



CONSOLIDATED CHEMICAL CO.

Material Safety Data Sheet

CS: 1.4.21

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Infosafe No™ 7C00N	Issue Date :April 2006	-ISSUED by CONSCHEM	CS: 1.4.21
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Product Name **CAUSTIC SODA LIQUID**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name CAUSTIC SODA LIQUID

Product Code 2640,7350, 7592, 11003

Product Use Chemical reagent, neutralising solution.

Company Name CONSOLIDATED CHEMICAL CO (ABN 34 527 060 773)

Address 52-62 WATERVIEW CLOSE DANDENONG SOUTH
VICTORIA 3175

Telephone Tel: 03/9799 7555

Number/Fax Fax: 03/9799 7666

Other Names

Name

Product Code

Sodium hydroxide - liquid

Caustic soda solution

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Liquid

Characterization

Information on Composition All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
Water	7732-18-5	50-55 %		
Sodium hydroxide	1310-73-2	45-50 %	C	R35

Synonyms

Sodium Hydroxide Solution, Liquid Caustic Soda (45%-50%), Caustic soda Solution (45%-50%), Soda Iye solution 45%-50%.

3. HAZARDS IDENTIFICATION

C Corrosive

Route(s) of Entry R35: Causes severe burns.

R41: Risk of serious damage to eyes.

Chronic Effects

Chronic effects are likely due to the severity of acute effects.

Inhalation

Inhalation of mist of the solution will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema. Inhalation of mists at elevated temperatures will increase these symptoms.

Ingestion

Ingestion can result in pain, nausea, vomiting, swelling of the larynx and subsequent suffocation, perforation of the gastrointestinal tract, cardiovascular collapse and coma.

Skin

Contact with skin will result in servere irritation. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Corrosive to the skin - may cause skin burns. Skin contact often does not cause pain, thus care should be taken to avoid contamination of gloves and boots.

Eye

A severe eye irritant. Contamination of the eyes can result in permanent injury. Corrosive to the eyes; contact can cause conjunctivitis, corneal burns and ulceration. This can result in permanent injury and possible loss of sight.

Other Information

Short term exposure by all routes is considered to be harmful. Can kill if swallowed.

4. FIRST AID MEASURES

Inhalation

Remove victim from exposure - avoid becoming a casualty. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible,



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Ingestion	either on site or at the nearest hospital. Immediately thoroughly rinse mouth with water. Give water to drink. DO NOT induce vomiting. If vomiting occurs, place victim's face downwards, head lower than hips to prevent vomit entering lungs. Seek immediate medical assistance.
Skin	Immediately wash contaminated skin with plenty of water for at least 15 minutes. 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 immediate medical advice.
Eye	Immediately irrigate with copious quantities of water for at least 15 mins. Eyelids to be held open. Remove clothing if contaminated and wash contaminated skin. Urgently seek medical assistance. Transport to hospital or medical centre. Continue washing during transport if possible.
First Aid Facilities	An eye wash fountain, safety shower and a general washing facility should be available immediately adjacent to the work area.
Advice to Doctor	Treat symptomatically and as for strongly alkaline corrosive materials.
Other Information	Poison Information Centre Phone 13 11 26 Australia Wide can provide additional assistance for scheduled poisons.

5. FIRE FIGHTING MEASURES

Extinguishing Media	As in any fire, wear an approved self-contained breathing apparatus in pressure-demand, and full protective gear. Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).
Specific Hazards	Not combustible, however reaction with metals will produce flammable hydrogen gas, which will burn if ignited.
Decomposition Temp.	Not available
Flash Point	Not applicable
Ignition Temperature	Not applicable
Flammable Limits	Not applicable
LEL	
Flammability	Non combustible material.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal	SPILLS: Slippery when spilt. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination. Contain using sand and earth - prevent runoff into drains and waterways. Use absorbent (soil or sand, inert material, vermiculite). Collect and seal in properly labelled containers for disposal. Wash area down with excess water. Caution - heat may be evolved.
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7. HANDLING AND STORAGE

Handling	SPECIAL MIXING AND HANDLING INSTRUCTIONS: Products can react violently with water. Considerable heat is generated when product is mixed with water. Therefore, when making solutions always carefully follow these steps. Always wear all protective clothing. Never add water to product. Always add product - with constant stirring - slowly to surface to lukewarm (25-35 Deg C) water, to assure product is being completely dissolved as it is needed. If product is added too rapidly, or without stirring, and becomes concentrated at bottom of mixing vessel, excessive heat may be generated, resulting in Dangerous boiling and spattering, and a possible immediate and violent eruption of highly caustic solution.
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NOTE: Never add more product than can be absorbed by solution while maintaining temperature below 35 Deg C (@ sea level) to prevent boiling and spattering.

Product can react explosively with acids, aldehydes, and many other organic chemicals - when mixing product with solutions containing such chemicals, follow all of above mixing instructions, and add product very gradually, while stirring constantly.

Always empty and clean containers of all residues before adding product, to avoid possible explosive reaction between product and unknown residue. Returnable containers should be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state and local regulations. All residual caustic soda should be removed from containers prior to disposal.

Storage

UN NO: 1824 PACKAGING GROUP: 2 Classified as an 8 (CORROSIVE) Dangerous Substance for the purpose of transport. Refer to relevant regulations for storage and transport requirements. Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5), radioactive substances (Class 7), or foodstuff and foodstuff empties. This material is a Scheduled Poison (S6) and must be stored, maintained and used in accordance with the relevant regulations. Store in a cool place and out of direct sunlight. Store away from acids, other oxidising agents and foodstuffs. Do not store in aluminium or galvanised containers or use die-cast zinc or aluminium bungs. Steel bungs should be used. Reacts exothermically on dilution with water. Keep containers closed at all times.- check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Sodium hydroxide			2		Peak limitation
Other Exposure Information	No value assigned for this specific material by the National Occupational Health and Safety Commission (Worksafe Australia). Exposure Standard for constituent: TWA NOTICES CARCINOGEN CATEGORY Sodium hydroxide 2 mg/m3 Peak Limitation - - As published by the National Occupational Health and Safety Commission (Worksafe Australia). 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. Exposure Standard (TWA) is the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers. This Exposure Standard is a guide to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. This Exposure Standard should not be used as a fine dividing line between safe and dangerous concentrations of the chemical. It is not a measure of relative toxicity.					
Respiratory Protection	Respirator meeting the requirements of AS 1715 and AS 1716.					
Eye Protection	Safety glasses, goggles or faceshield as appropriate.					
Hand Protection	Neoprene or nitrile rubber gloves.					
Personal Protective Equipment	O/ALLS, RUBBER BOOTS, FACE SHIELD, GLOVES(L), APRON Avoid all contact. Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots (leather is attacked). Available information suggests that gloves made from nitrile, neoprene, or natural rubber should be suitable for intermittent					



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contact. However, due to variations in glove construction and local conditions, a final assessment should be made by the user. Use with adequate ventilation. Avoid generating and inhaling mists and aerosols. If risk of inhalation of spray mists exists, wear respirator meeting the requirements of AS 1715 and AS 1716.

Footwear

Rubber boots.

Body Protection

Overalls, splash apron.

Eng. Controls

Use local exhaust ventilation where dust mist or spray may be generated. Maintain air concentrations below recommended Exposure Standards. Avoid generating and inhaling mists and aerosols. Keep containers closed when not in use.

Hygiene Measures

Wash hands before eating, drinking, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Water white to slightly coloured liquid.
Decomposition Temperature	Not available
Melting Point	12 C
Boiling Point	140 C
Solubility in Water	Miscible with water with evolution of considerable heat.
Specific Gravity (H₂O=1)	(20 C) 1.48 - 1.52
pH Value	(1% solution): 12.7 (7.5% SOLUTION) 14.0
Vapour Pressure	13%, mm Hg @ 60 Deg C
Vapour Density (Air=1)	(air=1) Not applicable
Viscosity	Not available.
Volatile Component	50 - 54 % water
Flash Point	Not applicable
Flammability	Non combustible material.
Ignition Temperature	Not applicable
Flammable Limits LEL	Not applicable

10. STABILITY AND REACTIVITY

Stability	Corrosive to aluminium, zinc ant time, liberating flammable hydrogen gas. Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas. Absorbs carbon dioxide from air. Reacts exothermically on dilution with water.
Hazardous Reaction	Corrosive to aluminium, zinc, and tin, liberating flammable hydrogen gas. Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas. OTHER PROPERTIES: Absorbs carbon dioxide from the air. Reacts exothermically upon dilution with water. SEE SPECIAL MIXING AND HANDLING INSTRUCTIONS.

11. TOXICOLOGICAL INFORMATION



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Toxicology Information No adverse health effects expected if the product is handled in accordance with the Safety Data sheet and the product label. Symptoms of effects that may arise if the product is mishandled are overexposed occurs are:

Inhalation Inhalation of mist of the solution will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema. Inhalation of mists at elevated temperatures will increase these symptoms.

Ingestion Ingestion can result in pain, nausea, vomiting, swelling of the larynx and subsequent suffocation, perforation of the gastrointestinal tract, cardiovascular collapse and coma.

Skin Contact with skin will result in severe irritation. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Corrosive to the skin - may cause skin burns. Skin contact often does not cause pain, thus care should be taken to avoid contamination of gloves and boots.

Eye A severe eye irritant. Contamination of the eyes can result in permanent injury. Corrosive to the eyes; contact can cause conjunctivitis, corneal burns and ulceration. This can result in permanent injury and possible loss of sight.

Chronic Effects Chronic effects are likely due to the severity of acute effects.

Other Information Acute Toxicity/Chronic Toxicity;
No LD50 data available for product, however, for the component solid sodium hydroxide;
Intraperitoneal LD50 (mouse): 40 mg/kg
Oral Lowest Lethal Dose (rabbit): 500 mg/kg
SKIN (rabbit): severe irritation 500mg/24H
EYES (rabbit): severe irritation 1 mg/30 sec rinse
Highly corrosive to any tissue with which it comes into contact.
Produces burns, deep ulceration and gelatinous necrotic areas at the site of contact. Low systemic toxicity.
Meets Standard of Food Chemicals Codes (Third Edition) (2)

12. ECOLOGICAL INFORMATION

Information on Ecological Effects Avoid contaminating waterways.

Other Precautions Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and protective equipment before storing or re-using.

13. DISPOSAL CONSIDERATIONS

Waste Disposal DISPOSAL: Refer to State Land Waste Management Authority. Empty containers must be decontaminated. Can be greatly diluted or carefully neutralised with dilute hydrochloric or sulphuric acid, and flushed to drain with copious amounts of water. Alternatively, normally suitable for disposal at approved land waste site.

14. TRANSPORT INFORMATION

U.N. Number 1824

Proper Shipping Name SODIUM HYDROXIDE SOLUTION

DG Class 8

Hazchem Code 2R

Packaging Method 3.8.8RT8

Packing Group II

EPG Number 8A1



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IERG Number 37

15. REGULATORY INFORMATION

Risk Phrase R35 Causes severe burns.
R41 Risk of serious damage to eyes.

Safety Phrase S2 Keep 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.

Poisons Schedule S6

Hazard Category Corrosive

16. OTHER INFORMATION

Contact Person/Point Mr. David Broberg
Technical Regulations Manager
TELEPHONE (03) 9799.7555
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Poisons Schedule S6

Hazard Category Corrosive

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