

Safety Data Sheet Zinc sulfate, monohydrate Revision 4, Date 19 Oct 2019

1. IDENTIFICATION

Product Name Zinc sulfate, monohydrate

Other Names Zinc sulphate, monohydrate

Uses Dietary/mineral supplement; used in animal feeds, fertilisers, toothpaste; used commercially as an astringent,

coagulant, electrolyte, mordant, preservative.

Chemical Family No Data Available **Chemical Formula** ZnSO4.H2O

Chemical Name Sulfuric acid, zinc salt (1:1), monohydrate

Product Description No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Schedule 6 Poisons Schedule (Aust)

Globally Harmonised System

Corporate Office Sydney Locked Bag 15 Minto NSW 2566 Australia 2 Swettenham Road Minto NSW 2566 Australia All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

E-mail

Phone +61 2 9733 3000 +61 2 9733 3111 svdnev@redox.com www.redox.com 92 000 762 345

Adelaide Brisbane Melbourne Perth

Sydney

Auckland Hawke's Bay

Kuala Lumpur USA





Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of

Chemicals (GHS)

Hazard Categories Acute Toxicity (Oral) - Category 4

Serious Eye Damage/Irritation - Category 1

Acute Hazard To The Aquatic Environment - Category 1

Pictograms







Signal Word Danger

Hazard Statements H302 Harmful if swallowed.

H318 Causes serious eye damage.H400 Very toxic to aquatic life.

Precautionary Statements Prevention P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.
P280 Wear eye protection/face protection.
P264 Wash skin thoroughly after handling.

Response P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 Rinse mouth.

P305 + P351 + P338

+ P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON $\,$

CENTRE/doctor

P391 Collect spillage.

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 NOT 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	
		6.9B	Substances that are harmful to human target organs or systems	
		8.3A	Substances that are corrosive to ocular tissue	
	Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment	
		9.2C	Substances that are harmful 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
Zinc sulphate, monohydrate	ZnSO4.H2O	7446-19-7	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then drink plenty of water. Do NOT induce vomiting. 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 flushing until advised to

stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Skin IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Wash skin and hair with plenty of soap

and running water. If skin irritation 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. If respiratory

symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Administer oxygen if

breathing is difficult.

Advice to Doctor

Treat symptomatically. Keep victim calm and warm - Obtain immediate medical care. 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 If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is

out.

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.

Fire and Explosion Hazard Decomposes on heating, emitting toxic fumes. Containers may explode when heated.

Hazardous Products of

Combustion

Fire or heat may produce irritating and/or toxic fumes, including Sulfur oxides, Zinc oxides.

Special Fire Fighting

Instructions

Contain runoff from fire control or dilution water - Runoff may pollute waterways.

Personal Protective Equipment Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform

may 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

No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid

generating dust. Avoid breathing dust and contact with eyes, skin and clothing.

Clean Up Procedures Collect material (sweep up, shovel) and keep in suitable, closed containers for disposal (see SECTION 13).

Decontamination Clean contaminated surfaces with an excess of water.

Decontamination Olean Contaminated Surfaces with an excess of w

Environmental Precautionary Measures

Containment

Spillages and decontamination runoff should be prevented from entering drains and watercourses.

Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Prevent dust cloud.

Evacuation Criteria

Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher

ground.

Personal Precautionary

Measures

Use personal protective equipment as required (see SECTION 8).

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. Minimise dust generation and accumulation. Avoid breathing dust/fume and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Avoid release to the environment - Collect spillage

(see SECTION 6).

Storage Storage Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect from

water/moisture (hygroscopic). Keep away from heat and sources of ignition - No smoking. Keep away from

incompatible materials (see SECTION 10).

Container Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General No specific exposure standards are available for this product. For dusts from solid substances without specific

occupational exposure standards:

- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3 (measured as inhalable dust).

- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3; TWA = 3 mg/m3 (respirable dust).

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 dust production, wear respiratory protection. Recommended: Dust

mask/particulate filter respirator (refer to AS/NZS 1715 & 1716).

- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Safety glasses, in

case of dust production, protective goggles.

- Hand protection: Handle with gloves. Recommended: Impermeable protective gloves, e.g. Nitrile rubber.

- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended:

Chemical-resistant protective clothing and safety shoes.

Special Hazards Precaustions

Work Hygienic Practices

No information available.

Do not eat, drink or smoke when using this product. Always wash hands and face immediately after handling this product and before leaving the workplace. Remove contaminated clothing immediately and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid

AppearancePowder granulesOdourOdourlessColourWhite

pH No Data Available
 Vapour Pressure No Data Available
 Relative Vapour Density No Data Available
 Boiling Point No Data Available

Melting Point 229 °C

Freezing Point

No Data Available

Solubility

210 g/l in water 20°C

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** No Data Available **Density** 3.35 g/cm3 **Specific Heat** No Data Available

Molecular Weight 179.467

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

No information available.

Flame Propagation or Burning

Rate of Solid Materials

No information available.

Non-Flammables That Could Contribute Unusual Hazards to a

No information available.

Fire Properties That May Initiate or

Non-combustible; Material itself does not burn.

Contribute to Fire Intensity

Reactions That Release Gases

or Vapours

Decomposes on heating, emitting irritating and/or toxic fumes, including Sulfur oxides, Zinc oxides.

Release of Invisible Flammable

Vapours and Gases

No information available.

10. STABILITY AND REACTIVITY

General InformationNo dangerous reactions known under normal conditions of use.

Chemical Stability Stable under recommended storage conditions.

Conditions to Avoid Avoid generating dust. Protect from moisture/water (hygroscopic).

Materials to Avoid Incompatible/reactive with strong bases, oxidising agents.

Hazardous Decomposition

Products

Decomposes on heating, emitting irritating and/or toxic fumes, including Sulfur oxides, Zinc oxides.

Hazardous Polymerisation Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Harmful if swallowed; May cause gastrointestinal complaints, nausea, vomiting, abdominal pain, diarrhoea, blood in stool, decreased renal function.
- Skin corrosion/irritation: May cause slight irritation.
- Eye damage/irritation: Causes serious eye damage; May cause corrosion of the eye tissue, visual disturbances.

- Respiratory/skin sensitisation: Not considered to be a skin sensitiser.
- Germ cell mutagenicity: Not mutagenic to germ cells.
- Carcinogenicity: No information available.
- Reproductive toxicity: While fertility toxicity has been observed at very high doses, the levels at which this occurs are unlikely to result from industrial use of the chemical.
- STOT (single exposure): Inhalation of dust or fume can irritate the respiratory tract; may cause coughing.
- STOT (repeated exposure): Not considered to cause serious damage to health from repeated exposure. Zinc over-consumption may cause haematological effects such as anaemia, neutropaenia, decreased cholesterol levels, immuno-toxic and gastrointestinal effects.
- Aspiration toxicity: No information available.

Acute

Ingestion Acute toxicity (Oral):

- LD50, Mouse: 926 mg/kg bw. (equiv. 337 mg Zn/kg) [ECHA].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:

- LC50, Fish: 2.4 mg/l (96 h).

- EC50, Crustacea (Daphnia): 0.56 mg/l (48 h). - EC50, Algae: 0.05 - 0.36 mg/l (72 h).

Persistence/Degradability Biodegradation is not applicable to metals/inorganic substances.

Mobility No information available.

Environmental Fate Very toxic to aquatic life - Avoid release to the environment.

Bioaccumulation Potential No information available.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Recycle/reuse or dispose of contents/container to a licensed disposal company and in accordance with

local/regional/national regulations.

Special Precautions for Land Fill Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an

afterburner and scrubber.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name Zinc sulfate, monohydrate

ClassNo Data AvailableSubsidiary Risk(s)No Data Available

EPG 47 Low To Moderate Hazard Substances

UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available

Special Provision AU01

Comments Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle

exceeding 500 kg(L) or IBCs.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulfate, monohydrate)

Class 9 Miscellaneous Dangerous Goods and Articles

Subsidiary Risk(s) No Data Available

EPG 47 Low To Moderate Hazard Substances

 UN Number
 3077

 Hazchem
 2Z

 Pack Group
 III

Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulfate, monohydrate)

Class 9 Miscellaneous Dangerous Goods and Articles

Subsidiary Risk(s) No Data Available

EPG 47 Low To Moderate Hazard Substances

 UN Number
 3077

 Hazchem
 2Z

 Pack Group
 III

Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name Zinc sulfate, monohydrate

ClassNo Data AvailableSubsidiary Risk(s)No Data Available

ERG 171 Substances (Low to Moderate Hazard)

UN Number No Data Available
Hazchem No Data Available
Pack Group No Data Available
Special Provision No Data Available

Comments Not regulated as a hazardous material when transported by land in packagings <1,000 lbs (454 kg).

Sea Transport

IMDG Code

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulfate, monohydrate)

Class 9 Miscellaneous Dangerous Goods and Articles

Subsidiary Risk(s) No Data Available

 UN Number
 3077

 Hazchem
 2Z

 Pack Group
 III

Special Provision No Data Available

EMS F-A, S-F **Marine Pollutant** Yes

Air Transport

IATA DGR

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulfate, monohydrate)

Class 9 Miscellaneous Dangerous Goods and Articles

Subsidiary Risk(s) No Data Available

 UN Number
 3077

 Hazchem
 2Z

 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 NOT 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 InformationZINC SULFATEPoisons Schedule (Aust)Schedule 6

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR003733

National/Regional Inventories

Australia (AICS) Listed

Canada (DSL) Not Determined

Canada (NDSL) Not Determined

China (IECSC) Not Determined

Europe (EINECS) 231-793-3

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

ZISULF1000, ZISULF1002, ZISULF1003, ZISULF2000, ZISULP0068, ZISULP0100, ZISULP0101, ZISULP0102, ZISULP0103, ZISULP0104, ZISULP0105, ZISULP0106, ZISULP0107, ZISULP0108, ZISULP0109, ZISULP0110, ZISULP0111, ZISULP0112, ZISULP0113, ZISULP0114, ZISULP0115, ZISULP0116, ZISULP0117, ZISULP0118, ZISULP0119, ZISULP0120, ZISULP0121, ZISULP0122, ZISULP0123, ZISULP0124, ZISULP0125, ZISULP0126, ZISULP0127, ZISULP0128, ZISULP0129, ZISULP0130, ZISULP0131, ZISULP0132, ZISULP0133, ZISULP0134, ZISULP0135, ZISULP0200, ZISULP0201, ZISULP0400, ZISULP0401, ZISULP0500, ZISULP0501, ZISULP0502, ZISULP0503, ZISULP0504, ZISULP0505, ZISULP0900, ZISULP1000, ZISULP1001, ZISULP1002, ZISULP1003, ZISULP1004, ZISULP1005, ZISULP1006, ZISULP1007, ZISULP1008, ZISULP1009, ZISULP1010, ZISULP1011, ZISULP1012, ZISULP1013, ZISULP1014, ZISULP1015, ZISULP1016, ZISULP1017, ZISULP1018, ZISULP1019, ZISULP1020, ZISULP1021, ZISULP1022, ZISULP1050, ZISULP1060, ZISULP1100, ZISULP1101, ZISULP1102, ZISULP1103, ZISULP1200, ZISULP1201, ZISULP1250, ZISULP1251, ZISULP1252, ZISULP1253, ZISULP1254, ZISULP1255, ZISULP1260, ZISULP1300, ZISULP1301, ZISULP1302, ZISULP1303, ZISULP1304, ZISULP1305, ZISULP1306, ZISULP1307, ZISULP1308, ZISULP1310, ZISULP1312, ZISULP1313, ZISULP1320, ZISULP1400, ZISULP1401, ZISULP1402, ZISULP1403, ZISULP1404, ZISULP1600, ZISULP1601, ZISULP1602, ZISULP1603, ZISULP1604, ZISULP1800, ZISULP1801, ZISULP1804, ZISULP1805, ZISULP1806, ZISULP1807, ZISULP1808, ZISULP1810, ZISULP1811, ZISULP1812, ZISULP1813, ZISULP1814, ZISULP1815, ZISULP1816, ZISULP1817, ZISULP1818, ZISULP1819, ZISULP1824, ZISULP2500, ZISULP2501, ZISULP2700, ZISULP2701, ZISULP2702, ZISULP2703, ZISULP2704, ZISULP2705, ZISULP2706, ZISULP2707, ZISULP2708, ZISULP2709, ZISULP2750, ZISULP2800, ZISULP3000, ZISULP3001, ZISULP3002, ZISULP3003, ZISULP3004, ZISULP3005, ZISULP3006, ZISULP3007, ZISULP3008, ZISULP3200, ZISULP3201, ZISULP3202, ZISULP3203, ZISULP3204, ZISULP3500, ZISULP3501, ZISULP3502, ZISULP3503, ZISULP3600, ZISULP3601, ZISULP3602, ZISULP3603, ZISULP3604, ZISULP3800, ZISULP3801, ZISULP3900, ZISULP4000, ZISULP4001, ZISULP4002, ZISULP4003, ZISULP4004, ZISULP4005, ZISULP4006, ZISULP4010, ZISULP4100, ZISULP4101, ZISULP4102, ZISULP4200, ZISULP4201, ZISULP4202, ZISULP4203, ZISULP4204, ZISULP4250, ZISULP4300, ZISULP4700, ZISULP4701, ZISULP4900, ZISULP4901, ZISULP5000, ZISULP5100, ZISULP5200, ZISULP5205, ZISULP5220, ZISULP5225, ZISULP5300, ZISULP5301, ZISULP5302, ZISULP5400, ZISULP5600, ZISULP5700, ZISULP5701, ZISULP5900, ZISULP6050, ZISULP6100, ZISULP6101, ZISULP6200, ZISULP6201, ZISULP6202, ZISULP6203, ZISULP6205, ZISULP6206, ZISULP6210, ZISULP6250, ZISULP6251, ZISULP6252, ZISULP6255, ZISULP6260, ZISULP6261, ZISULP6262, ZISULP6265, ZISULP6270, ZISULP6275, ZISULP6300, ZISULP6301, ZISULP6302, ZISULP6401, ZISULP6500, ZISULP6501, ZISULP6700, ZISULP6701, ZISULP6900, ZISULP6901, ZISULP6902, ZISULP7100, ZISULP7101, ZISULP7102, ZISULP7105, ZISULP7106, ZISULP7300, ZISULP7301, ZISULP7400, ZISULP7401, ZISULP7402, ZISULP7403, ZISULP7500, ZISULP7501, ZISULP7502, ZISULP7503, ZISULP7504, ZISULP7505, ZISULP7600, ZISULP7601, ZISULP7602, ZISULP7603, ZISULP7700, ZISULP7701, ZISULP7704, ZISULP7705, ZISULP7710, ZISULP7712, ZISULP7750, ZISULP7751, ZISULP7760, ZISULP7761, ZISULP7800, ZISULP7801, ZISULP7900, ZISULP7910, ZISULP7912, ZISULP8000, ZISULP8001, ZISULP8002, ZISULP8003, ZISULP8004, ZISULP8005, ZISULP8006, ZISULP8007, ZISULP8008, ZISULP8100, ZISULP8200, ZISULP8201, ZISULP8300, ZISULP8400, ZISULP8500, ZISULP8501, ZISULP8600, ZISULP8601, ZISULP8605, ZISULP8700, ZISULP8701, ZISULP8900, ZISULP9500, ZISULP9501, ZISULP9900, ZISULP9970, ZISULP9975

Revision

Key/Legend

Revision Date Reason for Issue 19 Oct 2019

SDS Updated

Less Than
Greater Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square CentimetresCO2 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/I 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

Ib 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.

Itr 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