassium hydroxide	2 mg/m ³
ES-STEL:	None assigned.	
ES-PEAK:	Sodium hydroxide	2 mg/m ³
	Potassium hydroxide	2 mg/m ³

Notations: None.

[Peak] indicates a ceiling concentration which should not be exceeded, even momentarily.

Biological Limit Values: No data found.

Engineering Controls:

Avoid using aluminium, tin, zinc, galvanised iron, wood or wood products as materials of construction.
Ensure adequate ventilation (same as outdoors) when using.
If handling industrial quantities, or if aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid breathing aerosols.
Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
Gloves, rubber or plastic.

Industrial Quantities:

Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: Clear, colourless, heavy liquid.
Odour: Practically odourless.
pH: 14 Very alkaline.
Vapour Pressure: No data.
Vapour Density: No data
Boiling Point: > 100 °C
Melting Point: No data.
Volatiles: > 50 % [water]
Volatile Organic Compounds (VOC): < 1 %
Evaporation Rate: No data.
Solubilities: Miscible with water in all proportions, with evolution of heat.
Specific Gravity/Density: About 1.4 g/mL @ 20 °C
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

Very alkaline solution. Will react violently with acids. Will absorb carbon dioxide from the air, forming carbonates. Corrosive to active metals such as aluminium, tin and zinc, generating hydrogen, a flammable gas. Contact with ammonium compounds may generate ammonia, a toxic gas. May form shock-sensitive salts with nitro compounds. May react with organic halides. Will attack wood and wood products. May attack glass on prolonged contact.

Section 10: Stability and Reactivity

- Chemical Stability:** Stable under normal conditions.
- Conditions to Avoid:** Incompatible materials.
- Incompatible Materials:** Acids, acid salts, active metals, ammonium compounds, flammable liquids, organic halides, metal salts, nitro compounds, wood and paper, glass.
- Hazardous Decomposition Products:** Oxides of sodium and potassium.
- Hazardous Reactions:** Reacts violently with acids.
Contact with active metals may generate hydrogen.
Contact with ammonium compounds may generate ammonia.
May form shock-sensitive products with nitro compounds.

Section 11: Toxicological Information

Health Effects:

No data available for the mixture. Information presented relates to individual ingredients.

- Acute:**
- Swallowed:** Corrosive. May cause severe burns to mouth, throat and gastrointestinal system. May cause a burning sensation and violent pain. May cause nausea, vomiting and diarrhoea (occasionally bloody), fall in blood pressure. May cause swelling of the larynx and subsequent suffocation. May cause holes in stomach and intestines. If not immediately fatal, may cause gastric constriction and scarring. The sites of such scarring have been associated with the later development of stomach cancer.
 - Skin:** Corrosive, causes severe burns. Mists and vapours may cause small burns.
 - Eyes:** Corrosive. Contact with eyes may cause redness, pain, blurred vision, and severe deep burns, with permanent impairment of sight.
 - Inhaled:** Aerosols inhaled will be irritating to the respiratory system. Over-exposure may cause coughing, a burning sensation, laboured breathing, sneezing, sore throat and runny nose. May cause pulmonary oedema (fluid build-up in the lungs). Onset of symptoms may be delayed.

Chronic: Repeated, light exposure to skin may cause dermatitis and burns.

LD₅₀ : Sodium hydroxide No data found.
Potassium hydroxide 273 mg/kg oral, rat.

LDLo: Sodium hydroxide 1.57 mg/kg oral, human -
anorexia, body temperature increase,
primary irritation, death.

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic organisms.

Persistence and degradability: No data.

Mobility: Readily transported by water.

Environmental Fate: No data.

Bioaccumulative potential: No data.

Other adverse environmental effects: No data.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:
Avoid disposal to natural waters or the environment.

Special precautions for landfill or incineration:
Unsuitable for incineration.
Do not use containers made of aluminium, tin, zinc, galvanised iron or glass.

Section 14: Transport Information

UN Number: UN 1719

UN Proper shipping name: Caustic alkali liquid, n.o.s.
(sodium hydroxide, potassium hydroxide)

Class and subsidiary risk: 8 Corrosive.

Packaging group: II

Special precautions for user: Do not store or transport with dangerous goods of classes 1, 4.3, 5.1, 5.2, 7, 8 (acidic), foodstuff and foodstuff empties.

HAZCHEM Code: 2 R

Material for export: Regulated.
Refer to **IMO/IMDG** and **IATA/ICAO**.

Section 15: Regulatory Information

Poisons (SUSDP): Schedule 6
Sodium hydroxide > 5 %
Potassium hydroxide > 5 %

Dangerous Goods: Yes. UN 1719 8/II 2 R.

Carcinogen:	Australia	IARC	NTP	RTECS
	No.	No.	No.	No.

Agricultural and Veterinary Chemicals Act: Not applicable.

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other information

Date of MSDS preparation: September 2007

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany,
(*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer (France).
NPT - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.

Literature references:

Other Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.

