



**SAFETY DATA SHEET  
MONOCALCIUM PHOSPHATE ANHYDROUS  
REVISION 4, DATE 12 AUG 2021**

## 1. IDENTIFICATION

<b>Product Name</b>	<b>Monocalcium Phosphate Anhydrous</b>
<b>Other Names</b>	Calcium bis(dihydrogenorthophosphate); MCP Anhydrous
<b>Uses</b>	Raw material for industry; Buffer agent; dough conditioner in baking; Firming agent, leavening agent, nutrient, yeast food and sequestrant; Feed.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	Ca(H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub>
<b>Chemical Name</b>	Phosphoric acid, calcium salt (2:1)
<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	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, 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	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999
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

**Redox Ltd**  
Corporate Office Sydney  
Locked Bag 1 Minto NSW 2566 Australia  
2 Swettenham Road Minto NSW 2566 Australia  
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

Phone +61 2 9733 3000  
Fax +61 2 9733 3111  
E-mail sydney@redox.com  
Web www.redox.com  
ABN 92 000 762 345

Australia  
Adelaide  
Brisbane  
Melbourne  
Perth  
Sydney

New Zealand  
Auckland  
Christchurch  
Hawke's Bay  
UK  
London

Malaysia  
Kuala Lumpur  
USA  
Los Angeles  
Oakland  
Mexico  
Saltillo



**Globally Harmonised System**

<b>Hazard Classification</b>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
<b>Hazard Categories</b>	Serious Eye Damage/Irritation - Category 1		
<b>Pictograms</b>			
<b>Signal Word</b>	Danger		
<b>Hazard Statements</b>	<b>H318</b>	Causes serious eye damage.	
<b>Precautionary Statements</b>	Prevention	<b>P280</b>	Wear eye protection/face protection.
	Response	<b>P305 + P351 + P338 + P310</b>	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.

**National Transport Commission (Australia)**

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

<b>Dangerous Goods Classification</b>	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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**Safe Work Australia**

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

<b>Hazard Classification</b>	Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations
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**3. COMPOSITION/INFORMATION ON INGREDIENTS***Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Monocalcium phosphate, anhydrous	Ca(H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub>	7758-23-8	>=90 - <=100 %

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

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth with water. Do not induce vomiting. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Get medical advice/attention. Never give anything by mouth to an unconscious person.
<b>Eye</b>	IF IN EYES: Protect unharmed eye! 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. *Small amounts splashed into eyes can cause irreversible tissue damage and blindness. Continue rinsing eyes during transport to hospital!

<b>Skin</b>	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Keep respiratory tract clear. If respiratory symptoms persist, get medical advice/attention.
<b>Advice to Doctor</b>	Treat symptomatically. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance. *Most important symptoms and effects, both acute and delayed: Causes serious eye damage.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

## 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. Dike fire-control water for later disposal.
<b>Flammability Conditions</b>	Non-combustible.
<b>Extinguishing Media</b>	If material is involved in a fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Fire and Explosion Hazard</b>	Substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
<b>Hazardous Products of Combustion</b>	Fire or heat may produce irritating and/or toxic gases, including oxides of Calcium, oxides of Phosphorus.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may cause pollution. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Personal Protective Equipment</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only 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. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal(see SECTION 13).
<b>Containment</b>	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Decontamination</b>	Neutralise with chalk, alkali solution or ammonia. Clean contaminated floors and objects thoroughly while observing environmental regulations.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away.
<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. Handle in accordance with good industrial hygiene and safety practice. Avoid generating dust.
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Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).

<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. 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 food/feedstuffs and incompatible materials (see SECTION 10).
<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 dusts from solid substances without specific occupational exposure standards: <ul style="list-style-type: none"> <li>- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m<sup>3</sup> (measured as inhalable dust).</li> <li>- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m<sup>3</sup>; TWA = 3 mg/m<sup>3</sup> (respirable dust).</li> </ul>
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	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.
<b>Personal Protection Equipment</b>	<ul style="list-style-type: none"> <li>- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate respirator. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection (refer to AS/NZS 1715 &amp; 1716).</li> <li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.</li> <li>- Hand protection: Handle with gloves. Recommended: Polyvinyl alcohol or nitrile-butyl-rubber gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.</li> <li>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Dust impervious protective suit. Choose body protection according to the amount and concentration of the hazardous substance(s) at the work place.</li> </ul>
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing and other protective equipment before storage or re-use. Remove contaminated clothing and protective equipment before entering eating areas.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Powder or granular
<b>Odour</b>	Odourless
<b>Colour</b>	White
<b>pH</b>	2.3 - 3.5 10 %
<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>	>200 °C (Decomposes before melting)
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Partly soluble in water
<b>Specific Gravity</b>	No Data Available
<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>	450 - 1,000 kg/m <sup>3</sup> (20/20 °C)
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	234.05
<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>	Not expected to form explosive dust-air mixtures.
<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.
<b>Reactions That Release Gases or Vapours</b>	Fire or heat will produce irritating and/or toxic gases, including oxides of Calcium, oxides of Phosphorus.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Avoid generating dust. Avoid extreme heat and humidity.
<b>Materials to Avoid</b>	Incompatible/reactive with strong oxidising agents.
<b>Hazardous Decomposition Products</b>	Fire or heat will produce irritating and/or toxic gases, including oxides of Calcium, oxides of Phosphorus.
<b>Hazardous Polymerisation</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Information on toxicological effects: - Acute toxicity: Not classified based on available information.
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- Skin corrosion/irritation: Not classified based on available information. No skin irritation (Rabbit).
- Eye damage/irritation: Causes serious eye damage. Irreversible effects on the eye (Rabbit) [OECD Guideline 405].
- Respiratory/skin sensitisation: Not classified based on available information. Does not cause skin sensitisation (Mouse) [Maximisation Test].
- Germ cell mutagenicity: Not classified based on available information. Negative (in vitro/in vivo).
- Carcinogenicity: Not classified based on available information. No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Reproductive toxicity: Not classified based on available information.
- STOT (single exposure): Not classified based on available information.
- STOT (repeated exposure): Not classified based on available information.
- Aspiration toxicity: No aspiration toxicity classification.

**Information on likely routes of exposure:**

- Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
- Eye contact: Severely irritating to eyes. May cause burns. May cause irreversible damage to eyes.
- Skin contact: May cause skin irritation.
- Inhalation: May cause irritation of respiratory tract.

Chronic effects: No information available.

**Acute****Ingestion****Acute toxicity (Oral):**

- LD50, Rat (female): 3,986 mg/kg [OPPTS 870.1100; Supplier's SDS].

**Carcinogen Category**

None

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Aquatic toxicity:**

- LC50, Fish (Oncorhynchus mykiss): >100 mg/l (96 h) [OECD Test Guideline 203].
- EC50, Crustacea (Daphnia magna): >100 mg/l (48 h) [OECD Test Guideline 202].
- EC50, Algae/aquatic plants (Desmodesmus subspicatus): >100 mg/l (72 h) [OECD Test Guideline 202].

**Persistence/Degradability**

No information available.

**Mobility**

No information available.

**Environmental Fate**

Prevent entry into drains and waterways.

**Bioaccumulation Potential**

No information available.

**Environmental Impact**

No Data Available

**13. DISPOSAL CONSIDERATIONS****General Information**

Do not dispose of waste into sewer. Dispose of contents/container via a licensed professional waste disposal service and in accordance with local/regional/national regulations.

**Special Precautions for Land Fill**

Contaminated packaging: Empty remaining contents.

Dispose of as unused product.

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

ADG Code

**Proper Shipping Name**

Monocalcium Phosphate Anhydrous

<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (Malaysia)**

ADR Code

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

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

US DOT

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (Vietnam)**

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
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<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Sea Transport**

IMDG Code

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for SEA transport.

**Air Transport**

IATA DGR

<b>Proper Shipping Name</b>	Monocalcium Phosphate Anhydrous
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for AIR transport.

**National Transport Commission (Australia)**

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

<b>Dangerous Goods Classification</b>	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**

<b>General Information</b>	No Data Available
<b>Poisons Schedule (Aust)</b>	Not Scheduled

**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

## Approval Code

HSR002503 - Additives Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020

## National/Regional Inventories

<b>Australia (AIIC)</b>	Listed
<b>Canada (DSL)</b>	Not Determined
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Not Determined
<b>Europe (EINECS)</b>	Not Determined
<b>Europe (REACH)</b>	Not Determined
<b>Japan (ENCS/METI)</b>	Not Determined
<b>Korea (KECI)</b>	Not Determined
<b>Malaysia (List of Classified Substances)</b>	Not Determined
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Not Determined
<b>Taiwan (TCSI)</b>	Not Determined
<b>USA (TSCA)</b>	Listed
<b>Mexico (INSQ)</b>	Not Determined

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	MOCAPA1000, MOCAPA1100, MOCAPA1500, MOCAPA2000, MOCAPA3200, MOCAPA3201, MOCAPA3400, MOCAPA3401, MOCAPA3410, MOCAPA5000, MOCAPA5010, MOCAPA5200, MOCAPA5210, MOCAPA6000, MOCAPA8000, MOCAPH1011, MOCAPH1012, MOCAPH1217, MOCAPH1218
<b>Revision</b>	4
<b>Revision Date</b>	12 Aug 2021
<b>Reason for Issue</b>	SDS updated.
<b>Key/Legend</b>	<p>&lt; Less Than          &gt; Greater Than</p> <p><b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></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 Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></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</p>

**immiscible** Liquids are insoluble in each other.

**inHg** Inch of Mercury

**inH2O** Inch of Water

**K** Kelvin

**kg** Kilogram

**kg/m<sup>3</sup>** 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<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

**mmH2O** Millimetres of Water

**mPa.s** Millipascals per Second

**N/A** Not Applicable

**NIOSH** National Institute for Occupational Safety and Health

**NOHSC** National Occupational Health and Safety Commission

**OECD** Organisation for Economic Co-operation and Development

**Oz** Ounce

**PEL** Permissible Exposure Limit

**Pa** Pascal

**ppb** Parts per Billion

**ppm** Parts per Million

**ppm/2h** Parts per Million per 2 Hours

**ppm/6h** Parts per Million per 6 Hours

**psi** Pounds per Square Inch

**R** Rankine

**RCP** Reciprocal Calculation Procedure

**STEL** Short Term Exposure Limit

**TLV** Threshold Limit Value

**tne** Tonne

**TWA** Time Weighted Average

**ug/24H** Micrograms per 24 Hours

**UN** United Nations

**wt** Weight