SAFETY DATA SHEET
DIETHYLAMINE
REVISION 6, DATE 11 OCT 22

1. IDENTIFICATION

Product Name	**Diethylamine**
Other Names	N,N-Diethylamine
Uses	Chemical used in synthesis and/or formulation of industrial products.
Chemical Family	No Data Available
Chemical Formula	C4H11N
Chemical Name	Ethanamine, N-ethyl-
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

Flammable Liquids - Category 2
Acute Toxicity (Oral) - Category 3
Acute Toxicity (Dermal) - Category 3
Acute Toxicity (Inhalation) - Category 4
Skin Corrosion/Irritation - Category 1A
Serious Eye Damage/Irritation - Category 1
Specific Target Organ Toxicity (Single Exposure) - Category 3
Acute Hazard To The Aquatic Environment - Category 2

Pictograms

Signal Word

Danger

Hazard Statements

H225	Highly flammable liquid and vapour.
H301 + H311	Toxic if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H401	Toxic to aquatic life.

Precautionary Statements

Prevention	**P210**	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P260	Do not breathe mist/vapour/spray.
	P273	Avoid release to the environment.
	P240	Ground and bond container and receiving equipment.
	P241	Use explosion-proof electrical/ventilating/lighting and all other equipment.
	P242	Use non-sparking tools.
	P243	Take action to prevent static discharges.
	P235	Keep cool.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
Response	**P370 + P378**	In case of fire: Use carbon dioxide (CO_2), dry chemical, alcohol resistant foam or water spray for extinction.
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
	P310	Immediately call a POISON CENTER or doctor.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P363	Wash contaminated clothing before reuse.
	P391	Collect spillage.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
Storage	**P403 + P233**	Store in a well-ventilated place. Keep container tightly closed.

		P405	Store locked up.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

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

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

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

HSNO Classifications	Physical Hazards	**3.1B**	Flammable liquid - high hazard
	Health Hazards	**6.1C**	Substances that are acutely toxic- Toxic
		6.1D	Substances that are acutely toxic - Harmful
		6.5B	Substances that are contact sensitisers
		6.9B	Substances that are harmful to human target organs or systems
		8.2B	Substances that are corrosive to dermal tissue UN PGII
		8.3A	Substances that are corrosive to ocular tissue

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Diethylamine	C4H11N	109-89-7	>=99.5 - <=100 %
Contains: Isopropylamine	C3H9N	75-31-0	>=0 - <=0.2 %
Contains: tert-Butylamine	C4H11N	75-64-9	>=0 - <=0.2 %
Contains: Ethyl(methyl)amine	C3H9N	624-78-2	>=0 - <=0.1 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink 200 - 300 ml of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. 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. Immediately call a Poison Centre or doctor/physician for advice; consult an eye specialist.
Skin	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. Apply sterile dressings. Immediately call a Poison Centre or doctor/physician for advice; consult a skin specialist. 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. Immediately call a Poison Centre or doctor/physician for advice. Immediately administer a corticosteroid from a controlled/metered dose inhaler! Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the

	substance; use alternative respiratory method or proper respiratory device - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat according to symptoms (decontamination, vital functions), no known specific antidote. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of the identity and nature of product (s) involved, and take precautions to protect themselves. *If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position).
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. Avoid getting water inside containers. *Public Safety Hazard: When any large containers are involved in a fire, consider initial evacuation of areas within 500 m in all directions. People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and any ventilation stopped.
Flammability Conditions	HIGHLY FLAMMABLE LIQUID & VAPOUR: Low flashpoint - Will be easily ignited by heat, sparks or flame.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO_2), alcohol-resistant foam or water spray for extinction - Do not use water jets. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray can be used. *Caution: Use of water spray when fighting fire may be inefficient.
Fire and Explosion Hazard	Risk of violent reaction or explosion! Vapours will form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air and will collect in low or confined areas. Many liquids are lighter than water. Containers may explode when heated. Vapours from runoff may create an explosion hazard.
Hazardous Products of Combustion	Fire will produce irritating, toxic and/or corrosive gases, including carbon monoxide, carbon dioxide, ammonia, hydrogen cyanide, nitrous gases, unburned hydrocarbons. Under certain conditions in case of fire other hazardous combustion products may be generated.
Special Fire Fighting Instructions	Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Runoff may be toxic and/or corrosive and may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and Liquid-tight chemical-protective clothing.
Flash Point	-26 °C [Closed cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	312 °C
Hazchem Code	•2WE

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. (no smoking, flares, sparks or flame) within at least 50 m. All equipment used in handling the product must be earthed. Do not touch or walk through spilled material. Do not breathe vapours and prevent contact with eyes, skin and clothing.
Clean Up Procedures	For large amounts, pump off product. Absorb small amounts with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect material and place it in suitable, properly labelled containers for later disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Vapour-suppressing foam may be used to control vapours; Water spray may be used to knock down or divert vapour clouds.
Decontamination	Clean contaminated floors and objects thoroughly with water and detergents.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep upwind and to higher ground. Keep unauthorised personnel away. Large spill: Immediately contact Police or Fire Brigade; Consider initial downwind evacuation of areas within at least 300 m.

Personal Precautionary Measures	Wear SCBA, fully-encapsulating, gas-tight suit and structural firefighting uniform when handling leaking or damaged containers and equipment. SCBA and chemical splash suits will offer limited protection for brief exposure provided there is no risk of ignition.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Do not breathe mist/vapours/spray and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). HIGHLY FLAMMABLE LIQUID & VAPOUR: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take action to prevent static discharge.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Storage temperature: <= 45 °C. Protect from temperatures above 80 °C (With longer exceeding of the indicated temperature packagings may be damaged). Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep only in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	For Diethylamine (CAS No. 109-89-7): - Safe Work Australia Exposure Standard: TWA = 10 ppm (30 mg/m3); STEL = 25 ppm (75 mg/m3). - New Zealand Workplace Exposure Standard [Adopted 2022]: TWA = 2 ppm (6 mg/m3); STEL = 5 ppm (15 mg/m3); Skin absorption (skin). COMPONENT: Isopropylamine (CAS No. 75-31-0): - Safe Work Australia Exposure Standard: TWA = 5 ppm (12 mg/m3); STEL = 10 ppm (24 mg/m3). - New Zealand Workplace Exposure Standard: TWA = 5 ppm (12 mg/m3); STEL = 10 ppm (24 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: In case of inadequate ventilation, wear respiratory protection. Recommended: Gas filter for gases/vapours of organic compounds (boiling point <65 °C, Type AX). In case of vapour/aerosol release, Full face mask with AX-P3 filter (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tightly fitting safety goggles and face-shield. - Hand protection: Wear protective gloves. Recommended: Chemical resistant protective gloves, e.g. PE laminate (ca. 0.1 mm coating thickness, breakthrough time of >480 min). FKM (0.7 mm coating thickness, breakthrough time of >240 min). Nitrile rubber (0.4 mm coating thickness, breakthrough time of >30 min). Gloves must be inspected regularly and prior to each use; Replace if necessary (e.g. pinhole leaks). - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Closed work clothing; chemical-protection suit.
Special Hazards Precaustions	In the presence of nitrosating agents, it is possible that this substance forms nitrosamines. Nitrosamines showed a carcinogenic effect in animal experiment.
Work Hygienic Practices	When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing immediately and dispose of safely. Wash contaminated clothing before reuse. Store work clothing separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Amine-like
Colour	Colourless to yellow
pH	13 100 g/l (20 °C)
Vapour Pressure	316 hPa [Literature data] (@ 25 °C)
Relative Vapour Density	2.52 Air = 1
Boiling Point	53.5 - 56.1 °C (1,013 hPa)
Melting Point	-50 °C
Freezing Point	No Data Available
Solubility	Miscible with water 25°C
Specific Gravity	0.71
Flash Point	-26 °C [Closed cup]
Auto Ignition Temp	312 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.71 g/cm3 [Literature data]
Specific Heat	No Data Available
Molecular Weight	73.14 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow: 0.58 (measured) [Literature data]
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	20 °C
Viscosity	0.319 mPa.s (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	pKA: 11.09 (20 °C)
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion! Public Safety Hazard!
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	Caution: Use of water spray when fighting fire may be inefficient.
Properties That May Initiate or Contribute to Fire Intensity	HIGHLY FLAMMABLE LIQUID & VAPOUR: Low flashpoint - Will be easily ignited by heat, sparks or flame.
Reactions That Release Gases or Vapours	Fire will produce irritating, toxic and/or corrosive gases, including carbon monoxide, carbon dioxide, ammonia, hydrogen cyanide, nitrous gases, unburned hydrocarbons. Under certain conditions in case of fire other hazardous combustion products may be generated.
Release of Invisible Flammable Vapours and Gases	Vapours will form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	Reacts with acids; The progress of reaction is exothermic. Some plastics, rubber or coatings can be corroded. No corrosive effect on metal.
Chemical Stability	No decomposition if stored and handled as prescribed/indicated. *Storage stability: - Storage temperature: <= 45 °C - Storage duration: 24 Months *From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.
Conditions to Avoid	Avoid extreme temperatures and sources of ignition.
Materials to Avoid	Incompatible/reactive with mercury, phenol, alcohols, aldehydes, esters, ketones, nitrites, strong acids, acid anhydrides, oxidizing agents, nitrosating agents.
Hazardous Decomposition Products	Fire/decomposition will produce irritating, toxic and/or corrosive gases, including carbon monoxide, carbon dioxide, ammonia, hydrogen cyanide, nitrous gases, unburned hydrocarbons. Under certain conditions in case of fire other hazardous combustion products may be generated.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	- Acute toxicity: Toxic if swallowed and in contact with skin. Harmful if inhaled. - Skin corrosion/irritation: Causes severe skin burns. Highly corrosive! (Rabbit) [similar to OECD guideline 404]. - Eye damage/irritation: Causes serious eye damage. Highly corrosive! Irreversible damage (Rabbit) [similar to OECD guideline 405]. - Respiratory/skin sensitisation: Skin sensitising effects were not observed in animal studies. Not-sensitising (Mouse; MEST) [Experimental/calculated data]. - Germ cell mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in a test with mammals. No experimental evidence available for genotoxicity in vitro (Ames test negative). - Carcinogenicity: In long-term animal studies in which the substance was given by inhalation, a carcinogenic effect was not observed. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies. - Reproductive toxicity: No indications of a developmental toxic/teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. - STOT (single exposure): May cause (temporary) respiratory irritation. - STOT (repeated exposure): No substance-specific organ toxicity was observed after repeated administration to animals. After repeated exposure the prominent effect is local irritation. - Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: 71 - 142 mg/kg (similar to OECD guideline 401) [Supplier's SDS.
Other	Acute toxicity (Dermal): - LD50, Rat: 582 mg/kg [Supplier's SDS].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat: 17.3 mg/l (4 h) vapour (similar to OECD guideline 403) [Supplier's SDS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Acutely toxic for aquatic organisms. *Inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment

	plants in appropriate low concentrations.
Persistence/Degradability	Readily biodegradable (according to OECD criteria). - Elimination information: 76 % BOD of the ThOD (28 d) [OECD Guideline 301 F (aerobic, activated sludge, domestic)]. *According to structural properties, hydrolysis is not expected/probable.
Mobility	Assessment transport between environmental compartments: - The substance will slowly evaporate into the atmosphere from the water surface (The data refer to the uncharged form of the substance). - Adsorption to solid soil phase is not expected (The data refer to the charged form of the substance).
Environmental Fate	Do not discharge product into the environment without control. The local regulations on waste-water treatment must be followed!
Bioaccumulation Potential	Because of the n-octanol/water distribution coefficient (log Pow 0.58), accumulation in organisms is not to be expected.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of by incineration in a suitable plant and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
EPG	18 Liquids - Highly Flammable, Toxic And/Or Corrosive
UN Number	1154
Hazchem	•2WE
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
EPG	18 Liquids - Highly Flammable, Toxic And/Or Corrosive
UN Number	1154
Hazchem	2WE
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
EPG	18 Liquids - Highly Flammable, Toxic And/Or Corrosive
UN Number	1154
Hazchem	2WE
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
ERG	132 Flammable Liquids - Corrosive
UN Number	1154
Hazchem	2WE
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
UN Number	1154
Hazchem	2WE
Pack Group	II
Special Provision	No Data Available
EMS	F-E, S-C
Marine Pollutant	No

Air Transport
IATA DGR

Proper Shipping Name	DIETHYLAMINE
Class	3 Flammable Liquids
Subsidiary Risk(s)	8 Corrosive Substances
UN Number	1154
Hazchem	2WE
Pack Group	II
Special Provision	No Data Available

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

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

15. REGULATORY INFORMATION

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

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

Approval Code	HSR001127 (Reissued)

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	DIETHY1000, DIETHY1001, DIETHY1002, DIETHY1003, DIETHY1004, DIETHY2000, DIETHY3000, DIETHY3001, DIETHY4000, DIETHY5000, DIETHY6000
Revision	6
Revision Date	11 Oct 2022

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm^2 Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm^3 Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m^3 Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m^3 Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m^3 Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight