

1. IDENTIFICATION

Product Name	Sodium Isobutyl Xanthate (SIBX)
Other Names	Sodium O-isobutyl dithiocarbonate
Uses	Flotation agent in mining and metal extraction.
Chemical Family	Xanthates
Chemical Formula	C ₅ H ₉ NaOS ₂
Chemical Name	Carbonodithioic acid, O-(2-methylpropyl) ester, sodium salt
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)

Not Scheduled

Globally Harmonised System

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

Hazard Categories Self-heating Substances and Mixtures - Category 2
 Acute Toxicity (Oral) - Category 4
 Acute Toxicity (Dermal) - Category 4
 Skin Corrosion/Irritation - Category 2
 Serious Eye Damage/Irritation - Category 2A
 Toxic To Reproduction - Category 2
 Specific Target Organ Toxicity (Single Exposure) - Category 3
 Specific Target Organ Toxicity (Repeated Exposure) - Category 2

Pictograms



Signal Word Warning

Hazard Statements

H252	Self-heating in large quantities; may catch fire.
H302 + H312	Harmful if swallowed or in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated inhalation exposure.
AUH031	Contact with acids liberates toxic gas

Precautionary Statements	Prevention	P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P235 + P410	Keep cool. Protect from sunlight.
		P270	Do not eat, drink or smoke when using this product.
		P271	Use only outdoors or in a well-ventilated area.
		P201	Obtain special instructions before use.
	Response	P260	Do not breathe dusts or mists.
		P312	Call a POISON CENTER or doctor if you feel unwell.
		P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
		P337 + P313	If eye irritation persists: Get medical advice.
		P330	Rinse mouth.
		P332 + P313	If skin irritation occurs: Get medical advice.
		P362	Take off contaminated clothing.
	Storage	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.
		P308 + P313	IF exposed or concerned: Get medical advice.
P407		Maintain air gap between stacks or pallets.	
P420		Store separately.	
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.	
	P405	Store locked up.	

SAFETY DATA SHEET SODIUM ISOBUTYL XANTHATE (SIBX) REVISION 5, DATE 22 JUL 19

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)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification

Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium isobutyl xanthate	C ₅ H ₉ NaOS ₂	25306-75-6	>=90 %
Free alkali (Sodium hydroxide)	NaOH	1310-73-2	<=0.5 %
Other, non-hazardous ingredients	Unspecified	Unspecified	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

IF SWALLOWED: Rinse mouth, then drink a glass of water. Do not induce vomiting. If vomiting occurs, give further water. 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. Call a Poison Centre or doctor/physician for advice.

Skin

IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Wash skin and hair with plenty of soap and water. Call a Poison Centre or doctor/physician for advice. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.

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. 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

If exposed or concerned, get medical advice/attention. Treat symptomatically. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves. Keep victim calm and warm.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

SAFETY DATA SHEET SODIUM ISOBUTYL XANTHATE (SIBX) REVISION 5, DATE 22 JUL 19

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
Flammability Conditions	SPONTANEOUSLY COMBUSTIBLE SUBSTANCE/SELF-HEATING: Flammable/combustible material. May ignite on contact with air or moisture. *Self-heating in large quantities; may catch fire.
Extinguishing Media	For Xanthates (UN3342), use FLOODING AMOUNTS OF WATER for small and large fires to stop the reaction. Smothering will not work for these materials, they do not need air to burn. *CAUTION: Xanthates (UN3342), when flooded with water, will continue to evolve flammable Carbon disulfide/Carbon disulphide vapours.
Fire and Explosion Hazard	Risk of violent reaction or explosion! May burn rapidly with flare-burning effect. May react vigorously on contact with water. May re-ignite after fire is extinguished. Containers may explode when heated. *Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	Fire will produce irritating, toxic and/or corrosive gases, including Carbon disulfide, Hydrogen sulfide.
Special Fire Fighting Instructions	Contain runoff from fire control water - Runoff may pollute waterways. Runoff 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 will only 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	1Y

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Do not breathe dust/vapours and prevent contact with eyes, skin and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Clean Up Procedures	For spills of Xanthates (UN3342), Use clean, non-sparking tools to collect material; dissolve in 5 parts water and place it into loosely covered plastic containers for later disposal (see SECTION 13). *CAUTION: Xanthates (UN3342), when flooded with water, will continue to evolve flammable Carbon disulfide/Carbon disulphide vapours.
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Do not allow material to get wet.
Decontamination	After cleaning, flush away any residual traces with water.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. Runoff may create fire or explosion hazard! If contamination of sewers or waterways has occurred advise local emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Wear positive pressure self-contained breathing apparatus (SCBA). Fully encapsulating, vapour-protective clothing should be worn for spills and leaks with no fire.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. 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). SPONTANEOUSLY COMBUSTIBLE SUBSTANCE/SELF-HEATING: Keep away from heat and sources of ignition - No smoking. Take
-----------------	---

precautionary measures against static discharge.

Storage	Store separately in a cool, dry and well-ventilated place. Protect from sunlight. Keep container tightly closed - check regularly for spills. Avoid exposure to air and water/moisture (hygroscopic). Maintain air gap between stacks/pallets. Keep away from heat and sources of ignition - No smoking. Store away from foodstuffs and other/incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. COMPONENT: Sodium hydroxide (CAS No. 1310-73-2): - Safe Work Australia Exposure Standard: TWA = 2 mg/m ³ Peak limitation. - New Zealand Workplace Exposure Standard: Ceiling = 2 mg/m ³ , DECOMPOSITION PRODUCT: Carbon disulphide (CAS No. 75-15-0): - Safe Work Australia Exposure Standard: TWA = 10 ppm (31 mg/m ³); Absorption through the skin may be a significant source of exposure (Sk). - New Zealand Workplace Exposure Standard [Adopted 2019]: TWA = 1 ppm (3 mg/m ³); Skin absorption (skin); Ototoxin (oto).
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. *It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection if an inhalation risk exists. Recommended: Dust mask/particulate respirator; Supplied-air respirator if risk of exposure to products of decomposition (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles. - Hand protection: Wear protective gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, safety shoes.
Special Hazards Precautions	If carbon disulfide is present due to external decomposition from the chemical, the appropriate exposure controls should be applied.
Work Hygienic Practices	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and wash before storage or reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder, granule or pellets
Odour	Unpleasant, sulphurous
Colour	Yellow or grey
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

SAFETY DATA SHEET SODIUM ISOBUTYL XANTHATE (SIBX) REVISION 5, DATE 22 JUL 19

Specific Gravity	1.17 - 1.18
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	173.255 g/mol (SIBX)
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	Hygroscopic: absorbs moisture or water from surrounding air.
Potential for Dust Explosion	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion! May burn rapidly with flare-burning effect. May re-ignite after fire is extinguished.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	May react vigorously on contact with water.
Properties That May Initiate or Contribute to Fire Intensity	SPONTANEOUSLY COMBUSTIBLE SUBSTANCE/SELF-HEATING: Flammable/combustible material. May ignite on contact with air or moisture. *Self-heating in large quantities; may catch fire.
Reactions That Release Gases or Vapours	Fire/decomposition will produce irritating, toxic and/or corrosive gases, including Carbon disulfide, Hydrogen sulfide.
Release of Invisible Flammable Vapours and Gases	On contact with water, will evolve flammable Carbon disulfide/Carbon disulphide vapours.

10. STABILITY AND REACTIVITY

General Information	Reacts exothermically on contact with water producing Carbon disulfide. Contact with acids liberates toxic gas.
Chemical Stability	Stable under normal conditions of use.
Conditions to Avoid	Avoid dust formation. Avoid exposure to moisture/water. Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with water, oxidising agents, combustible materials, acids, phosgene, sulfur chlorides, copper and copper alloys.
Hazardous Decomposition Products	Fire/decomposition will produce irritating, toxic and/or corrosive gases, including Carbon disulfide, Hydrogen sulfide.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION**General Information**

- Acute toxicity: Harmful if swallowed and in contact with skin. Xanthates are metabolised in humans and animals to Carbon disulfide. May cause nausea, vomiting, diarrhoea, abdominal pain, convulsions and loss of consciousness; adverse effects on the central nervous system (CNS), liver and kidneys. Death can occur if ingested in large quantities. Will liberate Carbon disulfide in contact with moist skin, which can be absorbed through the skin. DECOMPOSITION PRODUCT: Carbon disulfide (CAS No. 75-15-0) is Harmful if inhaled.
- Skin corrosion/irritation: Causes skin irritation.
- Eye damage/irritation: Causes serious eye irritation.
- Respiratory/skin sensitisation: May cause an allergic skin reaction. No information available on the product itself. READ-ACROSS: Potassium amyl xanthate was reported to not be a respiratory sensitiser. Sodium isopropyl xanthate was reported to be a skin sensitiser in a GPMT and potassium isoamyl xanthate was a skin sensitiser in a local lymph node assay [NICNAS].
- Germ cell mutagenicity: No information available on the product itself. READ-ACROSS: Potassium isoamyl xanthate is not considered to have genotoxic or mutagenic potential. Sodium ethyl xanthate is not classified as genotoxic. In vivo genotoxicity data on Carbon disulfide (metabolite) indicate that the chemical has limited genotoxic potential [NICNAS].
- Carcinogenicity: No information available.
- Reproductive toxicity: Suspected of damaging fertility & Suspected of damaging the unborn child. No information available on the product itself. READ-ACROSS: Carbon disulfide (metabolite) is Suspected of damaging fertility & Suspected of damaging the unborn child.
- STOT (single exposure): May cause respiratory irritation. High concentrations can produce central nervous system depression, leading to loss of co-ordination, impaired judgement and unconsciousness.
- STOT (repeated exposure): May cause damage to organs through prolonged or repeated exposure. No information available on the product itself. READ-ACROSS: Potassium amyl xanthate was reported to have harmful repeated dose toxicity based on results from animal tests following inhalational exposure [NICNAS]. DECOMPOSITION PRODUCT: Carbon disulfide (CAS No. 75-15-0) Causes damage to organs through prolonged or repeated exposure if inhaled. Repeated exposure to carbon disulfide was reported to induce neurotoxic effects [NICNAS].
- Aspiration toxicity: No information available.

Acute**Ingestion**

- Acute toxicity (Oral):
 COMPONENT: Sodium isobutyl xanthate (CAS No. 25306-75-6):
 - LD50, Rats: 500 mg/kg bw.

Carcinogen Category

None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into soils, drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container through a licensed waste contractor 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	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
EPG	25 Spontaneously Combustible Substances (Air And/Or Water Reactive)
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
EPG	25 Spontaneously Combustible Substances (Air And/Or Water Reactive)
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
EPG	25 Spontaneously Combustible Substances (Air And/Or Water Reactive)
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
ERG	135 Substances - Spontaneously Combustible
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-J
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)

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

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

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Not Assessed
----------------------	--------------

National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined

SAFETY DATA SHEET SODIUM ISOBUTYL XANTHATE (SIBX) REVISION 5, DATE 22 JUL 19

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	RAWMAT3000, RAWMAT3001, SOISBX0001, SOISBX1000, SOISBX1001, SOISBX1002, SOISBX1003, SOISBX1004, SOISBX1005, SOISBX1006, SOISBX1007, SOISBX1008, SOISBX1009, SOISBX1010, SOISBX1011, SOISBX1012, SOISBX1013, SOISBX1014, SOISBX1015, SOISBX1016, SOISBX1017, SOISBX1018, SOISBX1019, SOISBX1020, SOISBX1021, SOISBX1022, SOISBX1023, SOISBX1024, SOISBX1025, SOISBX1026, SOISBX1027, SOISBX2000, SOISBX2001, SOISBX2002, SOISBX3000, SOISBX3500, SOISBX3800, SOISBX4000, SOISBX4100, SOISBX4500, SOISBX4501, SOISBX4502, SOISBX4503, SOISBX4509, SOISBX4510, SOISBX4520, SOISBX4600, SOISBX4700, SOISBX5000, SOISBX5400, SOISBX5500, SOISBX6000, SOISBX8650, SOISBX8690
Revision	5
Revision Date	22 Jul 2019
Reason for Issue	Updated SDS
Key/Legend	<p>< 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</p>

SAFETY DATA SHEET SODIUM ISOBUTYL XANTHATE (SIBX) REVISION 5, DATE 22 JUL 19

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 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