



## 1. IDENTIFICATION

Product Name	Tetrakis(hydroxymethyl)phosphonium sulfate (THPS)
Other Names	Tetrakis(hydroxymethyl)phosphonium sulphate(2:1); THPS, 75%
Uses	Flame retardants, fire preventing agents; Corrosion inhibitors; Complexing agents, hydraulic fracturing and preservatives.
Chemical Family	No Data Available
Chemical Formula	C <sub>8</sub> H <sub>24</sub> O <sub>12</sub> P <sub>2</sub> S
Chemical Name	Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1) (salt)
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		Acute Toxicity (Oral) - Category 4 Acute Toxicity (Inhalation) - Category 3 Skin Corrosion/Irritation - Category 1C Serious Eye Damage/Irritation - Category 1 Sensitisation (Skin) - Category 1 Toxic To Reproduction - Category 1B Acute Hazard To The Aquatic Environment - Category 1	
Pictograms		   	
Signal Word		Danger	
Hazard Statements		<b>H302</b> <b>H314</b> <b>H317</b> <b>H331</b> <b>H360D</b> <b>H400</b>	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic if inhaled. May damage the unborn child. Very toxic to aquatic life.
Precautionary Statements	Prevention	<b>P260</b> <b>P280</b>  <b>P201</b> <b>P273</b> <b>P270</b> <b>P271</b> <b>P272</b>	Do not breathe mist/vapour/spray. Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator.  Obtain special instructions before use. Avoid release to the environment. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.
		<b>P303 + P361 + P353</b>  <b>P310</b> <b>P305 + P351 + P338</b>  <b>P308 + P313</b> <b>P304 + P340</b> <b>P301 + P330 + P331</b> <b>P363</b> <b>P391</b> <b>P333 + P313</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  Immediately call a POISON CENTER or doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep comfortable for breathing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Wash contaminated clothing before reuse. Collect spillage. If skin irritation or rash occurs: Get medical attention.
		<b>P403 + P233</b> <b>P405</b>	Store in a well-ventilated place. Keep container tightly closed. 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 & 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)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Tetrakis(hydroxymethyl)phosphonium sulfate	C8H24O12P2S	55566-30-8	>=75 %
Water	H2O	7732-18-5	<=25 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

**Swallowed** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately 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 rinsing 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 for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice. Wash contaminated clothing and shoes before reuse.  
\*For minor skin contact, avoid spreading material on unaffected skin.

**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. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

**Advice to Doctor** If exposed or concerned, get medical attention. Treat symptomatically. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed; therefore medical observation is suggested for at least 48 hours after the accident. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet (SDS) to the doctor in attendance.  
\*Most important symptoms and effects, both acute and delayed: Toxic if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May damage the unborn child.

**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; do not scatter the material.

**Flammability Conditions** Non-combustible; however, will burn under fire conditions following evaporation of water.

**Extinguishing Media** Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use water jets.  
\*Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Fire and Explosion Hazard** Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Fire exposed containers may vent contents through pressure relief valves.

<b>Hazardous Products of Combustion</b>	Fire may produce irritating, corrosive and/or toxic gases, including Phosphine, oxides of Phosphorus, Sulfur and Carbon.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may be corrosive and/or toxic and cause pollution.
<b>Personal Protective Equipment</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
<b>Flash Point</b>	182 °C
<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>	2X

6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material - Slippery when spilt. Do not breathe mist/vapours and prevent contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Absorb with earth, sand or other non-combustible material and transfer to a suitable, properly labelled container for disposal (see SECTION 13). *Do not return spilled material to original container.
<b>Containment</b>	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Do not allow uncontrolled discharge of product into the environment.
<b>Decontamination</b>	Wash non-recoverable residues with large amounts of water. Recover the cleaning water for subsequent disposal.
<b>Environmental Precautionary Measures</b>	Spillages and decontamination runoff should be prevented from entering drains and watercourses. If environmental contamination has occurred, advise local emergency services.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). *Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

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 area. Avoid exposure! Obtain special instructions before use - Do not handle until all safety precautions have been read and understood! Avoid formation and dispersion of mists and aerosols. 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 and suitable respirator (see SECTION 8). Do not mix with incompatible materials. Keep away from heat and sources of ignition - No smoking. 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 when not in use - Check regularly for leaks. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Prevent unauthorised access - Store locked up.
<b>Container</b>	Keep in the original container or suitable material, i.e. Polyethylene or polypropylene drums, Stainless steel, Intermediate Bulk Container (IBC).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
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	<div>- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Full-face respirator with multi-purpose combination (type ABEK) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.</div> <div>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles, full face shield (unless wearing full face respirator). Use equipment for eye protection tested and approved under appropriate government standards.</div> <div>- Hand protection: Wear protective gloves. Recommended: Long (elbow-length) impervious gloves, e.g. Nitrile rubber (Min. layer thickness: 0.11 mm; Break through time: 480 min).</div> <div>- Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, splash apron or equivalent chemical-impervious outer garment, rubber boots. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.</div> <div>* The protective equipment must be selected in accordance with current national standards and in cooperation with the supplier of the protective equipment. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use and the potential hazards and/or risks that may occur during use.</div>
Special Hazards Precautions	No information available.
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 immediately after handling the product. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Characteristic
Colour	Colourless to light yellow
pH	2.5 - 5.5 (25 °C)
Vapour Pressure	8.25 x 10(-4) mmHg (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	-43 °C
Freezing Point	-43 °C
Solubility	Miscible with water 25°C
Specific Gravity	1.37 - 1.42
Flash Point	182 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>=160 °C
Density	No Data Available
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	18 - 39 mPa.s (@ No Data Available)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
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; however, will burn under fire conditions following evaporation of water.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, corrosive and/or toxic gases, including Phosphine, oxides of Phosphorus, Sulfur and Carbon.
Release of Invisible Flammable Vapours and Gases	Contact with metals may evolve flammable hydrogen gas.

10. STABILITY AND REACTIVITY

General Information	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical Stability	Stable under proper operation and storage conditions.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong bases, strong reducing agents, strong acids, strong oxidizing agents. *Causes a reaction and releases hydrogen in contact with active metals (alkali metals, Na, Ca, etc).
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire/decomposition may produce irritating, corrosive and/or toxic gases, including Phosphine, oxides of Phosphorus, Sulfur and Carbon.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"><li>- Acute toxicity: Harmful if swallowed. Toxic if inhaled.</li><li>- Skin corrosion/irritation: Causes severe skin burns and eye damage.</li><li>- Eye damage/irritation: Causes serious eye damage. Corrosive (rabbit). Irreversible effects on the eye.</li><li>- Respiratory/skin sensitisation: Strong skin sensitiser - May cause an allergic skin reaction.</li><li>- Germ cell mutagenicity: THPS is not considered to be genotoxic.</li><li>- Carcinogenicity: Tetrakis(hydroxymethyl)phosphonium salts are classified in Group 3 of the IARC Monographs (Not classifiable as to its carcinogenicity to humans).</li><li>- Reproductive toxicity: May damage the unborn child.</li><li>- STOT (single exposure): No information available.</li><li>- STOT (repeated exposure): Substance accumulation in the human body may occur and may cause some concern</li></ul>
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following repeated or long-term occupational exposure. May cause damage to gastrointestinal tract and liver through prolonged or repeated exposure (oral).  
- Aspiration toxicity: No information available.

Acute

Ingestion	Acute toxicity (Oral): - LD50, Rat: 575 mg/kg bw. (expressed as active substance, 75% in water) [OECD 401; ECHA].
Other	Acute toxicity (Dermal): - LD50, Rat: >2,000 mg/kg bw. (expressed as active substance, 75% in water) [OECD 402; ECHA].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat: 0.591 mg/l (4 h) (aerosol; expressed as active substance, 75% in water) [OECD 403; ECHA].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Oncorhynchus mykiss): 119 mg/l (96 h) [Supplier's SDS]. - LC50, Fish (Lepomis macrochirus): 93 mg/l (96 h) [Supplier's SDS]. - EC50, Crustacea (Daphnia magna): 19.4 mg/l (48 h) [Supplier's SDS]. - EC50, Algae/aquatic plants (Pseudokirchneriella subcapitata): 0.20 mg/l (96 h) [Supplier's SDS].
Persistence/Degradability	Biodegradable (70 %, 21 d).
Mobility	Log Koc: 2.2
Environmental Fate	Very toxic to aquatic life - Avoid release to the environment. Do not allow product to reach ground water, watercourse or sewage system. Danger to drinking water if even small quantities leak into the ground.
Bioaccumulation Potential	Not expected to bioaccumulate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal.
Special Precautions for Land Fill	Container disposal: Triple rinse (or equivalent) all containers and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, in accordance with local/regional/national regulations.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code	
Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	2922
Hazchem	2X
Pack Group	III

Special Provision No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)  
Class 8 Corrosive Substances  
Subsidiary Risk(s) 6.1 Toxic and Infectious Substances - Toxic Substances  
EPG 37 Toxic And/Or Corrosive Substances Non-Combustible  
UN Number 2922  
Hazchem 2X  
Pack Group III  
Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)  
Class 8 Corrosive Substances  
Subsidiary Risk(s) 6.1 Toxic and Infectious Substances - Toxic Substances  
EPG 37 Toxic And/Or Corrosive Substances Non-Combustible  
UN Number 2922  
Hazchem 2X  
Pack Group III  
Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)  
Class 8 Corrosive Substances  
Subsidiary Risk(s) 6.1 Toxic and Infectious Substances - Toxic Substances  
ERG 154 Substances - Toxic and/or Corrosive (Non-Combustible)  
UN Number 2922  
Hazchem 2X  
Pack Group III  
Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)  
Class 8 Corrosive Substances  
Subsidiary Risk(s) 6.1 Toxic and Infectious Substances - Toxic Substances  
UN Number 2922  
Hazchem 2X  
Pack Group III  
Special Provision No Data Available  
EMS F-A, S-B  
Marine Pollutant No

Air Transport

IATA DGR

Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (Tetrakis(hydroxymethyl)phosphonium sulfate, Solution)
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
UN Number	2922
Hazchem	2X
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	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	HSR002510 - Additives, Process Chemicals and Raw Materials (Acutely Toxic, Corrosive) Group Standard 2020
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National/Regional Inventories

Australia (AIIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	259-709-0
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	HYMEPS1000, HYMEPS1001, HYMEPS1002, HYMEPS1003, HYMEPS1004, HYMEPS1005, HYMEPS2000, HYMEPS2200, HYMEPS2210, HYMEPS2220, HYMEPS2221, HYMEPS2222, HYMEPS3000, HYMEPS3010, HYMEPS4000, HYMEPS4200, HYMEPS5000, HYMEPS5200, HYMEPS5300
Revision	3
Revision Date	21 Oct 2022
Key/Legend	< Less Than > Greater Than <b>AICS</b> Australian Inventory of Chemical Substances <b>atm</b> Atmosphere <b>CAS</b> Chemical Abstracts Service (Registry Number) <b>cm²</b> Square Centimetres <b>CO2</b> Carbon Dioxide <b>COD</b> Chemical Oxygen Demand <b>deg C (°C)</b> Degrees Celcius <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand <b>deg F (°F)</b> Degrees Fahrenheit <b>g</b> Grams <b>g/cm³</b> Grams per Cubic Centimetre <b>g/l</b> Grams per Litre <b>HSNO</b> Hazardous Substance and New Organism <b>IDLH</b> Immediately Dangerous to Life and Health <b>immiscible</b> Liquids are insoluable in each other. <b>inHg</b> Inch of Mercury <b>inH2O</b> Inch of Water <b>K</b> Kelvin <b>kg</b> Kilogram <b>kg/m³</b> Kilograms per Cubic Metre <b>lb</b> Pound <b>LC50</b> 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. <b>LD50</b> 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. <b>ltr or L</b> Litre <b>m³</b> Cubic Metre <b>mbar</b> Millibar <b>mg</b> Milligram <b>mg/24H</b> Milligrams per 24 Hours <b>mg/kg</b> Milligrams per Kilogram <b>mg/m³</b> Milligrams per Cubic Metre <b>Misc or Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present. <b>mm</b> Millimetre <b>mmH2O</b> Millimetres of Water <b>mPa.s</b> Millipascals per Second <b>N/A</b> Not Applicable <b>NIOSH</b> National Institute for Occupational Safety and Health <b>NOHSC</b> National Occupational Heath and Safety Commission <b>OECD</b> Organisation for Economic Co-operation and Development <b>Oz</b> Ounce <b>PEL</b> 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