

1. IDENTIFICATION

Product Name	Copper sulphate, pentahydrate
Other Names	Copper(II) sulphate, pentahydrate
Uses	Industrial, professional, consumer uses; Absorbents; Ceramics; Coatings and inks; Cosmetics; Electroplating and galvanic; Fertiliser; Glass; Laboratory chemicals; Lubricants and greases; Leather dyes; Mineral flotation; Raw material for non-ferrous smelting; Non-metal surface treatment; Pigments; Processing aids; Putties, fillers, construction chemicals; Polishes and waxes; Photochemicals; Raw material for production of other compounds and fine chemicals; Rubber and plastic; Washing and cleaning products; Catalyst; Textile dyes; Adhesives; Water treatment.
Chemical Family	No Data Available
Chemical Formula	CuSO ₄ .5H ₂ O
Chemical Name	Sulfuric acid, copper(2+) salt (1:1), pentahydrate
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

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Schedule 6

Globally Harmonised System

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

Hazard Categories Acute Toxicity (Oral) - Category 4
Serious Eye Damage/Irritation - Category 1



Acute Hazard To The Aquatic Environment - Category 1
 Long-term Hazard To The Aquatic Environment - Category 1

Pictograms



Signal Word

Danger

Hazard Statements

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention	P280	Wear eye protection/face protection.
	P273	Avoid release to the environment.
	P270	Do not eat, drink or smoke when using this product.
Response	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.
	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
	P330	Rinse mouth.
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)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Copper sulphate, pentahydrate	CuSO4.5H2O	7758-99-8	>=98 %
Ingredients determined not to be hazardous	Unspecified	Unspecified	Balance %

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. Immediately call a Poison Centre or doctor/physician for advice.

Skin IF ON SKIN (or hair): Remove and isolate 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.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory



Inhaled	symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. Administer Methylene Blue for methemoglobinemia, BAL, DMPS, EDTA and d-penicillamine. Jaundice and haemolysis can appear after 5-6 hours. Symptoms of liver failure can appear after 3-4 days.
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. Dike fire-control water for later disposal.
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. Use the most suitable extinguishing media for the specific situation, evaluating their compatibility with the possible presence of other substances at the fire site. Do not scatter spilled material with high-pressure water streams.
Fire and Explosion Hazard	The substance decomposes on heating producing toxic and corrosive fumes.
Hazardous Products of Combustion	The substance decomposes on heating producing toxic and corrosive fumes, including Sulfur oxides (SO _x).
Special Fire Fighting Instructions	Contain runoff from fire control water - Runoff may pollute waterways. Dispose of contaminated fire extinguishing water and fire residues according to local regulations.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	Not applicable to an inorganic solid
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. Do not touch or walk through spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area. Deliver for disposal in compliance with the regulations in force (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud. Cover powder spill with plastic sheet or tarp to minimize spreading.
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 clothing as required (see SECTION 8). Avoid release to the environment - Collect spillage (see SECTION 6).
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Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use - Protect against physical damage and check regularly for spills. Avoid exposure to air/moisture/humidity. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep only in correctly labelled original containers or containers suitable for the type of product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. - Safe Work Australia Exposure Standard for Copper, dusts and mists (as Cu): TWA = 1 mg/m3. - New Zealand Workplace Exposure Standard for Copper and its inorganic compounds, as Cu [Adopted 2020]: TWA = 0.01 mg/m3 (respirable); Dermal sensitiser (dsen).
Exposure Limits	No Data Available
Biological Limits	Predicted no-effect concentrations (PNECs): - Freshwater: 7.8 µg/l - Marine water: 5.2 µg/l - Freshwater sediment: 87 mg/kg dw. - Marine water sediment: 676 mg/kg dw. - Soil: 288 mg/kg dw. - STP: 230 µg/l
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. Ensure ventilation is adequate and that air concentrations of components are controlled below Workplace Exposure Standards.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/respirator, with type P filter, whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles; Face-shield for operations that cause splashing or spray mist. - Hand protection: Handle with gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Long-sleeved work clothes or overalls, safety shoes.
Special Hazards Precautions	Minimize the residue present in the mixers before washing and cleaning operations, to reduce its presence in the waste water.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals/micro-crystals
Odour	Odourless
Colour	Blue or light blue
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	22 g/100 ml water 25°C
Specific Gravity	No Data Available
Flash Point	Not applicable to an inorganic solid
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available



Corrosion Rate	No Data Available
Decomposition Temperature	>=110 °C
Density	2.286 g/cm ³
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	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	The substance decomposes on heating producing toxic and corrosive fumes, including Sulfur oxides (SO _x).
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	The solution in water is a weak acid. Attacks many metals in the presence of water.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid dust formation. Avoid exposure to air.
Materials to Avoid	Incompatible/reactive with strong bases, hydroxylamine, magnesium, steel, (finely powdered) metals, sulfuric acid, caustics, ammonia, aliphatic amines, alkanolamines, amides, alkylene oxides, epichlorohydrin, organic anhydrides, isocyanates, vinyl acetate.
Hazardous Decomposition Products	The substance decomposes on heating producing toxic and corrosive fumes, including Sulfur oxides (SO _x).
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: Harmful if swallowed; Corrosive on ingestion with abdominal pain, burning sensation, diarrhoea, nausea, vomiting, shock or collapse. - Skin corrosion/irritation: May cause skin irritation, redness, pain. Non-irritating (Rabbit) [OECD Guideline 404]. - Eye damage/irritation: Causes serious eye damage, pain, redness, blurred vision. Serious irritation/irreversible eye damage (Rabbit) [OECD Guideline 405]. - Respiratory/skin sensitisation: Non-sensitising (Guinea pig) [OECD Guideline 406]. - Germ cell mutagenicity: Negative, in-vivo: Non-programmed DNA synthesis, male rats (Copper sulphate) [OECD Guideline 486]. Negative, in-vitro: Bacterial reverse mutation assay (Copper sulphate) [OECD Guideline 471]. - Carcinogenicity: Not listed as carcinogenic according to IARC.
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- Reproductive toxicity: Data are conclusive but not sufficient to classify.
- STOT (single exposure): Inhalation of dusts/aerosols may be irritating to the respiratory tract, with cough, sore throat. Ingestion may cause effects on the blood, kidneys and liver, resulting in hemolytic anemia, kidney impairment, liver impairment.
- STOT (repeated exposure): Lungs may be affected by repeated or prolonged exposure to the aerosol. The substance may have effects on the liver when ingested.
- Aspiration toxicity: No information available.

Acute

Ingestion	Acute Toxicity (Oral): - LD50, Rat (male/female): 482 mg/kg bw [OECD Guideline 401].
Other	Acute toxicity (Dermal): - LD50, Rat (male/female): >2,000 mg/kg [OECD Guideline 402].
Reproduction	Reproductive toxicity (Oral): - NOAEL, Rat: >1,500 ppm [OECD Guideline 416].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life with long lasting effects.
Persistence/Degradability	High persistence in water/soil; High persistence in air.
Mobility	Low mobility in soil (KOC: 6.124).
Environmental Fate	Avoid release to the environment - Prevent entry into soils, drains and waterways.
Bioaccumulation Potential	Low bioaccumulative potential (LogKOW: -2.2002).
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Recycle product/packaging wherever possible or dispose of in an authorised landfill 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	Copper sulphate, pentahydrate
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	Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.



Sea Transport

IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper sulphate, pentahydrate)
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. (Copper sulphate, pentahydrate)
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	COPPER SULFATE
Poisons Schedule (Aust)	Schedule 6

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	231-847-6
Europe (REACH)	01-2119520566-40-0000
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

COPLIQ0102, COPLIQ5300, COPSUB1000, COPSUF0500, COPSUF0600, COPSUF0700, COPSUF1000, COPSUL0100, COPSUL0101, COPSUL0102, COPSUL0103, COPSUL0105, COPSUL0220, COPSUL0221, COPSUL0222, COPSUL0223, COPSUL0225, COPSUL0501, COPSUL0502, COPSUL0600, COPSUL0601, COPSUL0602, COPSUL0700, COPSUL0701, COPSUL0800, COPSUL0801, COPSUL0900, COPSUL1001, COPSUL1002, COPSUL1003, COPSUL1004, COPSUL1005, COPSUL1006, COPSUL1007, COPSUL1008, COPSUL1009, COPSUL1010, COPSUL1011, COPSUL1012, COPSUL1013, COPSUL1014, COPSUL1015, COPSUL1016, COPSUL1017, COPSUL1018, COPSUL1019, COPSUL1020, COPSUL1021, COPSUL1022, COPSUL1023, COPSUL1024, COPSUL1025, COPSUL1026, COPSUL1027, COPSUL1028, COPSUL1029, COPSUL1030, COPSUL1031, COPSUL1032, COPSUL1033, COPSUL1034, COPSUL1035, COPSUL1036, COPSUL1037, COPSUL1038, COPSUL1039, COPSUL1040, COPSUL1041, COPSUL1042, COPSUL1043, COPSUL1044, COPSUL1045, COPSUL1046, COPSUL1100, COPSUL1102, COPSUL1110, COPSUL1111, COPSUL1150, COPSUL1205, COPSUL1300, COPSUL1301, COPSUL1303, COPSUL1304, COPSUL1500, COPSUL1502, COPSUL1510, COPSUL1520, COPSUL1600, COPSUL1601, COPSUL1602, COPSUL1701, COPSUL1702, COPSUL1800, COPSUL1801, COPSUL1802, COPSUL1803, COPSUL1804, COPSUL1805, COPSUL1806, COPSUL1807, COPSUL1808, COPSUL1809, COPSUL1900, COPSUL1901, COPSUL2000, COPSUL2001, COPSUL2002, COPSUL2003, COPSUL2004, COPSUL2005, COPSUL2101, COPSUL2102, COPSUL2200, COPSUL2201, COPSUL2202, COPSUL2203, COPSUL2210, COPSUL2212, COPSUL2224, COPSUL2225, COPSUL2226, COPSUL2300, COPSUL2301, COPSUL2302, COPSUL2303, COPSUL2304, COPSUL2400, COPSUL2401, COPSUL2402, COPSUL2403, COPSUL2405, COPSUL2500, COPSUL2501, COPSUL2502, COPSUL2600, COPSUL2601, COPSUL2700, COPSUL2701, COPSUL2800, COPSUL2900, COPSUL2901, COPSUL3001, COPSUL3002, COPSUL3003, COPSUL3004, COPSUL3005, COPSUL3006, COPSUL3007, COPSUL3008, COPSUL3050, COPSUL3100, COPSUL3200, COPSUL3201, COPSUL3300, COPSUL3301, COPSUL3333, COPSUL3334, COPSUL3401, COPSUL3402, COPSUL3500, COPSUL3501, COPSUL3502, COPSUL3503, COPSUL3600, COPSUL3601, COPSUL3700, COPSUL3701, COPSUL3702, COPSUL3800, COPSUL3801, COPSUL3900, COPSUL3901, COPSUL4000, COPSUL4001, COPSUL4002, COPSUL4003, COPSUL4100, COPSUL4101, COPSUL4102, COPSUL4200, COPSUL4201, COPSUL4202, COPSUL4203, COPSUL4204, COPSUL4205, COPSUL4206, COPSUL4300, COPSUL4301, COPSUL4302, COPSUL4400, COPSUL4600, COPSUL4700, COPSUL4800, COPSUL4801, COPSUL4802, COPSUL4900, COPSUL4901, COPSUL4902, COPSUL5000, COPSUL5001, COPSUL5002, COPSUL5003, COPSUL5100, COPSUL5101, COPSUL5102, COPSUL5200, COPSUL5201, COPSUL5202, COPSUL5300, COPSUL5301, COPSUL5302, COPSUL5303, COPSUL5304, COPSUL5305, COPSUL5306, COPSUL5307, COPSUL5310, COPSUL5312, COPSUL5320, COPSUL5330, COPSUL5350, COPSUL5353, COPSUL5401, COPSUL5500, COPSUL5501, COPSUL5600, COPSUL5700, COPSUL5800, COPSUL5801, COPSUL5900, COPSUL6000, COPSUL6001, COPSUL6100, COPSUL6101, COPSUL6200, COPSUL6201, COPSUL6300, COPSUL6301, COPSUL6310, COPSUL6400, COPSUL6500, COPSUL6501, COPSUL6502, COPSUL6600, COPSUL6700, COPSUL6701, COPSUL6800, COPSUL6801, COPSUL6802, COPSUL6803, COPSUL6804, COPSUL6805, COPSUL6806, COPSUL6807, COPSUL6808, COPSUL6809, COPSUL6900, COPSUL7000, COPSUL7100, COPSUL7200, COPSUL7300, COPSUL7400, COPSUL7500, COPSUL7600, COPSUL7601, COPSUL7602, COPSUL7604, COPSUL7605, COPSUL7606, COPSUL7607, COPSUL7608, COPSUL7609, COPSUL7610, COPSUL7611, COPSUL7612, COPSUL7613, COPSUL7614, COPSUL7615, COPSUL7616, COPSUL7617, COPSUL7618, COPSUL7619, COPSUL7620, COPSUL7621, COPSUL7622, COPSUL7623, COPSUL7624, COPSUL7625, COPSUL7626, COPSUL7627, COPSUL7628, COPSUL7700, COPSUL7800, COPSUL7900, COPSUL8001, COPSUL8002, COPSUL8003, COPSUL8004, COPSUL8005, COPSUL8006, COPSUL8100, COPSUL8101, COPSUL8102, COPSUL8200, COPSUL8300, COPSUL8400, COPSUL8500, COPSUL8600, COPSUL8700, COPSUL8800, COPSUL8900, COPSUL9000, COPSUL9100, COPSUL9101, COPSUL9200, COPSUL9300, COPSUL9400, COPSUL9500, COPSUL9600, COPSUL9700, COPSUL9800, COPSUL9900, COPSUL9950, COPSUL9951, COPSUL9952, COPSUL9953, COPSUL9955, COPSUL9960, COPSUL9961, COPSUL9970, COPSUL9971, COPSUL9972, COSULP9801

Revision 5
Revision Date 30 Jun 2021



Reason for Issue

update sds

Key/Legend

< Less Than
 > Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO₂ Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

