SAFETY DATA SHEET
EPICHLOROHYDRIN
REVISION 4, DATE 06 AUG 21

1. IDENTIFICATION

Product Name	**Epichlorohydrin**
Other Names	1-Chloro-2,3-epoxypropane; ECH
Uses	Resins, synthetics, surfactants, ion exchange resins, pharmaceuticals.
Chemical Family	No Data Available
Chemical Formula	C3H5ClO
Chemical Name	Oxirane, (chloromethyl)-
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 7

Globally Harmonised System

Hazard Classification

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

Hazard Categories

Flammable Liquids - Category 3
Acute Toxicity (Oral) - Category 3
Acute Toxicity (Dermal) - Category 3
Acute Toxicity (Inhalation) - Category 3
Skin Corrosion/Irritation - Category 1B
Serious Eye Damage/Irritation - Category 1
Sensitisation (Skin) - Category 1
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Toxic To Reproduction - Category 2

Pictograms

Signal Word

Danger

Hazard Statements

H226	Flammable liquid and vapour.
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.

Precautionary Statements

Prevention	**P280**	Wear protective gloves/protective clothing/eye protection/face protection.
	P260	Do not breathe vapours.
	P201	Obtain special instructions before use.
	P240	Ground and bond container and receiving equipment.
	P241	Use explosion-proof electrical/ventilating/lighting and all other equipment.
	P242	Use non-sparking tools.
	P243	Take action to prevent static discharges.
	P235	Keep cool.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	**P370 + P378**	In case of fire: Use carbon dioxide (CO_2), dry chemical or foam for extinction. Alcohol resistant foam is the preferred fire-fighting medium but, if it is not available, normal foam can be used.
	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.

	P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P363	Wash contaminated clothing before reuse.
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)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Epichlorohydrin (ECH)	C3H5ClO	106-89-8	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice.
Skin	IF ON SKIN: Immediately flush skin with running water for at least 15 - 20 minutes, while removing contaminated clothing and shoes. Wash skin with soap and water. Immediately call a Poison Centre or doctor/physician for advice. Wash contaminated clothing and shoes before reuse. *In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
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. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Advice to Doctor	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Keep affected person under observation.
Medical Conditions Aggravated by Exposure	May cause an allergic skin reaction.

5. FIRE FIGHTING MEASURES

General Measures	Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out.

	Dike fire-control water for later disposal; do not scatter the material. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.
Flammability Conditions	FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), water spray or alcohol-resistant foam for extinction. Use water spray or fog; do not use straight streams. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. *CAUTION: This product has a very low flash point: Use of water spray when fighting fire may be inefficient.
Fire and Explosion Hazard	Risk of violent reaction or explosion! Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air; They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapour explosion and poison hazard indoors, outdoors or in sewers! May polymerize explosively when heated or involved in a fire. Containers may explode when heated. Many liquids are lighter than water.
Hazardous Products of Combustion	Fire will produce irritating, corrosive and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution. Runoff to sewer may create fire or explosion hazard!
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Flash Point	32 °C [Closed cup]
Lower Explosion Limit	3.8 %
Upper Explosion Limit	21 %
Auto Ignition Temperature	385 °C
Hazchem Code	•3W

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Do not breathe mist/vapours and prevent contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal (see SECTION 13). *Use clean, non-sparking tools to collect absorbed material.
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Dike far ahead of large spill for later disposal. *A vapour-suppressing foam may be used to reduce vapours. Water spray may reduce vapour, but may not prevent ignition in closed spaces.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. Do not discharge into drains or watercourses or onto the ground. If required, notify relevant authorities according to all applicable regulations.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Stay upwind and/or uphill.
Personal Precautionary Measures	Fully encapsulating, vapour-protective clothing should be worn for spills and leaks with no fire. *Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

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 place. Obtain special instructions before use - Do not use until all safety precautions have been read and understood. Do not breathe mist/vapours and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION

	8). FLAMMABLE LIQUID & VAPOUR: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground and bond container and receiving equipment. Use explosion-proof equipment and non-sparking tools. Take action to prevent static discharges.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container. *Do not apply pressure, cut, weld, solder, bond, pierce, abrade or expose to heat, flames, sparks, static electricity or other sources of ignition. Follow all SDS/label precautions, as product residue may remain after container is emptied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	For Epichlorohydrin (CAS No. 106-89-8): - Safe Work Australia Exposure Standard: TWA = 2 ppm (7.6 mg/m3); Presumed to have carcinogenic potential for humans (Carc. 1B); Absorption through the skin may be a significant source of exposure (Sk); Respiratory and/or skin sensitiser (Sen). - New Zealand Workplace Exposure Standard [Adopted 2019]: TWA = 0.05 ppm (0.19 mg/m3); STEL = 0.15 ppm (0.58 mg/m3); Known or presumed human carcinogen (carcinogen category 1); Skin absorption (skin); Dermal sensitiser (dsen).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Use engineering controls to reduce air contamination to permissible exposure level. 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: Respiratory protection must be used if the airborne concentration exceeds the recommended occupational exposure limit. Recommended: Full facepiece respirator with organic vapour canister/cartridge(s). For unknown concentration or immediately dangerous to life or health, use supplied-air respirator with full facepiece or self-contained breathing apparatus (SCBA). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical splash goggles; Full-face visor or shield. - Hand protection: Wear protective gloves. Recommended: Gloves made of Butyl rubber. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Wear chemical protective suit.
Special Hazards Precaustions	Vapours may accumulate in the floor and in low-lying areas. Measure and ventilate the oxygen concentration in the air while working because there is a risk of oxygen deficiency when working in a confined space and/or in a low area.
Work Hygienic Practices	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Irritating, chloroform
Colour	Colourless
pH	No Data Available
Vapour Pressure	1.6 kPa (@ 20 °C)
Relative Vapour Density	3.2 Air = 1
Boiling Point	115 °C
Melting Point	No Data Available
Freezing Point	-54 °C

Solubility	6 g/100 ml water 25°C
Specific Gravity	1.05
Flash Point	32 °C [Closed cup]
Auto Ignition Temp	385 °C
Evaporation Rate	0.06
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	0.26
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	0.954 cSt (@ 20 °C)
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	Risk of violent reaction or explosion! May polymerize explosively when heated or involved in a fire.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	CAUTION: This product has a very low flash point: Use of water spray when fighting fire may be inefficient.
Properties That May Initiate or Contribute to Fire Intensity	FLAMMABLE LIQUID & VAPOUR: Will be easily ignited by heat, sparks or flames.
Reactions That Release Gases or Vapours	Fire/decomposition will produce irritating, corrosive and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl).
Release of Invisible Flammable Vapours and Gases	Vapours will form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid shocks and physical damage.
Materials to Avoid	Incompatible/reactive with acids, alkalis, reducing agents, oxidising agents, flammable/combustible materials, alkali metals and alkali earth metals, powdered metal, other metal alloys, amines, ammonia, inorganic halides, phenols and halogenated phenols.
Hazardous Decomposition Products	Fire/decomposition will produce irritating, corrosive and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl).
Hazardous Polymerisation	May polymerize explosively when heated or involved in a fire.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Toxic if swallowed, in contact with skin or if inhaled.
- Skin corrosion/irritation: Causes severe skin burns and eye damage. Corrosive to the skin of rabbits [NICNAS].
- Eye damage/irritation: Causes serious eye damage. Corrosive chemicals are considered to cause irreversible effects in the eyes.
- Respiratory/skin sensitisation: May cause an allergic skin reaction (positive results reported in several guinea pig tests).
- Germ cell mutagenicity: May cause genetic defects. The chemical is positive in a large number of in vitro and in vivo genotoxicity studies. A genotoxic mode of action for carcinogenicity cannot be precluded [NICNAS].
- Carcinogenicity: May cause cancer. Epichlorohydrin is Classified by the IARC Monographs as "Probably carcinogenic to humans" (Group 2A).
- Reproductive toxicity: Suspected of damaging fertility. The chemical had effects on male fertility in experiments conducted in rats following oral and inhalation exposure.
- STOT (single exposure): Evidence that the chemical causes respiratory irritation has been reported [NICNAS].
- STOT (repeated exposure): Observed adverse effects following oral exposure to the chemical are principally related to local toxicity (irritation) at the site of contact. Although the NOAEC (5 ppm) is sufficiently low to allow classification, as the effects were due to the irritant nature of the chemical and there is no significant evidence of systemic toxicity observed, no hazard classification for repeated dose inhalation toxicity is recommended [NICNAS].
- Aspiration toxicity: No information available.

Acute

Inhalation

Acute toxicity (Inhalation):
- LC50, Rats (male): 3,617 ppm (1 h) [ECHA].
- LC50, Rats (female): 2,165 ppm (1 h) [ECHA].

Ingestion

Acute toxicity (Oral):
- LD50, Rat: 175 mg/kg bw. [ECHA].

Other

Acute toxicity (Dermal):
- LD50, Rabbit: 515 mg/kg bw. [ECHA].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity:
- LC50, Fish (Pimephales promelas): 10.6 mg/L (96 h) [ECHA].
- LC50, Invertebrates (Daphnia magna): 23.9 mg/L (48 h) [ECHA].

Persistence/Degradability

The substance is readily biodegradable (rapidly degraded through biodegradation and hydrolysis reactions).

Mobility

No information available.

Environmental Fate

Harmful to aquatic life - Avoid release to the environment.

Bioaccumulation Potential

The product is not bioaccumulating.
*Log Pow: 0.45

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS

General Information

Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill

High-temperature incineration or high-temperature melt processing.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
EPG	18P Liquids - Highly Flammable, Toxic And/Or Corrosive (Polymerises Violently)
UN Number	2023
Hazchem	•3W
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
EPG	18P Liquids - Highly Flammable, Toxic And/Or Corrosive (Polymerises Violently)
UN Number	2023
Hazchem	•3W
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
EPG	18P Liquids - Highly Flammable, Toxic And/Or Corrosive (Polymerises Violently)
UN Number	2023
Hazchem	•3W
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
ERG	131P Flammable Liquids - Toxic (Polymerizing)
UN Number	2023
Hazchem	•3W
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
UN Number	2023
Hazchem	•3W
Pack Group	II
Special Provision	No Data Available
EMS	F-E, S-D
Marine Pollutant	Yes

Air Transport
IATA DGR

Proper Shipping Name	EPICHLOROHYDRIN
Class	6.1 Toxic and Infectious Substances - Toxic Substances
Subsidiary Risk(s)	3 Flammable Liquids
UN Number	2023
Hazchem	•3W
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	EPICHLOROHYDRIN (not to be available except to authorised or licensed persons).
Poisons Schedule (Aust)	Schedule 7

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

Approval Code	HSR000977 (Reissued)

National/Regional Inventories

Australia (AIIC)	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)	Not Determined

16. OTHER INFORMATION

Related Product Codes	EPICHL1000, EPICHL1001, EPICHL1002, EPICHL1003, EPICHL1004, EPICHL1005, EPICHL1006, EPICHL1007, EPICHL1008, EPICHL1009, EPICHL1010, EPICHL1011, EPICHL1012, EPICHL1013, EPICHL1014, EPICHL1015, EPICHL1016, EPICHL1017, EPICHL1018, EPICHL1019, EPICHL1020, EPICHL1021, EPICHL2000, EPICHL2001, EPICHL2500, EPICHL3000, EPICHL3500, EPICHL4000, EPICHL4200, EPICHL4500, EPICHL5000, EPICHL5001, EPICHL5002, EPICHL5500, EPICHL6000, EPICHL6001, EPICHL6002, EPICHL6100, EPICHL6500, EPICHL7000, EPICHL7500, EPICHL8000, EPICHL8001, EPICHL9000
Revision	4
Revision Date	06 Aug 2021
Key/Legend	< Less Than > Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm^2** 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/cm^3** 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/m^3** 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^3** Cubic Metre

mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m^3 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