

MATERIAL SAFETY DATA SHEET

Section 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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BRAND NAME – AUTOMATIC DISHWASHING LIQUID
TRADE NAME – AUTOMATIC DISHWASHING LIQUID

SHIPPING NAME (section 14) CAUSTIC ALKALI LIQUID NOS
(POTASSIUM HYDROXIDE)

USE – LIQUID DETERGENT USED IN COMMERCIAL DISHWASHING MACHINES

RESTRICTIONS – KEEP AWAY FROM ACIDS , ORGANIC MATERIALS AND ALUMINIUM

Section 2 HAZARDS CLASSIFICATION / IDENTIFICATION

CLASSIFIED AS : **HAZARDOUS – According to the criteria of NOHSC and Classified as a Dangerous Good according to the ADG Code.**

UN NUMBER : 1719

Emergency Overview – Corrosive Toxic. Harmful if inhaled. May be fatal if swallowed. Oxidizer. May cause methemoglobinemia. Causes eye and skin burns. Causes digestive and respiratory tract burns.

Potential Health Effects .

Inhalation – Severe irritant. Harmful if inhaled. May cause severe irritation of the respiratory tract with sore throat , coughing , shortness of breathe and delayed lung odema . Causes chemical burns to the respiratory tract . Severe pneumonitis may occur.

Ingestion – Corrosive ! Swallowing may cause severe burns of mouth , throat and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding , vomiting , diarrhoea , fall in blood pressure. Damage may appear days after exposure. Overexposure may cause methemoglobinemia .

SECTION 2 HAZARD CLASSIFICATION / IDENTIFICATION

Skin Contact – Corrosive ! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Eye Contact – Corrosive ! Causes irritation of eyes with greater exposure it can cause burns that may result in permanent impairment of vision, even blindness..

Chronic Exposure – Prolonged contact with diluted solutions has a destructive effect upon tissue. May cause methemoglobinemia .

Aggravation of Pre existing Conditions – Persons with pre existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of this substance.

RISK PHRASES :

- R22** – Harmful if swallowed.
- R35** – Causes severe burns.
- R36/38** – Irritating to eyes and skin.

SAFETY PHRASES:

- S1/2** – Keep locked up and out of reach of children.
- S24/25** – Avoid contact with skin and eyes.
- S26** – In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
- S37/39** – Wear suitable gloves and eye/face protection.
- S45** – In case of accident or if you feel unwell seek medical advice immediately (show label whenever possible)
- S50** – Do not mix with acids.

Section 3 COMPOSITION / INFORMATION OF INGREDIENTS

Chemical Entity:	CAS No:	Proportion (% mass)
Potassium Hydroxide	1310-58-3	10 – 30 %
Sodium hypochlorite	7681-52-9	<10

Section 4 FIRST AID MEASURES

Inhalation – Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen . Call a physician.

Ingestion – DO NOT INDUCE VOMITING. Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact – Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician immediately. Wash clothing before re use.

Eye Contact – Immediately flush eyes with plenty of water for at least 15 minutes, lifting the lower and upper eye lids occasionally. Get medical attention immediately.

Notes to Physician – Perform endoscopy in all areas of suspected potassium hydroxide ingestion. In case of severe oesophageal corrosion the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange , acid base balance , electrolytes and fluid intake are also required.

First Aid Facilities: **Ensure an eye bath and safety shower are available and ready for use.**

Section 5

FIRE FIGHTING MEASURES

Fire – Not considered to be a fire hazard. Can react with certain metals such as aluminium to generate flammable hydrogen gas.

Explosion – Contact with combustible materials may cause an explosion.

Fire Extinguishing Media – Use any means suitable for extinguishing surrounding fire. Adding water to caustic solutions generates large amounts of heat.

Special Information – In the event of fire wear full protective clothing and AS1715/1716 approved self contained breathing apparatus with full face piece operated in the pressure demand or other pressure mode.

HAZCHEM CODE 2R

Section 6

ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill – Keep unnecessary and unprotected people away from area of spill.

Wear appropriate personal protective equipment as specified in section 8.

Spills – Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with diluted acid such as acetic, hydrochloric or sulfuric. Residues should be treated with diluted sodium thiosulphate solutions. Absorb neutralized caustic residue on clay, vermiculite or other inert substances and package in a suitable container for disposal.

Section 7

HANDLING AND STORAGE

Store in a cool dry area.

Prevent possible eye and skin contact by wearing protective clothing and equipment.

Storage tanks must be vented and diked. Store drums of products separate from Acids and metals. Provide adequate drainage.

Other Precautions – Potassium hydroxide reacts with reducing sugars as fructose, lactose, maltose, galactose, laevulose and arabinose to form carbon monoxide. While the potential for worker exposure to carbon monoxide may be small a potential does exist during cleaning of certain dairy and possibly other industry equipment. Carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures.

Special Mixing and Handling Instruction – If added to acids a rapid temperature increase can result in dangerous boiling and / or spattering or may cause an immediate violent eruption.

Section 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

NOHSC exposure standards for atmospheric contaminants – Potassium Hydroxide TWA 5 mg/m³ STEL Peak Limitation

Respiratory Protection – Good industrial hygiene practices recommend that engineering controls be used to reduce environment concentrations to the permissible exposure level. If the use of respirators is necessary the only respirators permitted are those that have been approved by the NOHSC (AS 1715/1716)

Ventilation : Ventilation is not usually required for potassium hydroxide solutions. Avoid creation of mist or spray. If present wear appropriate safety clothing and provide local exhaust system. Where carbon monoxide may be generated special ventilation may be required.

Protective Clothing – Employees should be provided with and required to use impervious clothing , gloves , face shield , (eight inch minimum) and other appropriate protective clothing necessary to prevent any possibility of skin contact with solutions of potassium hydroxide. Material suggested for use are natural rubber , butyl rubber , neoprene or vinyl.

Eye Protection - Employees should be provided with and required to use dust and splash proof safety goggles where there is any possibility of potassium hydroxide contacting the eyes. Contact lenses should not be worn when using this chemical.

Other Protective Clothing or Equipment – Eye wash stations and safety shower must be available in the immediate work area for emergency use.

Work / Hygiene Practices – Avoid contact with skin avoid breathing dust or mist. Do not eat , drink or smoke in work area. Wash hands before eating drinking or using toilet facilities.

Section 9 PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE – Yellowish liquid

ODOUR - Alkaline

PH 13.7 approx

VAPOUR PRESSURE – No data

BOILING POINT °C - 100

VAPOUR DENSITY – No data

FREEZING POINT °C – no data

SOLUBILITY - Complete

SPECIFIC GRAVITY – 1.24

ADDITIONAL INFORMATION

Section 10 STABILITY & REACTIVITY

Stability – Stable – Hazardous Polymerization – Will not occur

Conditions to Avoid - Overheating in storage accelerates corrosion.

Materials to Avoid – Contact with water , acids , flammable liquids and organic halogen compounds, especially trichloroethylene may cause fire and explosion. Contact with metals such as aluminum , tin , and Zinc and alloys containing these metals cause formation of flammable hydrogen gas. Contact with nitromethane and other similar nitro compounds cause formation of shock sensitive salts.

Hazardous Decompositions Products – None

Section 11 TOXICOLOGICAL INFORMATION

Potassium Hydroxide is a strong alkali – the mist, dust and solutions cause severe injury to the eyes, mucous membranes and skin. Although inhalation is usually of secondary importance in industrial exposures the effects from the dust or mist will vary from mild irritation of the nose at 2mg/m³ to severe pneumonitis, depending on the severity of exposure. The greatest industrial hazard is rapid tissue destruction of eyes of skin upon contact with either the solid or with concentrated solutions. Contact with eyes causes disintegration and sloughing of conjunctival and corneal epithelium corneal opacification marked oedema and ulcerations after 7 to 13 days either gradual recovery begins or there is progression of ulceration and corneal opacification. Complication of severe eye burns are symblepharon (adhesion of the lid to the eyeball) with overgrowth of the cornea by a vascularized membrane, progressive or recurrent cornea ulceration and permanent corneal opacification. On the skin solutions of 25 to 50 % cause the sensation of irritation within 3 minutes; with solutions of 4 % this does not occur until after several hours. If not removed from the skin, severe burns with deep ulcerations will occur, exposure to the dust or mist may cause multiple small burns with temporary loss of hair. Ingestion produces severe pain in the oesophagus and stomach corrosive of the lips, mouth, tongue and pharynx and the vomiting of large pieces of mucosa; causes of squamous cell carcinoma of the oesophagus have occurred with latent periods of 12 – 42 years after ingestion; these cancers may have been sequelae of tissue destruction and possibly scar formation rather than from a direct carcinogenic action of Potassium hydroxide itself.

Section 12 ECOLOGICAL INFORMATION

No Information

Section 13 DISPOSAL CONSIDERATIONS

Dispose in approved chemical disposal area or in a manner which complies with all local state and federal regulations. Do not flush to sewer.

Section 14 TRANSPORT INFORMATION

UN NUMBER : 1719

**UN PROPER SHIPPING NAME : Caustic Alkali Liquid NOS
(Potassium Hydroxide)**

CLASS: 8

PACKING GROUP: 11

HAZCHEM CODE: 2R

Section 15 REGULATORY INFORMATION

POISONS SCHEDULE (SUSDP) Labelling – Schedule : S6 – Requires child proof lid – all volumes. Safety Directions : Corrosive. May produce severe burns. Attacks skin and eyes. Wear eye protection when mixing or using. Do not mix with hot water.

First Aid Instructions : For advice contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once . If swallowed do not induce vomiting. If in eyes hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the poisons centre or a doctor or for at least 15 minutes. If skin or hair contact occurs remove contaminated clothing and flush skin and hair with running water.

NOHSC Labelling : C – Corrosive , R22 Harmful if swallowed , R35 Causes severe burns, R36/38 Irritating to eyes and skin , S1/2 Keep locked up and out of reach of children, S24 /25 Avoid contact with skin and eyes, S26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice , S37/39 Wear suitable gloves and eye/face protection. S45 In case of accident or you feel unwell seek medical advice immediately. (Show label whenever possible) S50 Do not mix with acids.

Section 16	OTHER INFORMATION
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Carcinogenicity Lists (Potassium Hydroxide) : No ; NTP : No ; IARC Monograph : No ; OSHA Regulated: Yes

DATE OF LAST REVISION OF MATERIAL SAFETY DATA SHEET :

23 RD April 2008

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AUTHORISATION FOR ISSUE	_____	DATE
____/____/____	Les Buss	

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