



# SAFETY DATA SHEET NICKEL SULFATE REVISION 3, DATE 27 SEP 20

## 1. IDENTIFICATION

<b>Product Name</b>	<b>Nickel Sulfate</b>
<b>Other Names</b>	Nickel (II) sulphate, hexahydrate
<b>Uses</b>	Mainly used for electroplating of nickel; Restricted to professional users.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	NiSO <sub>4</sub> .6H <sub>2</sub> O
<b>Chemical Name</b>	Sulfuric acid, nickel(2+) salt (1:1), hexahydrate
<b>Product Description</b>	No Data Available

### Contact Details of the Supplier of this Safety Data Sheet

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
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.*

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
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)

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  
 Acute Toxicity (Inhalation) - Category 4  
 Skin Corrosion/Irritation - Category 2  
 Sensitisation (Respiratory) - Category 1  
 Sensitisation (Skin) - Category 1  
 Germ Cell Mutagenicity - Category 2  
 Carcinogenicity - Category 1A  
 Toxic To Reproduction - Category 1B  
 Specific Target Organ Toxicity (Repeated Exposure) - 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 + H332** Harmful if swallowed or if inhaled.  
**H315** Causes skin irritation.  
**H317** May cause an allergic skin reaction.  
**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
**H341** Suspected of causing genetic defects.  
**H350i** May cause cancer by inhalation.  
**H360D** May damage the unborn child.  
**H372** Causes damage to organs through prolonged or repeated exposure.  
**H410** Very toxic to aquatic life with long lasting effects.

## Precautionary Statements

Prevention

**P285** In case of inadequate ventilation wear respiratory protection.  
**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P201** Obtain special instructions before use.  
**P260** Do not breathe dusts or mists.  
**P273** Avoid release to the environment.  
**P270** Do not eat, drink or smoke when using this product.  
**P271** Use only outdoors or in a well-ventilated area.  
**P272** Contaminated work clothing should not be allowed out of the workplace.  
 Response **P304 + P340** IF INHALED: Remove victim to fresh air and keep comfortable for breathing.  
**P342 + P311** If experiencing respiratory symptoms: Call a POISON CENTER/doctor for emergency medical advice.  
**P308 + P313** IF exposed or concerned: Get medical attention.  
**P302 + P352** IF ON SKIN: Wash with plenty of soap and water.  
**P333 + P313** If skin irritation or rash occurs: Get medical attention.  
**P391** Collect spillage.  
**P301 + P312** IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
**P330** Rinse mouth.

	<b>P362 + P364</b>	Take off contaminated clothing and wash it before reuse.
Storage	<b>P405</b>	Store locked up.
Disposal	<b>P501</b>	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 &amp; Rail (ADG Code)

**Dangerous Goods Classification**

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

**3. COMPOSITION/INFORMATION ON INGREDIENTS***Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Nickel sulphate, hexahydrate	NiSO4.6H2O	10101-97-0	<=100 %

**4. FIRST AID MEASURES***Description of necessary measures according to routes of exposure*

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
<b>Eye</b>	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.
<b>Skin</b>	IF ON SKIN: Remove contaminated clothing and shoes immediately. Wash skin with plenty of soap and running water/shower. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	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.
<b>Medical Conditions Aggravated by Exposure</b>	Repeated or prolonged contact may cause skin sensitisation. Repeated or prolonged inhalation may cause asthma. The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Anyone who has shown symptoms of sensitisation due to this substance should avoid all further contact with nickel, nickel compounds and other metal compounds of (e.g.) copper, chromium and cobalt.

**5. FIRE FIGHTING MEASURES**

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	Non-combustible; however, dust explosion possible if in powder or granular form, mixed with air.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.
<b>Fire and Explosion Hazard</b>	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating, toxic and/or corrosive fumes, including Sulfur oxides, Nickel/nickel oxides.

<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid generating dust. Do not breathe dust and avoid contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Collect spillage (sweep up/shovel) and keep in suitable, closed containers for disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
<b>Decontamination</b>	Wash with plenty of water. Retain contaminated washing water and dispose it.
<b>Environmental Precautionary Measures</b>	Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	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 are. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Minimise dust generation and accumulation. Do not breathe dust/mist/aerosols and avoid contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection; In case of inadequate ventilation, wear respiratory protection (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid release to the environment - Collect spillage (see SECTION 6).
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available for this product. For Nickel, soluble compounds (as Ni): - Safe Work Australia Exposure Standard: TWA = 0.1 mg/m <sup>3</sup> ; classified as carcinogenic (g); Respiratory and/or skin sensitiser (Sen). COMPONENT: Nickel metal (CAS No. 7440-02-0): - Safe Work Australia Exposure Standard: TWA = 1 mg/m <sup>3</sup> ; Suspected human carcinogen (Carc. 2); Respiratory and/or skin sensitiser (Sen). - New Zealand Workplace Exposure Standard (2018): TWA = 0.02 mg/m <sup>3</sup> or 0.005 mg/m <sup>3</sup> (respirable dust).
<b>Exposure Limits</b>	No Data Available No information available.

**Biological Limits****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: Use a full-face particle filter respirator as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Face shield and safety glasses.
- Hand protection: Wear protective gloves. Recommended: Nitrile rubber (full/splash contact).
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.

**Special Hazards Precautions**

Depending on the degree of exposure, periodic medical examination is suggested.

**Work Hygienic Practices**

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Take off contaminated clothing and wash before reuse. Isolate contaminated clothing by sealing in a bag or other container. Contaminated work clothing should not be allowed out of the workplace. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Solid
<b>Appearance</b>	Crystalline solid
<b>Odour</b>	Odourless
<b>Colour</b>	Light green
<b>pH</b>	6
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Soluble in water (625 g/l) 0°C
<b>Specific Gravity</b>	3.68
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	848 °C
<b>Density</b>	3.68 g/cm <sup>3</sup>
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	262.85 g/mol
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available

<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No information available.
<b>Potential for Dust Explosion</b>	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	Non-combustible; however, dust explosion possible if in powder or granular form, mixed with air.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Sulfur oxides, Nickel/nickel oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	Reacts with oxidants; This generates fire and explosion hazard. The solution in water is a weak acid.
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid</b>	Avoid generating dust. Take precautionary measures against static discharge.
<b>Materials to Avoid</b>	Incompatible/reactive with strong oxidising agents, acids.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Sulfur oxides, Nickel/nickel oxides.
<b>Hazardous Polymerisation</b>	No information available.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	<ul style="list-style-type: none"> <li>- Acute toxicity: Harmful if swallowed and if inhaled. Symptoms include abdominal pain, dizziness, headache, nausea, vomiting.</li> <li>- Skin corrosion/irritation: Causes skin irritation, redness.</li> <li>- Eye damage/irritation: May cause eye irritation, redness.</li> <li>- Respiratory/skin sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction (GPMT).</li> <li>- Germ cell mutagenicity: Suspected of causing genetic defects. In vitro tests showed mutagenic effects.</li> <li>- Carcinogenicity: May cause cancer if inhaled. Nickel compounds are classified by the IARC Monographs as "Carcinogenic to humans" (Group 1).</li> <li>- Reproductive toxicity: May damage fertility or the unborn child. Presumed human reproductive toxicant.</li> <li>- STOT (single exposure): The substance is irritating to the skin, eyes and respiratory tract.</li> <li>- STOT (repeated exposure): Causes damage to organs (respiratory tract) through prolonged or repeated exposure (inhalation). Repeated or prolonged inhalation of the aerosol may cause effects on the lungs and nasal sinuses. This may result in inflammation and ulceration.</li> <li>- Aspiration toxicity: No information available.</li> </ul>
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): - LD50, Rat: 361.9 mg/kg (anhydrous substance [OECD TG 425]).
<b>Inhalation</b>	Acute toxicity (Inhalation): - LC50, Rat: 2.48 mg/l (4 h) (anhydrous substance).

Carcinogen Category

Carc. 1A

**12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	No information available.
<b>Persistence/Degradability</b>	No information available.
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Very toxic to aquatic life with long lasting effects - Avoid release to the environment.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

**13. DISPOSAL CONSIDERATIONS**

<b>General Information</b>	Recover, if possible, or dispose of contents/container to a licensed disposal company and in accordance with local/regional/national regulations.
<b>Special Precautions for Land Fill</b>	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

<b>Proper Shipping Name</b>	Nickel Sulphate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	AU01
<b>Comments</b>	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

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate, hexahydrate)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	3077
<b>Hazchem</b>	2Z

**SAFETY DATA SHEET NICKEL SULFATE REVISION 3, DATE 27 SEP 20**

<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

**Land Transport (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate, hexahydrate)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	3077
<b>Hazchem</b>	2Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

**Land Transport (United States of America)**

US DOT

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

**Sea Transport**

IMDG Code

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate, hexahydrate)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3077
<b>Hazchem</b>	2Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available
<b>EMS</b>	F-A, S-F
<b>Marine Pollutant</b>	Yes

**Air Transport**

IATA DGR

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate, hexahydrate)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3077
<b>Hazchem</b>	2Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available



**National Transport Commission (Australia)**

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

**Dangerous Goods Classification**

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

**15. REGULATORY INFORMATION****General Information**

NICKEL SULFATE

**Poisons Schedule (Aust)**

Schedule 6

**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

**Approval Code**

HSR005114 (Reissued)

**National/Regional Inventories****Australia (AIIIC)**

Listed

**Canada (DSL)**

Not Determined

**Canada (NDSL)**

Not Determined

**China (IECSC)**

Not Determined

**Europe (EINECS)**

232-104-9

**Europe (REACH)**

Listed

**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**

NISULP1000, NISULP1001, NISULP1002, NISULP1003, NISULP1004, NISULP1005, NISULP1006, NISULP1007, NISULP1008,

# SAFETY DATA SHEET NICKEL SULFATE REVISION 3, DATE 27 SEP 20

NISULP1009, NISULP1010, NISULP1011, NISULP1012, NISULP1013, NISULP1014, NISULP1800, NISULP1801, NISULP1802, NISULP1803, NISULP1804, NISULP1805, NISULP1806, NISULP1807, NISULP1808, NISULP2000, NISULP2100, NISULP2500, NISULP3000, NISULP3500, NISULP4000, NISULP4500, NISULP4501, NISULP5000, NISULP6000, NISULP6100, NISULP6200, NISULP6900, NISULP6901, NISULP6902, NISULP6903, NISULP6904, NISULP6905, NISULP6906, NISULP6907, NISULP6908, NISULP6909, NISULP6910, NISULP6911, NISULP6912, NISULP6913, NISULP6914, NISULP6915, NISULP6916, NISULP6917, NISULP6918, NISULP6919, NISULP7000, NISULP8000

## Revision

3

## Revision Date

27 Sep 2020

## Reason for Issue

SDS updated

## Key/Legend

< Less Than

> Greater Than

**AICS** Australian Inventory of Chemical Substances

**atm** Atmosphere

**CAS** Chemical Abstracts Service (Registry Number)

**cm<sup>2</sup>** Square Centimetres

**CO<sub>2</sub>** 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<sup>3</sup>** 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

**inH<sub>2</sub>O** Inch of Water

**K** Kelvin

**kg** Kilogram

**kg/m<sup>3</sup>** Kilograms per Cubic Metre

**lb** Pound

**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> 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.

**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> 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<sup>3</sup>** Cubic Metre

**mbar** Millibar

**mg** Milligram

**mg/24H** Milligrams per 24 Hours

**mg/kg** Milligrams per Kilogram

**mg/m<sup>3</sup>** Milligrams per Cubic Metre

**Misc or Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

**mm** Millimetre

**mmH<sub>2</sub>O** 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