

## 1. IDENTIFICATION

<b>Product Name</b>	<b>Caustic soda</b>
<b>Other Names</b>	Soda lye; Sodium hydroxide
<b>Uses</b>	Industrial/commercial use: In flotation agents; in pH regulation; as a solvent; in water treatment; as a photochemical; as a reducing agent; and in hydraulic fracturing. Domestic use: In cleaning/washing agents and additives; adhesives; and cosmetic use.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	NaOH
<b>Chemical Name</b>	Caustic soda
<b>Product Description</b>	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.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

### 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 +1-703-527-3887

## 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** 6

### Globally Harmonised System

<b>Hazard Classification</b>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
<b>Hazard Categories</b>	Skin Corrosion/Irritation - Category 1A Corrosive to Metals - Category 1		
<b>Pictograms</b>			
<b>Signal Word</b>	Danger		
<b>Hazard Statements</b>	<b>H290</b>	May be corrosive to metals.	
	<b>H314</b>	Causes severe skin burns and eye damage.	
<b>Precautionary Statements</b>	Prevention	<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
		<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	<b>P303 + P361 + P353</b>	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
		<b>P310</b>	Immediately call a POISON CENTER or doctor/physician.
		<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		<b>P390</b>	Absorb spillage to prevent material damage.
		<b>P301 + P330 + P331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		<b>P363</b>	Wash contaminated clothing before reuse.
		<b>P304 + P340</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	Storage	<b>P406</b>	Store in corrosive resistant container with a resistant inner liner.
		<b>P405</b>	Store locked up.
	Disposal	<b>P501</b>	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

<b>HSNO Classifications</b>	Health Hazards	<b>6.1D</b>	Substances that are acutely toxic - Harmful
		<b>8.1A</b>	Substances that are corrosive to metals
		<b>8.2B</b>	Substances that are corrosive to dermal tissue UN PGII
		<b>8.3A</b>	Substances that are corrosive to ocular tissue
	Environmental Hazards	<b>9.1D</b>	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
		<b>9.3C</b>	Substances that are harmful to terrestrial vertebrates

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium hydroxide	NaOH	1310-73-2	>=98 %

## 4. FIRST AID MEASURES

### Description of necessary measures according to routes of exposure

<b>Swallowed</b>	If swallowed: Rinse mouth, then (slowly) drink plenty of water or milk (no more than 2 glasses for an adult). Do NOT induce vomiting. If vomiting occurs, lean victim forward or place on their left side (head down position) to maintain an open airway and prevent aspiration. Keep victim warm and quiet. Immediately call a Poison Centre or doctor/physician. Never give anything by mouth to an unconscious person.
<b>Eye</b>	Eye contact: Immediately flush eyes with running water for at least 15 minutes, holding eyelids apart and away from the eye. Remove contact lenses, if present and easy to do. Continue rinsing. Injury should be irrigated for 20 - 30 minutes. Immediately call a Poison Centre or doctor/physician.
<b>Skin</b>	Skin contact: Immediately remove contaminated clothing and shoes. Flush skin (and hair) with running water for 20 - 30 minutes. For minor skin contact, avoid spreading material onto unaffected skin. Immediately call a Poison Centre or doctor/physician. Wash contaminated clothing and shoes before reuse.
<b>Inhaled</b>	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing. Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. Treat symptomatically and supportively.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
<b>Flammability Conditions</b>	Non-combustible. Material does not burn.
<b>Extinguishing Media</b>	Use extinguishing media suitable for the surrounding fire. Use dry chemical, CO <sub>2</sub> , foam or water spray - Do NOT use water jets.
<b>Fire and Explosion Hazard</b>	Containers may explode when heated. Contact with metals may evolve flammable hydrogen gas. Contact with moisture or water may generate sufficient heat to ignite combustible substances; spattering and boiling may occur.
<b>Hazardous Products of Combustion</b>	Fire or heat will produce irritating, toxic, and/or corrosive gases.
<b>Special Fire Fighting Instructions</b>	Runoff from fire control or dilution water may be toxic and/or corrosive and pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) with a full face-piece, in positive pressure mode. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is recommended for fire situations ONLY - it is NOT effective for spills.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	2W

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do
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not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin and eyes. Do NOT breath dust.

<b>Clean Up Procedures</b>	Sweep spilled substance into suitable containers for later disposal. Prevent dust cloud. Do NOT get water inside containers.
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Dike and clean up all spills immediately.
<b>Decontamination</b>	Small spills or residues can be flushed with plenty of water. Dilute acid (such as Acetic acid) may be used to neutralise residual traces after flushing.
<b>Environmental Precautionary Measures</b>	Drains for storage or work areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for spills.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Eyewash fountains and facilities for quickly drenching the body should be provided within the immediate work area for emergency use. Handle in accordance with good industrial hygiene and safety practice. Use only in a well-ventilated area. Do NOT breath dusts or mists. Wear protective gloves/protective clothing/eye protection/face protection. Do NOT allow wash water from cleaning or process equipment to enter drains - It may be necessary to collect all wash water for treatment before disposal.
<b>Storage</b>	Store locked up. Store in an area with a corrosion resistant concrete floor. Store in a cool, dry, well-ventilated area. Keep container tightly closed. Protect from any possible contact with water/moisture. Store away from incompatible materials - oxidising substances, organic peroxides, strong acids, food and food packaging. Keep away from heat and ignition sources.
<b>Container</b>	Keep only in the original container; or in a suitable corrosive resistant container with a resistant inner liner. Do NOT use aluminium, galvanised, zinc or tin-plated containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	Australia: Sodium hydroxide (CAS No. 1310-73-2) has an exposure standard of 2 mg/m <sup>3</sup> , time weighted average (TWA) (Peak limitation). Peak limitation notice: A maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time - which does not exceed 15 minutes. Immediately dangerous to life or health concentration (IDLH): 10 mg/m <sup>3</sup> .
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	Use local exhaust ventilation to prevent the chemical from entering the breathing zone of any worker. Air monitoring is recommended to ensure control measures in place are working effectively.
<b>Personal Protection Equipment</b>	Respiratory protection: In case of dust or aerosol formation, use a respirator with an approved filter. Filter type: Particulate. In conditions where exposure potential is high, wear a full-face air-supplied breathing apparatus and full protective suit. Hand protection: Wear impervious gloves - Suitable materials: PVC neoprene, natural or butyl-rubber. Unsuitable material: leather. Eye protection: Wear a full face shield or properly fitted chemical goggles in combination with respiratory protection. Skin/body protection: Impervious clothing/chemical resistant apron and boots. Suitable materials: PVC, neoprene.
<b>Special Hazards Precautions</b>	To avoid violent reaction, ALWAYS add material to water, and NEVER water to material.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke during work. Wear appropriate personal protective clothing/equipment to prevent skin and eye contact. Immediately wash skin when it becomes contaminated. Work clothing that becomes wet or significantly contaminated should be removed and replaced. Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Flake, pearl, prill, beads, blocks
<b>Odour</b>	Odourless
<b>Colour</b>	White, translucent
<b>pH</b>	>14
<b>Vapour Pressure</b>	0 torr (@ 20 °C)
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	1390 °C
<b>Melting Point</b>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	111 g/10 ml 20°C
<b>Specific Gravity</b>	2.130 (Water = 1)
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No Data Available
<b>Potential for Dust Explosion</b>	No information available.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	Contact with moisture or water may generate sufficient heat to ignite combustible substances.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	Non-combustible. Material does not burn.
<b>Reactions That Release Gases or Vapours</b>	- Fire or heat will produce irritating, toxic, and/or corrosive gases.
<b>Release of Invisible Flammable Vapours and Gases</b>	Contact with metals such as aluminium, zinc, tin and lead may evolve flammable hydrogen gas.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	CORROSIVE. The substance is a strong base - it reacts violently with acids.
<b>Chemical Stability</b>	Stable under normal conditions.

<b>Conditions to Avoid</b>	- Avoid heat and ignition sources. - Protect from any possible contact with water/moisture.
<b>Materials to Avoid</b>	Avoid oxidising substances, organic peroxides, strong acids, food and food packaging. Avoid contact with aluminium, tin, zinc, copper and their alloys.
<b>Hazardous Decomposition Products</b>	- Fire or heat will produce irritating, toxic, and/or corrosive gases. - Contact with metals may evolve flammable hydrogen gas.
<b>Hazardous Polymerisation</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	<ul style="list-style-type: none"> <li>- Critical health effects: Sodium hydroxide is corrosive to the skin, eyes, gastrointestinal and respiratory tracts.</li> <li>- Toxicokinetics: The constituents of sodium hydroxide (sodium ion and hydroxide ions) are normal physiological constituents. Accordingly, systemic health effects, such as repeated dose toxicity, carcinogenicity and reproductive toxicity are not expected. The available data support this conclusion.</li> <li>- Acute toxicity: No acute oral studies are available in animals to establish a median lethal dose (LD50). Sodium hydroxide has low to moderate acute dermal toxicity (no reliable LD50 data). Sodium hydroxide can be absorbed into the body by inhaling the aerosol form (no LC50 data available). Observance in humans: Cases of fatality due to ingesting (liquid) sodium hydroxide have been reported in humans, caused by oesophageal and gastric injury.</li> <li>- Corrosion/irritation: Sodium hydroxide is corrosive to the skin, eyes and respiratory tract and corrosive following ingestion. It causes deep penetrating burns and necrosis. The skin is discoloured and becomes brown or black. There could be recurring skin breakdown over a long period.</li> <li>- Sensitisation: Not considered a skin sensitiser.</li> <li>- Repeated dose toxicity: No animal data are available on repeated dose toxicity studies on oral or dermal exposure. Observance in humans: Obstructive airway disease has been reported in a factory worker following chronic occupational exposure to sodium hydroxide mist.</li> <li>- Genotoxicity: In vitro and in vivo genotoxicity tests indicate no evidence for mutagenic activity.</li> <li>- Carcinogenicity: No information available.</li> <li>- Reproductive/developmental toxicity: The effect of sodium hydroxide on fertility is not known. No valid studies are available regarding effects on fertility or developmental toxicity in animals after oral, dermal or inhalation exposure. Sodium hydroxide is not expected to be systemically available in the body under normal handling and use conditions, and for this reason it can be stated that the substance will not reach the foetus nor reach male/female reproductive organs.</li> </ul>
<b>Carcinogen Category</b>	None

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	<p>Toxicity to Fish: 96 hr LC50: 4.16 mg/l          Toxicity to Algae or other aquatic plants: 96 hr EC50: 1,034.1 mg/l          Toxicity to Crustacea: 384 hr EC50: 27,901.6 mg/l          Toxicity to Fish: 96 hr NOEC: 56 mg/l</p>
<b>Persistence/Degradability</b>	<p>Water/soil: Low persistence.          Air: Low persistence.</p>
<b>Mobility</b>	Soil: KOC = 14.3 (Low mobility).
<b>Environmental Fate</b>	Avoid release to the environment. Drains for storage or work areas should have retention basins for pH adjustments and dilution of spills/residues before discharge or disposal of material.
<b>Bioaccumulation Potential</b>	Bioaccumulation: LogKow = -3.8796 (Low potential).
<b>Environmental Impact</b>	No Data Available

## 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	Dispose of contents/container in accordance with local/regional/national regulations. This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
<b>Special Precautions for Land Fill</b>	Treat and neutralise at an approved treatment plant. Treatment should involve: Mixing or slurring in water; neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licensed to accept chemical/pharmaceutical wastes; or incineration in a licensed apparatus (after admixture with suitable combustible material).

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (Fiji)

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (Malaysia)

ADR

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (New Caledonia)

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (Papua New Guinea)

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	37 Toxic And/Or Corrosive Substances Non-Combustible
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>ERG</b>	154 Substances - Toxic and/or Corrosive (Non-Combustible)
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available
<b>EMS</b>	FA,SB
<b>Marine Pollutant</b>	No

### Air Transport

IATA DGR

<b>Proper Shipping Name</b>	SODIUM HYDROXIDE, SOLID
<b>Class</b>	8 Corrosive Substances



<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	1823
<b>Hazchem</b>	2W
<b>Pack Group</b>	II
<b>Special Provision</b>	No Data Available

### National Transport Commission (Australia)

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

<b>Dangerous Goods Classification</b>	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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## 15. REGULATORY INFORMATION

<b>General Information</b>	No Data Available
<b>Poisons Schedule (Aust)</b>	6

### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>Approval Code</b>	HSR001547
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### National/Regional Inventories

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Listed
<b>Canada (NDSL)</b>	Not Listed
<b>China (IECSC)</b>	Listed
<b>Europe (EINECS)</b>	215-185-5
<b>Europe (REACH)</b>	01-2119457892-27-
<b>Japan (ENCS/METI)</b>	Listed
<b>Korea (KECI)</b>	Listed
<b>Malaysia (EHS Register)</b>	Listed
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Listed
<b>Switzerland (Giftliste 1)</b>	Not Determined
<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Listed
<b>USA (TSCA)</b>	Listed

## 16. OTHER INFORMATION

### Related Product Codes

CASODA0300, CASODA1000, CASODA1001, CASODA1002, CASODA1003, CASODA1004, CASODA1005, CASODA1006, CASODA1007, CASODA1008, CASODA1009, CASODA1010, CASODA1011, CASODA1012, CASODA1013, CASODA1014, CASODA1015, CASODA1016, CASODA1017, CASODA1018, CASODA1019, CASODA1020, CASODA1021, CASODA1022, CASODA1023, CASODA1024, CASODA1025, CASODA1026, CASODA1027, CASODA1028, CASODA1029, CASODA1030, CASODA1031, CASODA1032, CASODA1033, CASODA1034, CASODA1035, CASODA1036, CASODA1037, CASODA1038, CASODA1039, CASODA1040, CASODA1041, CASODA1042, CASODA1043, CASODA1044, CASODA1045, CASODA1100, CASODA1101, CASODA1200, CASODA1201, CASODA1202, CASODA1203, CASODA1300, CASODA1301, CASODA1302, CASODA1303, CASODA1304, CASODA1305, CASODA1306, CASODA1307, CASODA1308, CASODA1309, CASODA1310, CASODA1311, CASODA1312, CASODA1313, CASODA1314, CASODA1315, CASODA1316, CASODA1317, CASODA1318, CASODA1319, CASODA1320, CASODA1321, CASODA1322, CASODA1323, CASODA1324, CASODA1325, CASODA1326, CASODA1327, CASODA1328, CASODA1329, CASODA1330, CASODA1331, CASODA1332, CASODA1400, CASODA1401, CASODA1402, CASODA1403, CASODA1500, CASODA1600, CASODA1700, CASODA1701, CASODA1800, CASODA1801, CASODA1900, CASODA2000, CASODA2001, CASODA2002, CASODA2003, CASODA2004, CASODA2005, CASODA2100, CASODA2101, CASODA2102, CASODA2200, CASODA2201, CASODA2202, CASODA2300, CASODA2301, CASODA2302, CASODA2400, CASODA2500, CASODA2501, CASODA2502, CASODA2503, CASODA2504, CASODA2505, CASODA2506, CASODA2600, CASODA2601, CASODA2602, CASODA2603, CASODA2604, CASODA2605, CASODA2606, CASODA2607, CASODA2608, CASODA2609, CASODA2700, CASODA2701, CASODA2702, CASODA2703, CASODA2704, CASODA2800, CASODA2900, CASODA3000, CASODA3001, CASODA3002, CASODA3003, CASODA3004, CASODA3005, CASODA3006, CASODA3007, CASODA3008, CASODA3100, CASODA3101, CASODA3200, CASODA3201, CASODA3300, CASODA3400, CASODA3500, CASODA3501, CASODA3502, CASODA3503, CASODA3504, CASODA3505, CASODA3506, CASODA3600, CASODA3601, CASODA3700, CASODA3800, CASODA3900, CASODA4000, CASODA4001, CASODA4002, CASODA4003, CASODA4004, CASODA4005, CASODA4006, CASODA4200, CASODA4201, CASODA4500, CASODA4501, CASODA4502, CASODA4503, CASODA4504, CASODA4505, CASODA4506, CASODA4507, CASODA4508, CASODA4600, CASODA4601, CASODA5000, CASODA5001, CASODA5002, CASODA5003, CASODA5004, CASODA5005, CASODA5100, CASODA5200, CASODA5300, CASODA5500, CASODA5501, CASODA5600, CASODA6000, CASODA6001, CASODA6500, CASODA6501, CASODA7000, CASODA7100, CASODA7101, CASODA7200, CASODA7500, CASODA7700, CASODA7701, CASODA7702, CASODA8000, CASODA8100, CASODA8101, CASODA8200, CASODA8300, CASODA8400, CASODA9000, CASODA9600, CASODI3800, CASODA1802, CASODA1803, CASODA1804, CASODA1805, CASODA1806, CASODA1807, CASODA1808, CASODA1809, CASODA1810, CASODA1811, CASODA1812, CASODA1813, CASODA1814, CASODA1815, CASODA1816, CASODA1817, CASODA1818, CASODA1819, CASODA1820, CASODA1821, CASODA1822, CASODA1823, CASODA1824, CASODA9100, CASODA5301, CASODA5014, CASODA5006, CASODA6010, CASODA5310, CASODA5502, CASODA5050, CASODA3010, CASODA3011, CASODA3021, CASODA3020, CASODA3030, CASODA3040, CASODA6050, CASODA6051, CASODA1150, CASODA2103, CASODA8250, CASODA8210, CASODA8255, CASODA1050, CASODA1750, CASODA1755, CASODA1760, CASODA1765, CASODA1770, CASODA1780, CASODA1785, CASODA8205, CASODA1761, CASODA5503, CASODA5504, CASODA1825, CASODA8201, CASODA5505, CASODA5010, CASODA1762

### Revision

4

### Revision Date

30 May 2017

### Key/Legend

< Less Than

> Greater Than

**AICS** Australian Inventory of Chemical Substances

**atm** Atmosphere

**CAS** Chemical Abstracts Service (Registry Number)

**cm<sup>2</sup>** Square Centimetres

**CO<sub>2</sub>** 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/cm<sup>3</sup>** 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

**inH<sub>2</sub>O** Inch of Water

**K** Kelvin

**kg** Kilogram

**kg/m<sup>3</sup>** 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  
**m<sup>3</sup>** Cubic Metre  
**mbar** Millibar  
**mg** Milligram  
**mg/24H** Milligrams per 24 Hours  
**mg/kg** Milligrams per Kilogram  
**mg/m<sup>3</sup>** Milligrams per Cubic Metre  
**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.  
**mm** Millimetre  
**mmH<sub>2</sub>O** Millimetres of Water  
**mPa.s** Millipascals per Second  
**N/A** Not Applicable  
**NIOSH** National Institute for Occupational Safety and Health  
**NOHSC** National Occupational Health 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