

MATERIAL SAFETY DATA SHEET

CLASSIFICATION OF MATERIAL:

Hazardous under Worksafe Australia Guidelines / NOHSC and Dangerous According to the ADG Code.

COMPANY DETAILS

COMPANY	Delshine Chemicals
ABN NUMBER	78 805 588 343
ADDRESS	Unit 1/30 Prindiville Drive, Wangara
TELEPHONE NUMBER	(08) 9309 4222
EMERGENCY TELEPHONE NUMBER	041 992 7281

IDENTIFICATION

Product Name: Liquid Caustic 50 %

Other Names: Sodium Hydroxide / Soda Lye
Shipping Names: Sodium Hydroxide Solution

UN Number:	1824	
Hazchem Code:	2R	Packaging Group: 11
Dangerous Goods Class:	8	
Sub Risk:	56	
Poisons Schedule:	S6	
Use:	Cleaning of cast steel hot plates, neutralizing acids etc	

PHYSICAL DESCRIPTION / PROPERTIES

Appearance: Grey odourless syrupy liquid.

Boiling Point (°C): 140-148 Melting Point: 12°C

Specific Gravity Kg/Lt: (20°) 1.5

Vapour Pressure
(Pa or mm of Hg at 25°C): 1.5

Physical Description/Properties cont.

Flashpoint (°C): Not available.
Flammability Limits (%): Not applicable
Solubility in Water (g/L): Miscible PH: 14
Other properties: Not applicable

INGREDIENTS

Chemical Entity:	CAS No:	Proportion (% mass)
Sodium Hydroxide	1310-73-2	50%
Water	7732-18-5	50%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

Swallowed: Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain, convulsions, chemical burns, loss of consciousness and possible death.

Eye: A severe eye irritant. Contamination of the eyes can result in permanent injury. Corrosive to eyes; contact can cause corneal burns .Always wear protective glasse's.

Skin: Contact with skin will result in severe burns. Corrosive to skin – may cause skin burns. Skin contact often does not cause pain, thus care should be taken to avoid contaminating gloves and boots.

Inhaled: Inhalation will result in respiratory irritation and burns depending on the severity of the exposure.

Chronic: The severity of acute effects is such that significant repeated or prolonged exposure is likely .

FIRST AID

Swallowed: Immediately rinse mouth out with water. Give water to drink. Do not induce vomiting. Seek immediate medical attention.

Eye: Immediately irrigate with copious amounts of water for at least 15 minutes. Eyelids to be held open. Seek urgent medical attention. Transport to doctor or hospital.

First Aid Cont.

Skin: Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or irritation occurs seek medical advice. For skin burns, immediately flood burnt area with plenty of water and cover with a clean, dry dressing. Seek urgent medical attention.

Inhaled: Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen all remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible, either on site or at the nearest hospital if breathing is difficult give oxygen.

Advice to Doctor: Treat symptomatically and as for a strongly alkaline material.

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

PRECAUTIONS FOR USE

- Exposure Standards** (TWA) is the time-weighted average airborne concentration over an 8 hr working day, for a 5 day working week over an entire life. According to current knowledge this concentration should neither impair the health nor. Cause undue discomfort to nearly all workers.
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.
These 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 exposure standards should be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
- Engineering Controls:** Ensure ventilation is adequate to maintain air concentrations below exposure standards. Avoid generating and inhaling dusts. Use with local exhaust ventilation or while wearing dust respirator/mask. Keep containers closed when not in use.
- Other Precautions :** Sodium Hydroxide reacts with reducing sugars such 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 for certain dairy and possibly other industry equipment.

PRECAUTIONS FOR USE

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

Instructions : If added to acids a rapid temperature increase can result in dangerous boiling and / or spattering or may cause an immediate violent eruption.

PERSONAL PROTECTION

Eye: Chemical safety goggles or face shield. Do not wear contact lenses.

Hand: Impervious gloves (long).

Respirator Type: Dust respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Protective Clothing: Impervious clothing , gloves and face shield minimum 8 inch.

SAFE HANDLING INFORMATION

Storage: Store away from acids, aluminum, zinc, lead, tin and their alloys. Do not store in aluminum or galvanised containers. Keep dry. Reacts exothermically with water. Heat evolved may cause boiling and spattering. Keep containers closed at all times, check regularly for spills.

Transport: Classified as a dangerous goods by the criteria of the Australian Dangerous Goods code (ADG code) for transport by road or rail.
Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactivity substances (Class7), strong acids of Class 8, foodstuff or foodstuff empties, however exemptions may apply.

Incompatibilities: Reacts with acids and other materials.

Spills: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and inhalation of dust. Sweep up, but avoid generating dust. Collect and seal in drums for disposal. Wash area down with large quantities of water. Caution – heat may be evolved cover area with sodium bicarbonate.

Disposal: Refer to State/Territory land waste management authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.

Flammability: Non combustible.

Fire/Explosion Hazard: Non combustible. Can react with some metals generating flammable hydrogen gas. Contact with some organic chemicals can produce violent or explosive conditions. Reaction with some moisture may produce sufficient heat to ignite combustible material (1).

Acceptable Extinguishing

Methods: Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Section X –

Stability and Reactivity Stability : Stable

Materials to Avoid

Contact with water, acids, flammable liquids, and organic halogen compounds especially trichloroethylene, may cause fires and explosions. Contact with metals such as aluminium , tin , zinc and alloys containing these metals causes formation of flammable hydrogen gas.
Hazardous Decomposition Products – None

Section X1 – Toxicological information :

Sodium Hydroxide - Oral Rabbit, adult LDLo : 500mg/kg. IPR-MUS LD50 40mg kg Irritation data: Eye (Monkey) 1%24h severe .Skin (Rabbit) 500mg/24h severe Eye (Rabbit) 1% severe. Not an NTP or IARC carcinogen.

Sodium 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 dust or mist will vary from mild irritations 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 or skin upon contact with either the solid or with concentrated solutions. Contact with the eyes causes disintegration and sloughing of conjunctival and corneal epithelium corneal opacification marked oedema and ulceration after 7 to 13 days either gradual recovery begins or there is progression of ulceration and corneal opacification.

Complications of severe eyes burns are symblepharon (adhesion of the lid to the eyeball) with overgrowth of the cornea by a permanent corneal opacification. On the skin solutions of 25 – 50 % cause the sensation of irritation within about 3 minutes with the 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 the oesophagus and stomach corrosion of the lips, mouth, tongue and pharynx and the vomiting of large pieces of mucosa case 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 sodium hydroxide itself.

SAFE HANDLING INFORMATION

Section XII – Ecological Information –

High ph . Alkalinity of undiluted or unneutralised material (ph>8.5 is harmful to aquatic life.

Section XIII – Disposal Considerations -

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

Section XIV – Transport Information –

Australian DG Propper Shipping Name – Sodium Hydroxide Solution UN 1824 Class 8 Hazchem 2R
Packing group II

Section XV Regulatory Information -

Australian Inventory of Chemicals Substance all ingredients present on AICS

NOHSC Labelling – C Corrosive R35 causes severe burns S1 / 2 Keep locked up and out of reach of children 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.

OTHER INFORMATION

Hazard Classification

C Corrosive

Risk Phrases

R35 Causes severe burns.

R41 Risk of serious damage to eyes.

Safety Phrases

S1 / 2 Keep locked up and out of reach of children

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 Wear suitable gloves.

S39 Wear eye/face protection

S45 In case of accident or if you fell unwell seek medical advice immediately. Show label when ever possible

CONTACT POINT – Les Buss – TELEPHONE (08) 9309 4222

AUTHORISATION FOR ISSUE

Les Buss

DATE

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