



SAFETY DATA SHEET
LOW DENSITY POLYETHYLENE (LDPE)
REVISION 4, DATE 10 JAN 22

1. IDENTIFICATION

| | |
|----------------------------|--|
| Product Name | Low Density Polyethylene (LDPE) |
| Other Names | Ethylene, polymer; LOTRENE LDPE; Polyethylene |
| Uses | Professional use; for film, moulding and extrusion applications. |
| Chemical Family | No Data Available |
| Chemical Formula | (C ₂ H ₄) _x |
| Chemical Name | Ethene, homopolymer |
| 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 | NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) |
| Signal Word | None |

National Transport Commission (Australia)

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

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|--------------------------------|---|
| 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) |
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

| Chemical Entity | Formula | CAS Number | Proportion |
|-----------------|---|-------------|------------|
| Polyethylene | (C ₂ H ₄) _x | 9002-88-4 | 98 - 100 % |
| Additives | Unspecified | Proprietary | 0 - 2 % |

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

| | |
|---|--|
| Swallowed | IF SWALLOWED: Rinse mouth with water. Do not induce vomiting. Get medical advice/attention if you feel unwell. |
| 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. If eye irritation persists, get medical advice/attention. *For contact with molten material, treat as for skin burns. |
| Skin | 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. *In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. Removal of solidified molten material from skin requires medical assistance. Removal may result in further damage to skin! |
| Inhaled | 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. |
| Advice to Doctor | Treat symptomatically. |
| Medical Conditions Aggravated by Exposure | No information available. |

5. FIRE FIGHTING MEASURES

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|-------------------------|--|
| General Measures | Notify fire brigade and environmental authorities. Evacuate unnecessary personnel. Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. Do not attempt to take action without suitable protective equipment. |
| Flammability Conditions | Combustible solid. Polymer may burn in presence of extreme heat and oxygen. *Polyethylene film is a hydrocarbon and therefore will burn readily; It will not, however, easily self-ignite. |

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| Extinguishing Media | Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use a solid water stream as it may scatter and spread fire. |
| Fire and Explosion Hazard | 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. Risk of dust explosion is increased if flammable vapour is also present. May accumulate hazardous static charge when agitated in transfer handling system. When burning, polyethylene will drip and run ignited particles. |
| Hazardous Products of Combustion | Fire may produce irritating and/or toxic fumes, including carbon oxides (CO, CO ₂), aldehydes, ketones, acetone, acetaldehyde, formaldehyde, hydrocarbons, acrylaldehyde, acrolein, prop-2-enal. |
| Special Fire Fighting Instructions | Contain runoff from fire control or dilution water - Runoff may cause pollution. |
| Personal Protective Equipment | Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. |
| Flash Point | approx. 340 |
| Lower Explosion Limit | 0.015 kg/m ³ (< 63 µm) |
| Upper Explosion Limit | No Data Available |
| Auto Ignition Temperature | >=350 °C |
| Hazchem Code | No Data Available |

6. ACCIDENTAL RELEASE MEASURES

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| General Response Procedure | Ensure adequate ventilation. ELIMINATE all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material. If spilled, may cause the floor to be slippery. Clean up spills immediately! Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing. Do not attempt to take action without suitable protective equipment. |
| Clean Up Procedures | Vacuum, shovel or sweep up spilled material into suitable containers for reuse, recycling or disposal (see SECTION 13). |
| Containment | Stop leak if you can do it without risk. Prevent dust cloud. |
| Decontamination | No information available. |
| Environmental Precautionary Measures | Do not allow product to enter drains, sewers or watercourses. Notify authorities if product enters sewers or public waters. |
| Evacuation Criteria | Spill or leak area should be isolated immediately. Keep unauthorised personnel away. |
| Personal Precautionary Measures | Use personal protective equipment as required (see SECTION 8). |

7. HANDLING AND STORAGE

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| Handling | 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. Minimise dust generation and accumulation. Avoid breathing dust and fumes and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). WARNING: May form combustible dust concentrations in air (during processing). Keep away from uncontrolled heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground and bond container and receiving equipment. Use explosion-proof equipment and non-sparking tools. Take action to prevent static discharges. |
| Storage | Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Check regularly for spills. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from food/drink and incompatible materials (see SECTION 10). |
| Container | Keep in original packaging or in appropriate packaging material, i.e. Polyethylene, paper bag, carton, Stainless steel. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------------------|---|
| General | 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 ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (Inhalable dust); TWA = 3 mg/m ³ (Respirable dust). |
| Exposure Limits | No Data Available |
| Biological Limits | No information available. |
| Engineering Measures | A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. |
| Personal Protection Equipment | - Respiratory protection: In case of inadequate ventilation/dust formation, wear respiratory protection: Recommended: Under dusty conditions, approved dust respirators should be worn. In certain situations, based on risk management processes, supplied air or organic canister may also be used to control exposure to polyethylene fume (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses. - Hand protection: Handle with gloves. Recommended: Protective gloves. Thermal-resistant gloves should be worn when handling hot materials. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Dustproof clothing; Safety foot-wear. |
| Special Hazards Precautions | Contact with melted/heated product may cause thermal burns. |
| Work Hygienic Practices | Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|----------------------------------|---------------------------------------|
| Physical State | Solid |
| Appearance | Pellets or powder |
| Odour | Odourless |
| Colour | Translucent/White |
| pH | No Data Available |
| Vapour Pressure | No Data Available |
| Relative Vapour Density | No Data Available |
| Boiling Point | No Data Available |
| Melting Point | 90 - 160 °C |
| Freezing Point | No Data Available |
| Solubility | Insoluble/Negligible water solubility |
| Specific Gravity | No Data Available |
| Flash Point | approx. 340 |
| Auto Ignition Temp | >=350 °C |
| Evaporation Rate | No Data Available |
| Bulk Density | 915 - 935 kg/m ³ |
| Corrosion Rate | No Data Available |
| Decomposition Temperature | >250 °C |
| Density | 0.910 - 0.945 g/cm ³ |
| 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 |

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| Saturated Vapour Concentration | No Data Available |
| Vapour Temperature | No Data Available |
| Viscosity | No Data Available |
| Volatile Percent | No Data Available |
| VOC Volume | Negligible |
| Additional Characteristics | Minimum ignition energy: 63 mJ |
| Potential for Dust Explosion | 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. Risk of dust explosion is increased if flammable vapour is also present. May accumulate hazardous static charge when agitated in transfer handling system. |
| 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 | Combustible solid. Polymer may burn in presence of extreme heat and oxygen. When burning, polyethylene will drip and run ignited particles. *Polyethylene film is a hydrocarbon and therefore will burn readily; It will not, however, easily self-ignite. |
| Reactions That Release Gases or Vapours | Fire/decomposition may produce irritating and/or toxic fumes, including carbon oxides (CO, CO2), aldehydes, ketones, acetone, acetaldehyde, formaldehyde, hydrocarbons, acrylaldehyde, acrolein, prop-2-enal. |
| Release of Invisible Flammable Vapours and Gases | No information available. |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| General Information | Electrostatic charges may be generated during handling. |
| Chemical Stability | The product is stable under normal handling and storage conditions. |
| Conditions to Avoid | Avoid generating dust. Keep away from heat and sources of ignition. Take action to prevent static discharges. |
| Materials to Avoid | Incompatible/reactive with strong oxidising agents. |
| Hazardous Decomposition Products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire/decomposition may produce irritating and/or toxic fumes, including carbon oxides (CO, CO2), aldehydes, ketones, acetone, acetaldehyde, formaldehyde, hydrocarbons, acrylaldehyde, acrolein, prop-2-enal. |
| Hazardous Polymerisation | Will not occur. |

11. TOXICOLOGICAL INFORMATION

| | |
|----------------------------|--|
| General Information | <ul style="list-style-type: none">- Acute toxicity: Not classified (Based on available data, the classification criteria are not met). May cause choking if swallowed.- Skin corrosion/irritation: Not classified (Based on available data, the classification criteria are not met). Heated product causes burns; thermal decomposition products are produced at elevated temperatures and these may be irritating. Skin contact may result in mechanical injury or abrasion (low risk hazard).- Eye damage/irritation: Not classified (Based on available data, the classification criteria are not met). Pellets, fine dust and powder may scratch eye surface/cause mechanical irritation to eyes; thermal decomposition products are produced at elevated temperatures and these may be irritating. Heated product causes burns.- Respiratory/skin sensitisation: Not classified.- Germ cell mutagenicity: Not classified.- Carcinogenicity: Not classified. Polyethylene (CAS No. 9002-88-4) is Classified by the IARC Monographs as "Not classifiable as to its carcinogenicity to humans" (Group 3).- Reproductive toxicity: Not classified.- STOT (single exposure): Not classified. Fine dust may cause irritation of respiratory system and mucous. If heated to |
|----------------------------|--|

more than 130°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and shortness of breath. Fumes given off during processing can cause respiratory irritation, headache and nausea.

- STOT (repeated exposure): Not classified.
- Aspiration toxicity: Not classified.

Carcinogen Category None

12. ECOLOGICAL INFORMATION

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|---------------------------|--|
| Ecotoxicity | No information available. |
| Persistence/Degradability | Polyethylene resin (pellets) are not biodegradable and may persist for many years in the environment. |
| Mobility | Low mobility in soil. |
| Environmental Fate | The product is considered non-toxic, non-volatile and insoluble in water; however, small particles can have physical effects on water and soil organisms. Do not allow product to spread into the environment. |
| Bioaccumulation Potential | Low bioaccumulative potential. |
| Environmental Impact | No Data Available |

13. DISPOSAL CONSIDERATIONS

| | |
|-----------------------------------|--|
| General Information | Recycle the material, as far as possible, or dispose of in accordance with relevant local regulations. |
| Special Precautions for Land Fill | No information available. |

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

| | |
|----------------------|--|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| Comments | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

Land Transport (Malaysia)

ADR Code

| | |
|----------------------|---------------------------------|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |

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| | |
|-------------------|--|
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| Comments | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

Land Transport (New Zealand)
NZS5433

| | |
|----------------------|--|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| Comments | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

Land Transport (United States of America)
US DOT

| | |
|----------------------|--|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| Comments | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

Sea Transport
IMDG Code

| | |
|----------------------|---|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| EMS | No Data Available |
| Marine Pollutant | No |
| Comments | NON-DANGEROUS GOODS: Not regulated for SEA transport. |

Air Transport
IATA DGR

| | |
|----------------------|---------------------------------|
| Proper Shipping Name | Low Density Polyethylene (LDPE) |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |

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| | |
|-------------------|---|
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| Comments | NON-DANGEROUS GOODS: Not regulated for AIR transport. |

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) |
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15. REGULATORY INFORMATION

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|-------------------------|-------------------|
| 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 | Not Hazardous |
|---------------|---------------|

National/Regional Inventories

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

USA (TSCA)

Not Determined

16. OTHER INFORMATION

Related Product Codes

POETLD1000, POETLD1001, POETLD1002, POETLD1003, POETLD1004, POETLD1005, POETLD1006, POETLD1007, POETLD1008, POETLD1009, POETLD1010, POETLD1100, POETLD1200, POETLD1244, POETLD1500, POETLD1700, POETLD1701, POETLD1702, POETLD1703, POETLD1704, POETLD1705, POETLD1706, POETLD1707, POETLD1708, POETLD1709, POETLD1710, POETLD1711, POETLD1712, POETLD1713, POETLD1714, POETLD1715, POETLD1716, POETLD1717, POETLD1718, POETLD1719, POETLD1720, POETLD1721, POETLD1722, POETLD1723, POETLD1724, POETLD1725, POETLD1726, POETLD1727, POETLD1728, POETLD1729, POETLD1730, POETLD1731, POETLD1732, POETLD1733, POETLD1734, POETLD1735, POETLD1736, POETLD1737, POETLD1738, POETLD1739, POETLD1740, POETLD1741, POETLD1742, POETLD1743, POETLD1744, POETLD1745, POETLD1746, POETLD1747, POETLD1748, POETLD1749, POETLD1750, POETLD1751, POETLD1752, POETLD1753, POETLD1754, POETLD1755, POETLD1756, POETLD1757, POETLD1758, POETLD1759, POETLD1760, POETLD1761, POETLD1762, POETLD1763, POETLD1764, POETLD1765, POETLD1766, POETLD1767, POETLD1768, POETLD1769, POETLD1770, POETLD1771, POETLD1772, POETLD2000, POETLD2480, POETLD2500, POETLD2600, POETLD3000, POETLD3010, POETLD3020, POETLD3200, POETLD3400, POETLD3500, POETLD5000, POETLD5100, POETLD5200, POETLD5300, POETLD5301, POETLD5302, POETLD5316, POETLD5317, POETLD5400, POETLD5500, POETLD5600, POETLD5700, POETLD5800, POETLD5900, POETLD6000, POETLD6010, POETLD7370, POETLD8000

Revision

4

Revision Date

10 Jan 2022

Reason for Issue

Updated SDS

Key/Legend

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances**atm** Atmosphere**CAS** Chemical Abstracts Service (Registry Number)**cm²** Square Centimetres**CO₂** Carbon Dioxide**COD** Chemical Oxygen Demand**deg C (°C)** Degrees Celcius**EPA (New Zealand)** Environmental Protection Authority of New Zealand**deg F (°F)** Degrees Fahrenheit**g** Grams**g/cm³** 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 insoluble in each other.**inHg** Inch of Mercury**inH₂O** Inch of Water**K** Kelvin**kg** Kilogram**kg/m³** 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**m³** Cubic Metre**mbar** Millibar**mg** Milligram**mg/24H** Milligrams per 24 Hours**mg/kg** Milligrams per Kilogram**mg/m³** 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