

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)

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

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

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

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

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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

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

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, CO ₂), 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, CO ₂), 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
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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

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

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

General Information	No Data Available
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Poisons Schedule (Aust)	Not Scheduled
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Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Not Hazardous
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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, POETLD5701, POETLD5800, POETLD5900, POETLD6000, POETLD6010, POETLD7370, POETLD8000
Revision	4
Revision Date	10 Jan 2022
Reason for Issue	Updated SDS
Key/Legend	<p>< Less Than > Greater Than</p> <p>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</p>

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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