1. IDENTIFICATION

Product Name	**Caustic Soda Liquid**
Other Names	Caustic Soda Solution; Soda Lye Solution (10-50%); SODIUM HYDROXIDE (Na(OH)); Sodium Hydroxide (Na(OH)) 10.0 - 50.0% Solution
Uses	Used to neutralize acids, make sodium salts and to hydrolize fats to form soaps. To treat cellulose in making viscose rayon and cellophane. To precipitate alkaloids and most metals from water solutions of their salts. Gold mining a pH adjuster. Industrial cleaning applications in sugar industry.
Chemical Family	No Data Available
Chemical Formula	NaOH
Chemical Name	Caustic Soda Liquid
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	No. 8, Block G, Ground Floor, Taipan 2 Jalan PJU 1A/3 Ara Damansara 47301, Petaling Jaya, Selangor, Malaysia	+60-3-7843-6833

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) 6

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories			Corrosive to Metals - Category 1 Skin Corrosion/Irritation - Category 1A Serious Eye Damage/Irritation - Category 1
Pictograms			
Signal Word			Danger
Hazard Statements		**H290**	May be corrosive to metals.
		H314	Causes severe skin burns and eye damage.
Precautionary Statements	Prevention	**P234**	Keep only in original container.
		P264	Wash hands thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
		P260	Do not breathe fume/gas/mist/vapours/spray.
		P280	Wear protective gloves/protective clothing/eye protection.
	Response	**P390**	Absorb spillage to prevent material damage.
		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.
		P363	Wash contaminated clothing before reuse.
		P304 + P340	IF INHALED: Remove victim 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.
	Storage	**P405**	Store locked up.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	**6.1D**	Substances that are acutely toxic - Harmful
		6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
		8.1A	Substances that are corrosive to metals
		8.2B	Substances that are corrosive to dermal tissue UN PGII
		8.3A	Substances that are corrosive to ocular tissue
	Environmental Hazards	**9.1D**	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Water	No Data Available	7732-18-5	50.0 - 90 %
Sodium Hydroxide	No Data Available	1310-73-2	10 - 50.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

DO NOT delay. For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.

Eye

DO NOT delay. Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Eye injuries require saline.

Skin

DO NOT delay. Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital or doctor without delay.

Inhaled

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital or doctor without delay.

Advice to Doctor

For acute or short-term repeated exposures to highly alkaline materials:
Respiratory stress is uncommon but present occasionally because of soft tissue oedema.
Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary. Oxygen is given as indicated. The presence of shock suggests perforation and mandates an intravenous line and fluid administration. Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue. Alkalis continue to cause damage after exposure.
INGESTION:
Milk and water are the preferred diluents. No more than 2 glasses of water should be given to an adult.
Neutralizing agents should never be given since exothermic heat reaction may compound injury.
Catharsis and emesis are absolutely contra-indicated. Activated charcoal does not absorb alkali. Gastric lavage should not be used.
Supportive care involves the following: Withhold oral feedings initially.
If endoscopy confirms transmucosal injury starts steroids only within the first 48 hours.
Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

Medical Conditions Aggravated by Exposure

The material may accentuate any pre-existing dermatitis condition.

5. FIRE FIGHTING MEASURES

General Measures

If safe to do so, remove containers from the path of fire. When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.
evacuation by 800 metres in all directions.

Flammability Conditions

Not considered to be a significant fire risk.

Extinguishing Media

In case of fire, appropriate extinguishing media include Water spray or fog, Foam, Dry chemical powder, Carbon dioxide.

Fire and Explosion Hazard

Non combustible liquid.

Hazardous Products of Combustion

Reacts with aluminium/ zinc producing flammable, explosive hydrogen gas. Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas. Reacts exothermically on dilution with water. Other combustion products include: caustic compounds.

Special Fire Fighting Instructions	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Please note: Structural fire fighters uniform will provide limited protection.
Flash Point	Non Flammable
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	2R

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Isolate the danger area. Use clean, non-sparking tools and equipment. Shut off all possible sources if ignition.
Clean Up Procedures	Minor spills : Contain and absorb spill with sand, earth, inert material or vermiculite. Place spilled material in clean, dry, sealable, labelled container. Major spills : Alert Fire Brigade and tell them location and nature of hazard. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers fro recycling. Neutralize/ decontaminate residue. Collect solid residues and seal in labelled drums for disposal.
Containment	Stop leak if safe to do so.
Decontamination	Wash area and prevent run off into drains.
Environmental Precautionary Measures	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Evacuation Criteria	When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. Discard contaminated shoes. Keep away from combustible material. Empty containers pose a fire risk, evaporate residue under a fume hood. Chemicals should be used only by those trained in handling potentially hazardous materials.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Protect from direct sunlight. Store away from foodstuffs. Do not store in aluminium or galvanized 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. Keep containers closed when not in use. This product has a UN classification of 1824 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous goods By Road and Rail.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. DO NOT use aluminium, galvanized or tin-plated containers. Plastic carboy or Plastic container Plastic drum. Mild steel can.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

	Life-threatening health effects is: sodium hydroxide 50 mg/m3 Caustic Soda 50% Ceiling ppm 2. Irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is: sodium hydroxide 5 mg/m3 Other than mild, transient adverse effects without perceiving a clearly defined odour is: sodium hydroxide 0.5 mg/m3
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	RESPIRATOR: Wear a respirator with suitable filter for organic gases and vapours (Type A) if engineering controls are inadequate (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Elbow length impervious gloves (AS2161). CLOTHING: Chemical-resistant coveralls, splash apron and safety footwear (AS3765/2210).
Work Hygienic Practices	Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Strongly alkaline corrosive liquid.
Odour	No specific odour
Colour	Clear slightly hazy water-white
pH	12.7
Vapour Pressure	<24 hPa (@ 20 °C)
Relative Vapour Density	1.38 Air = 1
Boiling Point	approx. 140 °C
Melting Point	approx. 12 °C
Freezing Point	No Data Available
Solubility	Miscible with water
Specific Gravity	1.48 - 1.52 (water=1
Flash Point	Non Flammable
Auto Ignition Temp	No Data Available
Evaporation Rate	Very Slow
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.515 g/ml Relative
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	50

VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	Aluminium, zinc and tin.
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	Contact with some metals may generate flammable hydrogen gas.
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

General Information	Corrosive Liquid.
Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Absorbs carbon dioxide from the air.
Conditions to Avoid	Presence of water. Presence of incompatible materials.
Materials to Avoid	Incompatible with acids , ammonium salts, aluminium, tin, and zinc .
Hazardous Decomposition Products	Corrosive to aluminium, tin, and zinc, liberating flammable hydrogen gas. Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas. Reacts exothermically on dilution with water.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	IRRITATION Skin (rabbit):500 mg/24h SEVERE Eye (rabbit):0.05 mg/24h SEVERE Eye (rabbit):1 mg/24h SEVERE Eye (rabbit):1 mg/30s rinsed- SEVERE The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.
EyeIrritant	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Ingestion	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. Considered an unlikely route of entry in commercial/industrial environments.
Inhalation	Not normally a hazard due to non-volatile nature of product. The material may produce respiratory tract irritation. Symptoms of pulmonary irritation may include coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and a burning sensation. Unlike most organs, the lung can respond to a chemical insult or a chemical agent, by first removing or neutralising the irritant and then repairing the damage (inflammation of the lungs may be a consequence). The repair process (which initially developed to protect mammalian lungs from foreign matter and antigens) may, however, cause further damage to the lungs (fibrosis for example) when activated by hazardous chemicals. Often, this results in an impairment of gas exchange the primary function of the lungs. Therefore prolonged exposure to respiratory irritants may cause sustained breathing difficulties.
SkinIrritant	Bare unprotected skin should not be exposed to this material. The material may accentuate any pre-existing dermatitis condition. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (non allergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Historically there may be inter-cellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

Chronic

Other	Principal routes of exposure are usually by skin contact with the material, eye contact with the material and accidental ingestion. A prompt response to all contact is imperative to minimize damage. Reaction to contact with broken skin is prompt and intense. Reaction to contact with intact skin apart from initial soapy feeling may be delayed, but unless removed quickly will result in burns, which may proceed to deep ulceration with scarring.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50 (96h): 43mg/l Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. Environmental processes (such as oxidation and the presence of acids or bases) may transform insoluble metals to more soluble ionic forms. Microbiological processes may also transform insoluble metals to more soluble forms. Such ionic species may bind to dissolved ligands or sorb to solid particles in aquatic or aqueous media. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms.
Persistence/Degradability	Even though many metals show few toxic effects at physiological pHs, transformation may introduce new or magnified effects. A metal ion is considered infinitely persistent because it cannot degrade further. Persistence: Water/ Soil : LOW
Mobility	When released to dry soil most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. Environmental processes may also be important in changing solubilities. Mobility : HIGH
Environmental Fate	Prevent, by any means available, spillage from entering drains or water courses. DO NOT discharge into sewer or waterways.
Bioaccumulation Potential	The current state of science does not allow for an unambiguous interpretation of various measures of bioaccumulation. The counter-ion may also create health and environmental concerns once isolated from the metal. Under normal physiological conditions the counter-ion may be essentially insoluble and may not be bioavailable. Environmental processes may enhance bioavailability. Bioaccumulation : LOW
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Decontamination and destruction of containers should be considered.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible

UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

Land Transport (Fiji)

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	154 Substances - Toxic and/or Corrosive (Non-Combustible)
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available
EMS	FA,SB
Marine Pollutant	No

Air Transport
IATA

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	1824
Hazchem	2R
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	6

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR001576

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined

Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes

CAUBUL1000, CAUSOB0300, CAUSOB0400, CAUSOB0600, CAUSOB0900, CAUSOB1000, CAUSOB1001, CAUSOB1002, CAUSOB1003, CAUSOB1004, CAUSOB1005, CAUSOB1006, CAUSOB1007, CAUSOB1008, CAUSOB1009, CAUSOB1010, CAUSOB1011, CAUSOB2000, CAUSOB2001, CAUSOB2002, CAUSOB2003, CAUSOB2004, CAUSOB2200, CAUSOB2500, CAUSOB2501, CAUSOB2502, CAUSOB2700, CAUSOB2800, CAUSOB3000, CAUSOB3001, CAUSOB3200, CAUSOB3201, CAUSOB3300, CAUSOB3301, CAUSOB3500, CAUSOB3600, CAUSOB4000, CAUSOB4500, CAUSOB4600, CAUSOB4900, CAUSOB4901, CAUSOB4902, CAUSOB4903, CAUSOB4904, CAUSOB5000, CAUSOB5001, CAUSOB5100, CAUSOB5500, CAUSOB6000, CAUSOB6001, CAUSOB7000, CAUSOB7500, CAUSOB7501, CAUSOB7502, CAUSOB7700, CAUSOB8000, CAUSOB9000, CAUSOB9100, CAUSOB9400, CAUSOC1000, CAUSOC1001, CAUSOC1002, CAUSOC1100, CAUSOC2500, CAUSOC3000, CAUSOD0500, CAUSOD0600, CAUSOD0601, CAUSOD0700, CAUSOD0800, CAUSOD0900, CAUSOD1000, CAUSOD1001, CAUSOD1002, CAUSOD1003, CAUSOD1004, CAUSOD1005, CAUSOD1006, CAUSOD1007, CAUSOD1100, CAUSOD1101, CAUSOD1200, CAUSOD1300, CAUSOD1400, CAUSOD1500, CAUSOD1600, CAUSOD2000, CAUSOD2001, CAUSOD2100, CAUSOD2200, CAUSOD2300, CAUSOD2500, CAUSOD2501, CAUSOD2600, CAUSOD2700, CAUSOD2900, CAUSOD3000, CAUSOD3100, CAUSOD3200, CAUSOD3201, CAUSOD3300, CAUSOD3301, CAUSOD3302, CAUSOD3400, CAUSOD3401, CAUSOD3500, CAUSOD4000, CAUSOD4001, CAUSOD4100, CAUSOD4500, CAUSOD4600, CAUSOD4700, CAUSOD4800, CAUSOD4801, CAUSOD4900, CAUSOD4901, CAUSOD5000, CAUSOD5001, CAUSOD5500, CAUSOD6000, CAUSOD6500, CAUSOD6600, CAUSOD6700, CAUSOD7000, CAUSOD7100, CAUSOD7200, CAUSOD7400, CAUSOD7500, CAUSOD7600, CAUSOD7700, CAUSOD7800, CAUSOD7900, CAUSOD7901, CAUSOD8000, CAUSOD8001, CAUSOD8100, CAUSOD8200, CAUSOD8900, CAUSOD9100, CAUSOD9200, CAUSOD9300, CAUSOD9301, CAUSOD9302, CAUSOD9400, CAUSOI0200, CAUSOI0201, CAUSOI0300, CAUSOI0800, CAUSOI0900, CAUSOI1000, CAUSOI1001, CAUSOI1002, CAUSOI1003, CAUSOI1004, CAUSOI1100, CAUSOI1101, CAUSOI1200, CAUSOI1201, CAUSOI1300, CAUSOI1400, CAUSOI1500, CAUSOI1600, CAUSOI1700, CAUSOI1701, CAUSOI1800, CAUSOI2000, CAUSOI2001, CAUSOI2200, CAUSOI2300, CAUSOI2400, CAUSOI2401, CAUSOI2500, CAUSOI2600, CAUSOI2800, CAUSOI2801, CAUSOI2900, CAUSOI2901, CAUSOI3000, CAUSOI3001, CAUSOI3100, CAUSOI3101, CAUSOI3200, CAUSOI3201, CAUSOI3300, CAUSOI3301, CAUSOI3302, CAUSOI3303, CAUSOI3400, CAUSOI3500, CAUSOI3600, CAUSOI3700, CAUSOI3800, CAUSOI3900, CAUSOI4000, CAUSOI4001, CAUSOI4100, CAUSOI4200, CAUSOI4300, CAUSOI4600, CAUSOI4700, CAUSOI4701, CAUSOI4800, CAUSOI4801, CAUSOI4900, CAUSOI4901, CAUSOI4902, CAUSOI5000, CAUSOI5100, CAUSOI5500, CAUSOI6000, CAUSOI6001, CAUSOI6100, CAUSOI6500, CAUSOI6600, CAUSOI6700, CAUSOI6800, CAUSOI6900, CAUSOI7000, CAUSOI7800, CAUSOI7900, CAUSOI7901, CAUSOI7902, CAUSOI8000, CAUSOI8001, CAUSOI8100, CAUSOI8500, CAUSOI8800, CAUSOI8900, CAUSOI9000, CAUSOI9100, CAUSOI9200, CAUSOS1000, CAUSOD2948, CAUSOI3250, CAUSOD2800, CAUSOI3304, CAUSOD1800, CAUSOD1801, CAUSOD1802, CAUSOD1803, CAUSOD1804, CAUSOD1805, CAUSOD1806, CAUSOD1807, CAUSOD1808, CAUSOD1809, CAUSOD1810, CAUSOD1811, CAUSOD1812, CAUSOD1813, CAUSOD1814, CAUSOD1815, CAUSOD1816, CAUSOD1817, CAUSOD1818, CAUSOD1819, CAUSOD1820, CAUSOD1821, CAUSOD1822, CAUSOD1823, CAUSOD1824, CAUSOD1825, CAUSOD1826, CAUSOD1827, CAUSOD1828, CAUSOD1829, CAUSOD1830, CAUSOD1831, CAUSOD1832, CAUSOD1833, CAUSOD1834, CAUSOD1835, CAUSOD1836, CAUSOD1837, CAUSOD1838, CAUSOD1839, CAUSOD1840, CAUSOD1841, CAUSOD1842, CAUSOD1843, CAUSOD1844, CAUSOD1845, CAUSOD1846, CAUSOD1847, CAUSOD1848, CAUSOD1849, CAUSOD1850, CAUSOD1851, CAUSOD1852, CAUSOD1853, CAUSOD1854, CAUSOD1855, CAUSOD1856, CAUSOD1857, CAUSOD1858, CAUSOD1859, CAUSOD1860, CAUSOD1861, CAUSOD1862, CAUSOD1863, CAUSOD1864, CAUSOD1865, CAUSOD1866, CAUSOD1867, CAUSOD1868, CAUSOD1869, CAUSOD1870, CAUSOD1871,

CAUSOD1872, CAUSOD1873, CAUSOD1874, CAUSOD1875, CAUSOD1876, CAUSOD1877, CAUSOD1878, CAUSOD1879, CAUSOD1880, CAUSOD1881, CAUSOD1882, CAUSOD1883, CAUSOD1884, CAUSOD1885, CAUSOD1886, CAUSOD1887, CAUSOD1888, CAUSOD1889, CAUSOD1890, CAUSOD1891, CAUSOD1892, CAUSOD1893, CAUSOD1894, CAUSOD1895, CAUSOD1896, CAUSOD1897, CAUSOD1898, CAUSOD1899, CAUSOD1900, CAUSOD1901, CAUSOB2510, CAUSOD1902, CAUSOD1903, CAUSOD1904, CAUSOI2902, CAUSOD1905, CAUSOD1906, CAUSOD1907, CAUSOD1908, CAUSOD1910, CAUSOD1909, CAUSOD1911, CAUSOD1912, CAUSOD1913, CAUSOB2701, CAUSOD8901, CAUSOD1914, CAUSOB0301, CAUSOD1050, CAUSOC2501, CAUSOB2503, CAUSOD1915, CAUSOD1916, CAUSOD1917, CAUSOD1700, CAUSOD1918, CAUSOB2010, CAUSOD8250, CAUSOD1919, CAUSOD3010, CAUSOD3020, CAUSOD1701, CAUSOI2405, CAUSOD4201, CAUSOD4202, CAUSOD4203, CAUSOD1920, CAUSOD1720, CAUSOD1921, CAUSOC2450, CAUSOD1922, CAUSOD1923, CAUSOD1924, CAUSOD1925, CAUSOD1926, CAUSOD1927, CAUSOD2050

Revision 2

Revision Date 24 Jul 2014

Reason for Issue Updated SDS

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations

wt Weight