1. IDENTIFICATION

Product Name	**Calcium hypochlorite, hydrated (UN2880)**
Other Names	Bleaching powder; Calcium hypochlorite, hydrated, with not less than 5.5% but not more than 16% water; Calcium oxychloride; Chlorinated lime
Uses	Water treatment agent; Bleaching agent.
Chemical Family	No Data Available
Chemical Formula	CaCl2O2.H2O
Chemical Name	Calcium hypochlorite
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox 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) Schedule 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

Oxidising Solids - Category 2

Acute Toxicity (Oral) - Category 4

Skin Corrosion/Irritation - Category 1B

Serious Eye Damage/Irritation - Category 1

Specific Target Organ Toxicity (Single Exposure) - Category 3

Acute Hazard To The Aquatic Environment - Category 1

Pictograms

Signal Word

Danger

Hazard Statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
AUH031	Contact with acids liberates toxic gas

Precautionary Statements

Prevention	**P210**	Keep away from heat.
	P221	Take any precaution to avoid mixing with combustibles/organic material.
	P260	Do not breathe dusts or mists.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P273	Avoid release to the environment.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
Response	**P370 + P378**	In case of fire: Use water for extinction.
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
	P310	Immediately call a POISON CENTER or doctor.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P363	Wash contaminated clothing before reuse.
	P391	Collect spillage.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
Storage	**P403 + P233**	Store in a well-ventilated place. Keep container tightly closed.
	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	Physical Hazards	**5.1.1B**	Oxidising substances that are liquids or solids: medium hazard
	Health Hazards	**6.1D**	Substances that are acutely toxic - Harmful
		8.1A	Substances that are corrosive to metals
		8.2C	Substances that are corrosive to dermal tissue UN PGIII
		8.3A	Substances that are corrosive to ocular tissue
	Environmental Hazards	**9.1A**	Substances that are very ecotoxic in the aquatic environment
		9.2A	Substances that are very ecotoxic in the soil environment
		9.3C	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Available Chlorine (as Calcium hypochlorite)	Ca(ClO)2	7778-54-3	>=65 %
Calcium hydroxide	Ca(OH)2	1305-62-0	<=6 %
Water	H2O	7732-18-5	5.5 - 10 %
Ingredients determined not to be hazardous	Unspecified	Unspecified	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

IF SWALLOWED: Rinse mouth, then drink (sip) a glass of water. Call a Poison Centre or doctor/physician for advice or phone for an ambulance immediately. Do NOT induce vomiting. If vomiting occurs spontaneously, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Transport to hospital or doctor without delay! Never give anything by mouth to an unconscious person.

Eye

IF IN EYES: Call a Poison Centre or doctor/physician for advice or phone for an ambulance immediately. Immediately flush eyes with (lukewarm) running water for at least 20 minutes, holding eyelids open and occasionally lifting the upper and lower lids - DO NOT INTERRUPT FLUSHING (If necessary, keep emergency vehicle waiting). Neutral saline solution may be used if it is available. Transport to hospital or doctor without delay! Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin

IF IN SKIN (or hair): Immediately flush skin and hair with (lukewarm) running water for at least 20 minutes while removing contaminated clothing and shoes - DO NOT INTERRUPT FLUSHING (If necessary, keep emergency vehicle waiting). For gross contamination - Drench contaminated clothing and skin with plenty of water before removing clothes. For minor skin contact, avoid spreading material on unaffected skin. Call a Poison Centre or doctor/physician for advice or phone for an ambulance immediately. Transport to hospital or doctor without delay! Wash contaminated clothing and shoes before reuse; Discard contaminated leather goods.

Inhaled

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice or phone for an ambulance immediately. 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. Transport to hospital or doctor without delay!

Advice to Doctor

Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves.
*Delayed effects from exposure to chlorine can include shortness of breath, severe headache, pulmonary oedema and pneumonia.

Medical Conditions Aggravated by Exposure

No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal. ALWAYS stay away from tank ends.
Flammability Conditions	OXIDISING SUBSTANCE: Non-combustible; however, will accelerate burning when involved in a fire. May ignite combustibles.
Extinguishing Media	USE FLOODING QUANTITIES OF WATER for extinction - Do not use dry chemicals, Carbon dioxide (CO2) or foam. Large fire: Flood fire area with water from a protected position.
Fire and Explosion Hazard	Risk of violent reaction or explosion! May intensify fire; oxidizer. May explode from heating, shock, friction or contamination. Containers may explode when heated. Runoff may create fire or explosion hazard. Decomposes on contact with water evolving toxic chlorine gas! *Calcium hypochlorite is a powerful oxidising agent and decomposes violently upon heating liberating oxygen, and toxic chlorine gas. In case of fire, area must be evacuated and specialist fire fighters called.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive gases, including Carbon oxides, halogenated compounds, metal oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways; Runoff may create fire or explosion hazard. *All water utilised to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment. Monitor all exit water for available chlorine and pH.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Structural firefighter's uniform will provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	1W

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Prevent exposure to heat. Do not contaminate - Keep combustibles away from spilled material. Clean up all spills immediately. Avoid dust formation. Do not breathe dust/vapours and prevent contact with eyes, skin and clothing.
Clean Up Procedures	Sweep up, avoiding generation of dust, then immediately spread as a thin layer in uncontaminated, dry, open area to reduce the possibility of local hot spots forming. Use clean, non-sparking tools to transfer material to a clean, dry container for disposal and cover loosely (see SECTION 13). Move container from spill area. Do not seal disposal containers tightly. Do NOT return spilled material to original container for re-use. Do NOT add small amounts of water to Calcium hypochlorite.
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Prevent dust cloud. *Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash.
Decontamination	All water utilised to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment. Monitor all exit water for available chlorine and pH.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. Advise local authorities of any contaminated water release.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Large spill: Immediately contact Police or Fire Brigade; Consider initial downwind evacuation of areas within at least 100 m.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Large spill: Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Structural firefighter's uniform will provide limited protection.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial

	hygiene and safety practice. Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Avoid dust formation. Do not breathe dust and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). OXIDISING MATERIAL: Keep away from heat and all sources of ignition - No smoking. Do not contaminate - Take any precaution to avoid mixing with combustibles. Do not mix with or allow product to come into contact with any other chemicals, including different types of chlorinating chemicals. Do not add water to product - Always add product to large quantities of water to fully dissolve (but in case of fire, drench with water). Use clean, spark-proof tools and explosion-proof equipment. Avoid release to the environment - Collect spillage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers closed when not in use. Protect containers from physical damage. Check containers regularly for corrosion or leaks. Protect from moisture/humidity - Do not allow to get damp. If product becomes contaminated or decomposes, do NOT reseal container - may lead to drum rupture. Keep away from heat and all sources of ignition - No smoking. Keep away from foodstuffs, combustibles and other incompatible materials (see SECTION 10). Store locked up. *Prolonged storage at elevated temperatures will significantly shorten the shelf life, and may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.
Container	Keep in the original container. Empty containers retain product residue and can be hazardous. Do not reuse container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. COMPONENT: Calcium hydroxide (CAS No. 1305-62-0): - Safe Work Australia Exposure Standard: TWA = 5 mg/m3. - New Zealand Workplace Exposure Standard [Next review 2022]: TWA = 5 mg/m3. COMPONENT: Calcium carbonate (CAS No. 471-34-1): - Safe Work Australia Exposure Standard: TWA = 10 mg/m3 (This value is for inhalable dust containing no asbestos and <1% crystalline silica). - New Zealand Workplace Exposure Standard: TWA = 10 mg/m3. DECOMPOSITION PRODUCT: Chlorine gas (CAS No. 7782-50-5): - Safe Work Australia Exposure Standard: TWA = 1 ppm (3 mg/m3) Peak limitation. - New Zealand Workplace Exposure Standard [Next review 2023]: TWA = 0.5 ppm (1.5 mg/m3); STEL = 1 ppm (2.9 mg/m3).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if levels above the exposure limits are possible. Recommended: A NIOSH approved (or equivalent) full-face air purifying respirator equipped with combination chlorine/P100 cartridges. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres, or if exposure concentrations exceed ten (10) times the published limit. - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Wear chemical splash goggles and face shield. - Hand protection: Wear protective gloves. Recommended: Chemical-resistant, impervious gloves, e.g. Nitrile, neoprene, butyl rubber. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. A full impervious suit is recommended if exposure is possible to a large portion of the body.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Remove contaminated clothing and shoes immediately and wash before reuse. Discard contaminated leather goods.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline, powder or granule
Odour	Chlorine
Colour	White to off-white

pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	170 - 180 °C
Density	No Data Available
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	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion! May intensify fire; oxidizer. May explode from heating, shock, friction or contamination.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	Decomposes on contact with water evolving toxic chlorine gas!
Properties That May Initiate or Contribute to Fire Intensity	OXIDISING SUBSTANCE: Non-combustible; however, will accelerate burning when involved in a fire. May ignite combustibles.
Reactions That Release Gases or Vapours	Fire may produce irritating, toxic and/or corrosive gases, including Carbon oxides, halogenated compounds, metal oxides.
Release of Invisible Flammable Vapours and Gases	Calcium hypochlorite is a powerful oxidising agent and decomposes violently upon heating liberating oxygen, and toxic chlorine gas. Explosive and toxic nitrogen trichloride is formed by contact with chlorinated isocyanuric acid.

10. STABILITY AND REACTIVITY

General Information	Corrosive to metals in the presence of moisture. Decomposes on contact with water evolving toxic chlorine gas! Contact with acids liberates toxic gas.
Chemical Stability	Calcium hypochlorite is a powerful oxidising agent - Decomposition occurs on exposure to heat, reducing agents, combustible materials.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid exposure to direct sunlight. Avoid exposure to moisture.
Materials to Avoid	incompatible/reactive with dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate, acids, aluminium, iron, lead, magnesium, zinc, organic materials, combustible materials, reducing agents, ammonia, nitrogen compounds, acidic materials, cyanides, hydrogen peroxide, chlorinated isocyanuric acid

(organic bleaching powder), copper.

Hazardous Decomposition Products Fire may produce irritating, toxic and/or corrosive gases, including Carbon oxides, halogenated compounds, metal oxides. Decomposes violently upon heating liberating oxygen, and toxic chlorine gas.

Hazardous Polymerisation This product will not undergo polymerisation reactions.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. The chemical is incompatible with acidic conditions, where it can react with acids to release toxic chlorine gas.
- Skin corrosion/irritation: Causes severe skin burns. The dry material is moderately irritating to the skin; However, when wet, it will produce burns to the skin.
- Eye damage/irritation: Causes serious eye damage. Corrosive to eyes. Contamination of eyes can result in corneal burns and permanent injury.
- Respiratory/skin sensitisation: This material is not known or reported to be a skin or respiratory sensitiser.
- Germ cell mutagenicity: Not considered to be genotoxic.
- Carcinogenicity: Not known or reported to be carcinogenic. Hypochlorite salts are classified by the IARC Monographs as "Not classifiable as to its carcinogenicity to humans" (Group 3).
- Reproductive toxicity: No specific reproductive or developmental toxicity.
- STOT (single exposure): May cause respiratory irritation. Chlorine, evolved from decomposition when wet, is a severe respiratory irritant, corrosive, and highly toxic. Delayed effects can include shortness of breath, headache, pulmonary oedema, and pneumonia.
- STOT (repeated exposure): No systemic adverse effects following repeated oral/dermal exposure.
- Aspiration toxicity: No information available.

Acute

Ingestion Acute toxicity (Oral):
COMPONENT: Calcium hypochlorite (CAS No. 7778-54-3):
- LD50, Rat: 790 mg/kg bw.

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:
COMPONENT: Calcium hypochlorite (CAS No. 7778-54-3):
- LC50, Fish (Bluegill): 0.088 mg/l (96 h) [nominal, static].
- LC50, Fish (Rainbow trout): 0.16 mg/l (96 h) [nominal, static].
- LC50, Crustacea (Daphnia magna): 0.11 mg/l (48 h) [nominal, static].

Persistence/Degradability This material is biodegradable.

Mobility No information available.

Environmental Fate Very toxic to aquatic life - Prevent entry into drains and waterways.

Bioaccumulation Potential Expected to have a low bioaccumulation potential.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information If recycling or reclamation is not possible, dispose of (contents/container) via a commercial waste disposal service and in accordance with local/regional/national regulations.

Special Precautions for Land Fill No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	2880
Hazchem	1W
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	2880
Hazchem	1W
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	2880
Hazchem	1W
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
ERG	140 Oxidizers
UN Number	2880
Hazchem	1W
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
UN Number	2880
Hazchem	1W
Pack Group	II
Special Provision	No Data Available
EMS	F-H, S-Q
Marine Pollutant	Yes

Air Transport
IATA DGR

Proper Shipping Name	Calcium hypochlorite, hydrated with >= 5.5% and <= 16% water
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
UN Number	2880
Hazchem	1W
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	CHLORINATING COMPOUNDS (incl. Calcium hypochlorite) are listed in Schedule 6 of the SUSMP.
Poisons Schedule (Aust)	Schedule 6

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

Approval Code	HSR006978

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	231-908-7
Europe (REACh)	Listed

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

16. OTHER INFORMATION

Related Product Codes

CAHYPO0500, CAHYPO0600, CAHYPO0700, CAHYPO0800, CAHYPO0805, CAHYPO0810, CAHYPO0900, CAHYPO1000, CAHYPO1001, CAHYPO1002, CAHYPO1003, CAHYPO1004, CAHYPO1005, CAHYPO1006, CAHYPO1007, CAHYPO1008, CAHYPO1009, CAHYPO1010, CAHYPO1011, CAHYPO1012, CAHYPO1013, CAHYPO1014, CAHYPO1015, CAHYPO1016, CAHYPO1017, CAHYPO1018, CAHYPO1019, CAHYPO1020, CAHYPO1021, CAHYPO1022, CAHYPO1023, CAHYPO1100, CAHYPO1200, CAHYPO1210, CAHYPO1225, CAHYPO1240, CAHYPO1500, CAHYPO1600, CAHYPO1800, CAHYPO1801, CAHYPO1802, CAHYPO1803, CAHYPO1804, CAHYPO1805, CAHYPO1806, CAHYPO2000, CAHYPO2001, CAHYPO2002, CAHYPO2003, CAHYPO2004, CAHYPO2005, CAHYPO2006, CAHYPO2100, CAHYPO2500, CAHYPO3000, CAHYPO3001, CAHYPO4000, CAHYPO4001, CAHYPO4500, CAHYPO5000, CAHYPO5500, CAHYPO6000, CAHYPO6500, CAHYPO6501, CAHYPO6502, CAHYPO6503, CAHYPO6504, CAHYPO6505, CAHYPO6506, CAHYPO6507, CAHYPO6508, CAHYPO6509, CAHYPO6510, CAHYPO6511, CAHYPO6512, CAHYPO6513, CAHYPO6514, CAHYPO6515, CAHYPO6540, CAHYPO6800, CAHYPO6801, CAHYPO6802, CAHYPO6803, CAHYPO6804, CAHYPO6900, CAHYPO7000, CAHYPO7015, CAHYPO7040, CAHYPO7500, CAHYPO8000, CAHYPO8001, CAHYPO8500, CAHYPO8501, CAHYPO8700, CAHYPO8800, CAHYPO8850, CAHYPO8900, CAHYPO9000, CAHYPO9001, CAHYPO9025, CAHYPO9100, CAHYPO9200, CAHYPO9201, CAHYPO9202, CAHYPO9203, CAHYPO9300, CAHYPO9301, CAHYPO9302, CAHYPO9400, CAHYPO9401, CAHYPO9405, CAHYPO9410, CAHYPO9500, CAHYPO9501, CAHYPO9502, CAHYPO9525, CAHYPO9600, CAHYPO9601, CAHYPO9602, CAHYPO9615, CAHYPO9700, CAHYPO9701, CAHYPO9725, CAHYPO9800, CAHYPO9900

Revision

5

Revision Date

17 Sep 2019

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