

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Zinc Borate</b>
<b>Other Names</b>	Hexaboron dizinc undecaoxide
<b>Uses</b>	Used as flame retardant.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	$2ZnO \cdot 3B_2O_3 \cdot 3.5H_2O$
<b>Chemical Name</b>	Boron zinc hydroxide oxide
<b>Product Description</b>	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** Toxic To Reproduction - Category 2  
Acute Hazard To The Aquatic Environment - Category 1  
Long-term Hazard To The Aquatic Environment - Category 2

**Pictograms**

**Signal Word** Warning

**Hazard Statements**

<b>H361d</b>	Suspected of damaging the unborn child.
<b>H400</b>	Very toxic to aquatic life.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

Prevention	<b>P201</b>	Obtain special instructions before use.
	<b>P273</b>	Avoid release to the environment.
	<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator.
Response	<b>P308 + P313</b>	IF exposed or concerned: Get medical advice.
	<b>P391</b>	Collect spillage.
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 & Rail (ADG Code)

**Dangerous Goods Classification** NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Safe Work Australia**

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

**Hazard Classification** Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

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

Chemical Entity	Formula	CAS Number	Proportion
Hexaboron dizinc undecaoxide	2ZnO·3B2O3·3.5H2O	138265-88-0	<=100 %

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

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention if you feel unwell. 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: 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. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	If exposed or concerned, get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. *Most important symptoms and effects, both acute and delayed: Suspected of damaging the unborn child.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

**5. FIRE FIGHTING MEASURES**

<b>General Measures</b>	As with all fires, evacuate personnel to a safe area. 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>	This material is non-combustible.
<b>Extinguishing Media</b>	If material is involved in a fire, use an extinguishing agent suitable for the surrounding fire.
<b>Fire and Explosion Hazard</b>	The product is not flammable, combustible or explosive.
<b>Hazardous Products of Combustion</b>	Fire/decomposition may produce irritating and/or toxic gases, including Carbon oxides, Zinc oxides.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may cause pollution.
<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. 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>	Do not dry sweep. Wet-sweep or vacuum dust with equipment fitted with a HEPA filter and place in a closed, labelled waste container 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>	No information available.
<b>Environmental Precautionary Measures</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher

ground.

**Personal Precautionary Measures** Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Avoid release to the environment - Collect spillage (see SECTION 6). *As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up. Store in accordance with local regulations. Use appropriate containment to avoid environmental contamination.
<b>Container</b>	Keep in the original container. Do not store in unlabelled containers.

## 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: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m <sup>3</sup> (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m <sup>3</sup> ; TWA = 3 mg/m <sup>3</sup> (respirable dust).
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
<b>Personal Protection Equipment</b>	- Respiratory protection: None required under normal operating conditions. In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or chemical splash goggles. - Hand protection: Handle with gloves. Recommended: Chemical-resistant, impervious gloves, e.g. Butyl or nitrile rubber, Natural latex. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective clothing, e.g. Overalls. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Handle in accordance with good industrial hygiene and safety practice. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove contaminated clothing and protective equipment before entering eating areas. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Crystalline powder

<b>Odour</b>	Odourless
<b>Colour</b>	White
<b>pH</b>	6 - 7
<b>Vapour Pressure</b>	Negligible (@ 20 °C)
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	980 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Slightly soluble in water
<b>Specific Gravity</b>	2.67 g/cm <sup>3</sup>
<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>	480 - 640 kg/m <sup>3</sup>
<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>	383.41 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>	Product does not present an explosion hazard.
<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>	This material is non-combustible.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition may produce irritating and/or toxic gases, including Carbon oxides, Zinc oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	The substance is stable under normal storage and handling conditions.
<b>Chemical Stability</b>	Stable at room temperature in closed containers under normal storage and handling conditions.

<b>Conditions to Avoid</b>	Avoid generating dust. Avoid excess heat.
<b>Materials to Avoid</b>	Incompatible/reactive with strong reducing agents, acids, bases.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating and/or toxic gases, including Carbon oxides, Zinc oxides.
<b>Hazardous Polymerisation</b>	No dangerous reactions known.

## 11. TOXICOLOGICAL INFORMATION

### General Information

Information on toxicological effects:

- Acute toxicity: Not classified.
- Skin corrosion/irritation: Not classified. No irritation (Rabbit).
- Eye damage/irritation: Not classified. No irritation (Rabbit).
- Respiratory/skin sensitisation: Not classified. Not sensitising to skin (Guinea pig). There are no data to suggest that borates are respiratory sensitisers.
- Germ cell mutagenicity: Not classified. Not mutagenic. Negative (in vitro) [OECD 476].
- Carcinogenicity: Not classified. No carcinogenic effects observed in chronic carcinogenicity studies of boric acid conducted in rats and mice, and no evidence of carcinogenic effects in zinc borate breakdown products.
- Reproductive toxicity: Suspected of damaging the unborn child. Adverse symptoms may include reduced foetal weight, increase in foetal deaths, skeletal malformations. Developmental effects have been observed in laboratory animals, the most sensitive species being the rat (NOAEL 9.6 mg B/kg bw/day). While boron has been shown to adversely affect male reproduction in laboratory animals, there was no clear evidence of male reproductive effects attributable to boron in studies of highly exposed workers.
- STOT (single exposure): Not classified.
- STOT (repeated exposure): Not classified. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.
- Aspiration toxicity: Not classified.

Information on likely routes of exposure:

- Ingestion: This product is not intended for ingestion. Small amounts (e.g. 1 teaspoon) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.
  - Eye contact: No information available.
  - Skin contact: Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.
  - Inhalation: No information available.
- Chronic effects: Suspected of damaging the unborn child.

### Acute

#### Ingestion

- Acute toxicity (Oral):
- LD50, Rat: >5,000 mg/kg [Supplier's SDS].

#### Inhalation

- Acute toxicity (Inhalation):
- LC50, Rat: >4.95 mg/L (4 h) [Supplier's SDS].

### Carcinogen Category

None

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Aquatic toxicity:

- LC50, Fish: >2.4 mg/L (96 h) [OECD 203].
- EC50, Daphnia: 76 mg B/L (48 h) [OECD 202].
- EC50, Algae: 74 mg B/L (72 h) [OECD 201].

### Persistence/Degradability

Not applicable (inorganic substance).

<b>Mobility</b>	Zinc borate will hydrolyse under environmental conditions to boric acid and zinc hydroxide. Adsorption of boric acid to soils or sediments is minimal. Adsorption of zinc ions is described by partition coefficients and may vary with site-specific conditions.
<b>Environmental Fate</b>	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. *Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron sensitive plants in high quantities. Care should be taken to minimise the amount of this product released to the environment.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

### 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	The generation of waste should be avoided or minimised wherever possible. Where appropriate, material should be recovered and recycled through the process. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled.
<b>Special Precautions for Land Fill</b>	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

### 14. TRANSPORT INFORMATION

#### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	Zinc Borate
<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. (Zinc borate hydrate)
<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 (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc borate hydrate)
<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. (Zinc borate hydrate)
<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. (Zinc borate hydrate)
<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. (Zinc borate hydrate)
<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**

NOT 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**

ZINC BORATE is listed in Schedule 6 of the SUSMP for use as an agricultural chemical.

**Poisons Schedule (Aust)**

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****Australia (AIIIC)**

Listed

**Canada (DSL)**

Not Determined

**Canada (NDSL)**

Not Determined

**China (IECSC)**

Listed

**Europe (EINECS)**

235-804-2

**Europe (REACH)**

01-2119691658-19-xxxx

**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)**

Listed

**USA (TSCA)**

Not Determined

**16. OTHER INFORMATION****Related Product Codes**

ZIBORA1000, ZIBORA1001, ZIBORA1002, ZIBORA1003, ZIBORA2000, ZIBORA3000, ZIBORA4000, ZIBORA5000, ZIBORA6000, ZIBORA7000, ZIBORA9000

**Revision**

4

**Revision Date**

15 Jan 2021

## 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  
**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  
**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