

1. IDENTIFICATION

Product Name	Zinc oxide
Other Names	C.I. 77947; C.I. Pigment White 4; Chinese white; Zinc monoxide; Zinc Oxide AKTIV; Zinc white
Uses	Additive.
Chemical Family	No Data Available
Chemical Formula	ZnO
Chemical Name	Zinc oxide
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

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	Acute Hazard To The Aquatic Environment - Category 1 Long-term Hazard To The Aquatic Environment - Category 1		
Pictograms			
Signal Word	Warning		
Hazard Statements	H410	Very toxic to aquatic life with long lasting effects.	
Precautionary Statements	Prevention	P273	Avoid release to the environment.
	Response	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

Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment
	9.3C	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Zinc oxide	ZnO	1314-13-2	>=93 %
May contain: Magnesium oxide	MgO	1309-48-4	0 - 4 %

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 unless directed to do so by medical personnel. Get medical advice/attention if you feel unwell. 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.
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. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	The symptoms of metal fume fever do not become manifest until a few hours have passed. Treat symptomatically. No action shall be taken involving any personal risk or without suitable training. 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	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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 does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon dioxide, Carbon monoxide, metal 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) in combination with normal firefighting clothing (full fire kit).
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	No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid creating dusty conditions and prevent wind dispersal. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Move containers from spill area. Collect material (sweep or vacuum up) and place it into a suitable, properly labelled container for disposal (see SECTION 13); if appropriate, moisten first or cover with damp absorbent to avoid generating dust.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. If environmental contamination 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	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. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as
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required (see SECTION 8). Avoid release to the environment - Collect spillage (see SECTION 6).

Storage

Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use; Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep away from foodstuffs and incompatible materials (see SECTION 10). Use appropriate containment to avoid environmental contamination.

Container

Keep in the original container or an approved alternative made from a compatible material. Do not store in unlabelled containers. Empty containers retain product residue and can be hazardous.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General

COMPONENT: Zinc oxide (CAS No. 1314-13-2):
- Safe Work Australia Exposure Standard for Zinc oxide (dust): TWA = 10 mg/m³*.
*This value is for inhalable dust containing no asbestos and <1% crystalline silica.
- Safe Work Australia Exposure Standard for Zinc oxide (fume): TWA = 5 mg/m³; STEL = 10 mg/m³.
- New Zealand WES for Zinc oxide, dust: TWA = 10 mg/m³ (respirable dust).
- New Zealand WES for Zinc oxide, fume: TWA = 3 mg/m³ (respirable dust); STEL = 10 mg/m³.
COMPONENT: Magnesium oxide (CAS No. 1309-48-4):
- Safe Work Australia Exposure Standard for Magnesium oxide (fume): TWA = 10 mg/m³.
- New Zealand WES for Magnesium oxide, fume: TWA = 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: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/respirator complying with an approved standard (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields; If operating conditions cause high dust concentrations to be produced, use dust goggles.
- Hand protection: Handle with gloves. Recommended (<1 hr): Chemical-resistant, impervious gloves, e.g. Polyvinyl chloride (PVC), Nitrile rubber (NBR), Polychloroprene (CR).
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear protective clothing, e.g. Overalls, safety shoes.

Special Hazards Precautions

No information available.

Work Hygienic Practices

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Solid

Appearance

Powder

Odour

Odourless

Colour

White to yellowish

pH

No Data Available

Vapour Pressure

No Data Available

Relative Vapour Density

No Data Available

Boiling Point

No Data Available

Melting Point

>800 - 1975 °C

Freezing Point

No Data Available

Solubility

Insoluble in cold water

Specific Gravity

5.61

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	5.6 g/cm ³
Specific Heat	No Data Available
Molecular Weight	81.4 g/mol
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 Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon dioxide, Carbon monoxide, metal oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Reacts violently with aluminium powder, magnesium powder and chlorinated rubber (on heating); This generates fire and explosion hazard.
Chemical Stability	Stable under normal storage and handling conditions.
Conditions to Avoid	Avoid dust formation. Avoid release to the environment.
Materials to Avoid	Incompatible/reactive with acids, alkalis, magnesium, aluminium, chlorinated rubber (on heating).
Hazardous Decomposition Products	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Carbon dioxide, Carbon monoxide, metal oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on possible routes of exposure:</p> <ul style="list-style-type: none"> - Ingestion: No adverse effects expected; Large amounts may cause abdominal pain, diarrhoea, nausea, vomiting. - Eye contact: Non-irritating; May cause (mechanical) eye irritation, redness. - Skin contact: Non-irritating; No adverse effects expected. - Inhalation: Dust may cause respiratory irritation, coughing, sore throat. Fumes may cause metallic taste, headache, fever, chest tightness, shortness of breath, weakness, muscle pain. <p>Chronic effects: Repeated or prolonged inhalation of (Zinc oxide) dust may lead to chronic respiratory irritation.</p>
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Acute

Ingestion	Acute toxicity (Oral): COMPONENT: Zinc oxide (CAS No. 1314-13-2): - LD50, Rat: >5,000 mg/kg COMPONENT: Magnesium oxide (CAS No. 1309-48-4): - LD50, Rat: >5,000 mg/kg
Inhalation	Acute toxicity (Inhalation - Dust/mist): COMPONENT: Zinc oxide (CAS No. 1314-13-2): - LC50, Rat: >5,700 mg/m ³ (4 h).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: COMPONENT: Zinc oxide (CAS No. 1314-13-2): - EC50, Daphnia (Ceriodaphnia dubia): 0.413 mg Zn/L (48 h) [US EPA 821-R-02-012; pH: <7]. - IC50, Algae (Pseudokirchneriella subcapitata): 0.136 mg Zn/L (72 h) [OECD 201, Growth Inhibition Test; pH: >7 - 8.5].
Persistence/Degradability	No information available; The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility	No information available.
Environmental Fate	Very toxic to aquatic life with long lasting effects - Avoid release to the environment.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	The generation of waste should be avoided or minimised wherever possible. Dispose of surplus and non-recyclable product via a licensed waste disposal contractor and in accordance with local/regional/national regulations. This material and its container must be disposed of in a safe way. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Special Precautions for Land Fill	Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Zinc oxide
Class	No Data Available
Subsidiary 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	UN#3077

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)
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 oxide)
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	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)
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 oxide)
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)
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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	HSR002054
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	215-222-5
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

ZIOXID0001, ZIOXID0002, ZIOXID0500, ZIOXID0700, ZIOXID1000, ZIOXID1001, ZIOXID1002, ZIOXID1003, ZIOXID1004, ZIOXID1005, ZIOXID1006, ZIOXID1007, ZIOXID1008, ZIOXID1009, ZIOXID1010, ZIOXID1011, ZIOXID1012, ZIOXID1013, ZIOXID1014, ZIOXID1015, ZIOXID1016, ZIOXID1017, ZIOXID1018, ZIOXID1019, ZIOXID1020, ZIOXID1021, ZIOXID1022, ZIOXID1023, ZIOXID1024, ZIOXID1025, ZIOXID1026, ZIOXID1027, ZIOXID1028, ZIOXID1029, ZIOXID1030, ZIOXID1031, ZIOXID1032, ZIOXID1033, ZIOXID1034, ZIOXID1035, ZIOXID1036, ZIOXID1037, ZIOXID1038, ZIOXID1039, ZIOXID1040, ZIOXID1041, ZIOXID1042, ZIOXID1043, ZIOXID1044, ZIOXID1045, ZIOXID1046, ZIOXID1047, ZIOXID1048, ZIOXID1049, ZIOXID1050, ZIOXID1051, ZIOXID1052, ZIOXID1053, ZIOXID1054, ZIOXID1055, ZIOXID1056, ZIOXID1057, ZIOXID1058, ZIOXID1059, ZIOXID1060, ZIOXID1061, ZIOXID1062, ZIOXID1063, ZIOXID1064, ZIOXID1065, ZIOXID1066, ZIOXID1067, ZIOXID1068, ZIOXID1069, ZIOXID1070, ZIOXID1071, ZIOXID1072, ZIOXID1073, ZIOXID1074, ZIOXID1075, ZIOXID1076, ZIOXID1077, ZIOXID1078, ZIOXID1079, ZIOXID1080, ZIOXID1081, ZIOXID1082, ZIOXID1083, ZIOXID1084, ZIOXID1100, ZIOXID1400, ZIOXID1500, ZIOXID1501, ZIOXID1502, ZIOXID1503, ZIOXID1600, ZIOXID1700, ZIOXID1701, ZIOXID1702, ZIOXID1703, ZIOXID1800, ZIOXID1801, ZIOXID1802, ZIOXID1803, ZIOXID1804, ZIOXID1805, ZIOXID1806, ZIOXID1900, ZIOXID1901, ZIOXID1902, ZIOXID1903, ZIOXID2000, ZIOXID2001, ZIOXID2002, ZIOXID2003, ZIOXID2100, ZIOXID2101, ZIOXID2200, ZIOXID2201, ZIOXID2202, ZIOXID2256, ZIOXID2300, ZIOXID2400, ZIOXID2401, ZIOXID2500, ZIOXID2501, ZIOXID2502, ZIOXID2600, ZIOXID2601, ZIOXID2700, ZIOXID2701, ZIOXID2800, ZIOXID2900, ZIOXID3000, ZIOXID3100, ZIOXID3101, ZIOXID3200, ZIOXID3201, ZIOXID3300, ZIOXID3400, ZIOXID3500, ZIOXID3501, ZIOXID3502, ZIOXID3510, ZIOXID3515, ZIOXID3520, ZIOXID3600, ZIOXID3601, ZIOXID3605, ZIOXID3610, ZIOXID3900, ZIOXID4000, ZIOXID4001, ZIOXID4002, ZIOXID4100, ZIOXID4200, ZIOXID4300, ZIOXID4400, ZIOXID4500, ZIOXID4600, ZIOXID4700, ZIOXID4800, ZIOXID4900, ZIOXID5000, ZIOXID5001, ZIOXID5002, ZIOXID5100, ZIOXID5200, ZIOXID5201, ZIOXID5300, ZIOXID5400, ZIOXID5500, ZIOXID5501, ZIOXID5502, ZIOXID5600, ZIOXID5700, ZIOXID5800, ZIOXID5900, ZIOXID6000, ZIOXID6001, ZIOXID6002, ZIOXID6003, ZIOXID6004, ZIOXID6100, ZIOXID6101, ZIOXID6300, ZIOXID6400, ZIOXID6450, ZIOXID6500, ZIOXID6550, ZIOXID6700, ZIOXID7000, ZIOXID7001, ZIOXID7500, ZIOXID7501, ZIOXID7502, ZIOXID7600, ZIOXID7700, ZIOXID8000, ZIOXID8001, ZIOXID8400, ZIOXID8410, ZIOXID8500, ZIOXID8600, ZIOXID8700, ZIOXID8900, ZIOXID8910, ZIOXID8911, ZIOXID8912, ZIOXID8913, ZIOXID8914, ZIOXID9000, ZIOXID9001, ZIOXID9010, ZIOXID9025, ZIOXID9100, ZIOXID9110, ZIOXID9200, ZIOXID9220, ZIOXID9221, ZIOXID9222, ZIOXID9250, ZIOXID9268, ZIOXID9270, ZIOXID9300, ZIOXID9310, ZIOXID9320, ZIOXID9321, ZIOXID9322, ZIOXID9399, ZIOXID9400, ZIOXID9401, ZIOXID9405, ZIOXID9406, ZIOXID9410, ZIOXID9450, ZIOXID9460, ZIOXID9490, ZIOXID9499, ZIOXID9500, ZIOXID9501, ZIOXID9510, ZIOXID9600, ZIOXID9700, ZIOXID9800, ZIOXID9900, ZIOXID9901, ZIOXIL1000

Revision

3

Revision Date

26 Jul 2017

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
NIHSC 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