1. IDENTIFICATION

Product Name	**Caustic Soda Liquid**
Other Names	Caustic soda solution; Sodium hydroxide solution
Uses	Chemical manufacture; cleaning/washing agents/additives; adhesives; flotation agents; pH regulation; solvent; water treatment; photochemical; reducing agent; hydraulic fracturing.
Chemical Family	No Data Available
Chemical Formula	NaOH.H2O
Chemical Name	Sodium hydroxide, aqueous solution
Product Description	>=5% aqueous solution.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Petrospico Sanat Co.	Unit 6, No. 32, Ostad Mohammad Ali Keshavarz St, Farhang Sq, Saadat Abad, Teh, Iran	+98 21 26 29 90 41 +98 21 26 29 90 25

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		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	**P260**	Do not breathe gas/mist/vapours/spray.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	**P301 + P330 + P331**	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
		P304 + P340	IF INHALED: Remove victim to fresh air and keep 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.
		P363	Wash contaminated clothing before reuse.
		P390	Absorb spillage to prevent material-damage.
	Storage	**P405**	Store locked up.
		P406	Store in corrosive resistant container with a resistant inner liner.
	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
		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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium hydroxide	NaOH	1310-73-2	>=5 - <=50 %
Water	H2O	7732-18-5	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then drink (slowly) 1 - 2 glasses of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Urgent hospital treatment is likely to be needed. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Never give anything by mouth to an unconscious person. Transport to hospital or doctor without delay.

Eye IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Immediately call a Poison Centre or doctor/physician for advice. Remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay.

Skin IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for 20 - 30 minutes. Immediately call a Poison Centre or doctor/physician for advice. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. For minor skin contact, avoid spreading material on unaffected skin. Transport to hospital or doctor without delay.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician for advice. 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. Alkalis continue to cause damage after exposure. Reaction may be delayed up to 24 hours after exposure; affected individuals need complete rest and must be kept under medical observation even if no symptoms are (yet) manifested. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

General Measures Alert Fire Brigade and tell them location and nature of hazard. If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Avoid getting water inside containers.

Flammability Conditions Non-combustible; Material itself does not burn.

Extinguishing Media If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use water jets.

Fire and Explosion Hazard Not considered a significant fire risk, however containers may burn. Containers may explode when heated. Contact with metals may evolve flammable hydrogen gas.

Hazardous Products of Combustion Fire or heat will produce irritating, toxic and/or corrosive gases.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and pollute waterways.

Personal Protective Equipment Liquid-tight chemical protective clothing (splash suit) in combination with self-contained breathing apparatus (SCBA) should be used. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for this material.

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 2R

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Clean up all spills immediately. Do not breathe vapours and prevent contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to a suitable, properly labelled container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Cover with dry earth, sand or other non-combustible material followed by plastic sheet to minimise spreading.
Decontamination	Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Environmental Precautionary Measures	Small spillages and decontamination run-off may be washed to drains with large quantities of water. Due care must however still be exercised to avoid unnecessary pollution of watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Large spill: Alert Fire Brigade and tell them location and nature of hazard; Consider downwind evacuation.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Large spill: Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum 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. Handle in accordance with good industrial hygiene and safety practice. Do not breathe mist/vapours/spray and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Avoid overheating (decomposition). Keep away from sources of ignition - No smoking. Absorb spillage to prevent material damage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers securely sealed. Check regularly for spills and leaks. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep only in the original container or corrosive resistant container/container with a resistant inner liner. Do NOT use aluminium, galvanised or tin-plated containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	COMPONENT: Sodium hydroxide (CAS No. 1310-73-2): - Safe Work Australia Exposure Standard: TWA = 2 mg/m3 Peak limitation. - New Zealand Workplace Exposure Standard: TWA = 2 mg/m3 Ceiling. - NIOSH REL/OSHA PEL: 2 mg/m3 Ceiling. - Immediately dangerous to life or health (IDLH) concentration: 10 mg/m3.
Exposure Limits	No Data Available
Biological Limits	No information available.
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.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Particulate/mist filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Properly fitted chemical goggles. - Hand protection: Wear protective gloves. Recommended: Elbow length PVC gloves. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, PVC apron. When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
Special Hazards Precaustions	Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. 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.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes immediately - Do NOT allow clothing wet with material to stay in contact with skin. Wash contaminated clothing and shoes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Slight odour
Colour	Clear - slightly hazy water-white
pH	>12 (as supplied)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	~142 °C (50% soln.)
Melting Point	No Data Available
Freezing Point	~12 °C
Solubility	Miscible with water
Specific Gravity	approx. 1.52 (50% soln.)
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	No Data Available
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	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Fire or heat will produce irritating, toxic and/or corrosive gases.
Release of Invisible Flammable Vapours and Gases	Contact with metals may evolve flammable hydrogen gas.

10. STABILITY AND REACTIVITY

General Information	May be corrosive to metals. Attacks some plastics, rubber, coatings and metals (aluminium, tin, zinc, etc, and their alloys), producing flammable hydrogen gas.
Chemical Stability	Product is considered stable; Unstable in the presence of incompatible materials.
Conditions to Avoid	Avoid overheating (decomposition). Keep away from sources of ignition.
Materials to Avoid	Incompatible/reactive with strong acids, acid chlorides, acid anhydrides and chloroformates. Avoid contact with copper, aluminium and their alloys.
Hazardous Decomposition Products	Fire or heat will produce irritating, toxic and/or corrosive gases.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Corrosive following ingestion. Ingestion of Sodium hydroxide may result in severe burns to the mouth, throat and stomach, pain, nausea and vomiting, swelling of the larynx and subsequent suffocation, perforation of the gastro-intestinal tract.
- Skin corrosion/irritation: Corrosive; Causes severe skin burns. Sodium hydroxide burns are not immediately painful; onset of pain may be delayed. It causes deep penetrating burns and necrosis. The skin is discoloured and becomes brown or black, which can make initial assessment of the injury difficult. There could be recurring skin breakdown over a long period [NICNAS].
- Eye damage/irritation: Corrosive; Causes serious eye damage. Oedema, destruction of the epithelium, corneal opacification and iritis may occur. Contamination of eyes can cause corneal burns and result in permanent injury. May cause blindness.
- Respiratory/skin sensitisation: Sodium hydroxide is not considered a skin sensitiser [NICNAS].
- Germ cell mutagenicity: No evidence for a mutagenic activity [NICNAS].
- Carcinogenicity: Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).
- Reproductive toxicity: No information available.
- STOT (single exposure): Breathing in mists or aerosols may produce respiratory irritation. Inhalation of alkaline corrosives may produce irritation of the respiratory tract with coughing, choking, pain and mucous membrane damage. Pulmonary oedema may develop in more severe cases; symptoms may be delayed. Symptoms of overexposure include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.
- STOT (repeated exposure): Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis of the jaw; Bronchial irritation, with cough, and bronchial pneumonia may ensue. The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic).
- Aspiration toxicity: No information available.

Acute

Other

Acute toxicity (Dermal):
COMPONENT: Sodium hydroxide (CAS No. 1310-73-2):
- LD50, Rabbit: 1,350 mg/kg [Supplier's SDS].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity:
COMPONENT: Sodium hydroxide (CAS No. 1310-73-2):
- LC50, Fish: 125 mg/L (96 h) [US EPA, Ecotox database].
- EC50, Crustacea: 40.4 m/L (48 h) [ECHA Registered Substances - Ecotoxicological Information].

Persistence/Degradability

COMPONENT: Sodium hydroxide (CAS No. 1310-73-2):
- Low persistence in water/soil.
- Low persistence in air.

*Biodegradation is not an applicable endpoint since the product is an inorganic chemical.

Mobility

COMPONENT: Sodium hydroxide (CAS No. 1310-73-2):
- Low mobility in soil (KOC = 14.3).

Environmental Fate Prevent entry into drains and waterways.

Bioaccumulation Potential

COMPONENT: Sodium hydroxide (CAS No. 1310-73-2):
- Low bioaccumulative potential (Log Kow = -3.8796).

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Recycle wherever possible, or dispose contents/container of in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Containers may still present a chemical hazard/danger when empty!

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

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)
ADG Code

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)
ADR Code

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 Caledonia)
ADG Code

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 Code

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	F-A, S-B
Marine Pollutant	No

Air Transport
IATA DGR

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	SODIUM HYDROXIDE
Poisons Schedule (Aust)	Schedule 6

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

Approval Code	HSR001576

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Listed
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, CAUSOB0301, CAUSOB0400, CAUSOB0600, CAUSOB0900, CAUSOB1000, CAUSOB1001, CAUSOB1002, CAUSOB1003, CAUSOB1004, CAUSOB1005, CAUSOB1006, CAUSOB1007, CAUSOB1008, CAUSOB1009, CAUSOB1010, CAUSOB1011, CAUSOB1012, CAUSOB2000, CAUSOB2001,

CAUSOB2002, CAUSOB2003, CAUSOB2004, CAUSOB2010, CAUSOB2015, CAUSOB2200, CAUSOB2500, CAUSOB2501, CAUSOB2502, CAUSOB2503, CAUSOB2510, CAUSOB2511, CAUSOB2700, CAUSOB2701, CAUSOB2702, 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, CAUSOC2450, CAUSOC2500, CAUSOC2501, CAUSOC3000, CAUSOD0500, CAUSOD0600, CAUSOD0601, CAUSOD0700, CAUSOD0800, CAUSOD0900, CAUSOD1000, CAUSOD1001, CAUSOD1002, CAUSOD1003, CAUSOD1004, CAUSOD1005, CAUSOD1006, CAUSOD1007, CAUSOD1050, CAUSOD1100, CAUSOD1101, CAUSOD1200, CAUSOD1300, CAUSOD1400, CAUSOD1500, CAUSOD1600, CAUSOD1700, CAUSOD1701, CAUSOD1702, CAUSOD1703, CAUSOD1708, CAUSOD1720, 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, CAUSOD1902, CAUSOD1903, CAUSOD1904, CAUSOD1905, CAUSOD1906, CAUSOD1907, CAUSOD1908, CAUSOD1909, CAUSOD1910, CAUSOD1911, CAUSOD1912, CAUSOD1913, CAUSOD1914, CAUSOD1915, CAUSOD1916, CAUSOD1917, CAUSOD1918, CAUSOD1919, CAUSOD1920, CAUSOD1921, CAUSOD1922, CAUSOD1923, CAUSOD1924, CAUSOD1925, CAUSOD1926, CAUSOD1927, CAUSOD1928, CAUSOD1929, CAUSOD1930, CAUSOD1931, CAUSOD1932, CAUSOD1933, CAUSOD1934, CAUSOD1935, CAUSOD1936, CAUSOD1937, CAUSOD1938, CAUSOD1939, CAUSOD1940, CAUSOD1941, CAUSOD1942, CAUSOD1943, CAUSOD1944, CAUSOD2000, CAUSOD2001, CAUSOD2017, CAUSOD2020, CAUSOD2050, CAUSOD2051, CAUSOD2052, CAUSOD2055, CAUSOD2100, CAUSOD2200, CAUSOD2300, CAUSOD2500, CAUSOD2501, CAUSOD2600, CAUSOD2700, CAUSOD2800, CAUSOD2900, CAUSOD2910, CAUSOD2948, CAUSOD3000, CAUSOD3010, CAUSOD3020, CAUSOD3100, CAUSOD3200, CAUSOD3201, CAUSOD3300, CAUSOD3301, CAUSOD3302, CAUSOD3310, CAUSOD3315, CAUSOD3400, CAUSOD3401, CAUSOD3500, CAUSOD3600, CAUSOD3605, CAUSOD3610, CAUSOD3700, CAUSOD4000, CAUSOD4001, CAUSOD4100, CAUSOD4201, CAUSOD4202, CAUSOD4203, CAUSOD4500, CAUSOD4600, CAUSOD4650, CAUSOD4700, CAUSOD4800, CAUSOD4801, CAUSOD4900, CAUSOD4901, CAUSOD5000, CAUSOD5001, CAUSOD5025, CAUSOD5100, CAUSOD5105, CAUSOD5500, CAUSOD6000, CAUSOD6500, CAUSOD6600, CAUSOD6700, CAUSOD7000, CAUSOD7100, CAUSOD7200, CAUSOD7400, CAUSOD7500, CAUSOD7600, CAUSOD7700, CAUSOD7800, CAUSOD7900, CAUSOD7901, CAUSOD8000, CAUSOD8001, CAUSOD8100, CAUSOD8200, CAUSOD8250, CAUSOD8260, CAUSOD8261, CAUSOD8262, CAUSOD8263, CAUSOD8264, CAUSOD8265, CAUSOD8300, CAUSOD8900, CAUSOD8901, CAUSOD8982, 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, CAUSOI2002, CAUSOI2200, CAUSOI2300, CAUSOI2400, CAUSOI2401, CAUSOI2405, CAUSOI2500, CAUSOI2600, CAUSOI2800, CAUSOI2801, CAUSOI2900, CAUSOI2901, CAUSOI2902, CAUSOI3000, CAUSOI3001, CAUSOI3100, CAUSOI3101, CAUSOI3200, CAUSOI3201, CAUSOI3250, CAUSOI3300, CAUSOI3301, CAUSOI3302, CAUSOI3303, CAUSOI3304, 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

Revision	5
Revision Date	31 Jul 2020
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