

# Material Safety Data Sheet

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Infosafe No. KP00B Issue Date : December 2010 APPROVED by QENOS

Product Name : UNPIGMENTED LDPE AND LLDPE

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** UNPIGMENTED LDPE AND LLDPE  
**Company Name** QENOS PTY LTD  
**Address** 471 - 513 Kororoit Creek Road, ALTONA  
VIC 3018 Australia  
**Emergency Tel.** (03) 9258 7333  
**Telephone/Fax Number** Tel: (03) 9258 7333  
Fax: (03) 9360 9027  
**Email** alan.findlay@qenos.com  
**Recommended Use** Unpigmented LDPE and LLDPE for film, moulding and extrusion applications.  
Production of moulded polyethylene articles, wire and cable coatings,  
packaging film.

**Other Names** Name Product Code

LOW DENSITY POLYETHYLENE (LDPE)  
LINEAR LOW DENSITY POLYETHYLENE (LLDPE)  
ALKATHENE; ALKATUFF  
EP2010PNX, EP2507PNX  
LD0128MS, LD0220MS  
LD1217, LD2424, LD6622  
LDD201, LDD203, LDD204, LDD205  
LDF433, LDH210, LDH215, LDJ225  
LDJ226, LDJ250, LDN248  
LL0130AB, LL0132HS  
LL401, LL425, LL438, LL488  
LL501, LL525, LL540  
LL601, LL705UV, LL710UV, LL711UV  
LL722, LL725, LL755, LL820  
LLCOS1, LLFOS1, LLMOS1, LLMOS2  
WJG117, WNC199, WRM124  
XDS34, XJF143, XLC177, XLF197  
LDD25, LDH45, LDJ65, LDN85  
LDD105, LDR125, LDJ145

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** NON-HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical** Solid

**Characterization**

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	POLYETHYLENE	9002-88-4	98-100 %
	PROPRIETARY ADDITIVES		0-2 %

## 4. FIRST AID MEASURES

**Inhalation** Remove victim to fresh air.  
Remove contaminated clothing. Seek medical advice if effects persist.  
**Ingestion** Not expected to be a problem. If uncomfortable seek medical assistance.  
**Skin** Wash contact area with soap and water. Molten material will adhere to skin and cause burns. Cool material as quickly as possible with water and see a physician for prompt removal of the adhering material and treatment of the

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burn. Do not remove material or clothing from skin. Removal may result in further damage to skin.  
**Eye** Flush with water in order to remove particulates. For contact with molten material treat as for skin burns.  
**Advice to Doctor** Treat symptomatically. Advice as per above information.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** Carbon Dioxide, Foam, Dry Chemical, Water Fog or Fine Water Spray;  
**Specific Hazards** Dust explosion hazard - High concentration of air-borne powders, fines or dust may form explosive mixtures with air. Risk of dust explosion is increased if flammable vapour also present.  
Static electricity - May accumulate hazardous static charge when agitated in transfer handling systems.  
See section 7 for additional information.  
**Decomposition Temp.** >250°C  
**Precautions in connection with Fire** Firefighters must use self contained breathing apparatus;

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal**  
1. Dampen down to prevent spread by wind.  
2. Shovel or sweep up spilled material and dispose or recycle.  
3. Disposal of recovered material should conform to local regulations.  
NOTE: Spilled pellets on surfaces/floors will create slip hazards and should be swept up promptly.

## 7. HANDLING AND STORAGE

**Handling and Storage** Manage Dust explosion Hazard: Minimize production of fines/dust when handling PE polymer. Keep handling areas free of loose dust/powder and fines around handling systems and prevent build up and concentration of fines/dust on flat surfaces such as floors and other surfaces such as ducting, structure beams and ceilings. Manage Static Electricity hazard: Earth (ground) all material handling and transfer equipment to dissipate static electricity. Keep away from uncontrolled heat and other ignition sources. For additional information on control of static and potential dust and fire hazards, refer to NFPA -654 'Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye Pharmaceutical and Plastics Industries'.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Other Exposure Information** No exposure standard has been published by the National Occupational Health & Safety Commission (Worksafe Australia). Qenos recommends a limit of 10 mg/m<sup>3</sup> for nuisance dusts.  
**Engineering Controls** Good general ventilation is required under ordinary conditions of use. Avoid inhaling dusts and fumes generated during use. Use with local exhaust ventilation during processing.  
**Personal Protective Equipment** Thermal resistant gloves should be worn when handling hot materials. Use safety glasses. Under dusty conditions approved dust respirators to AS/NZ1715 and AS/NZ1716 should be worn to avoid exposure by inhalation.  
**Technical Protective Measures** NOTES REGARDING THERMAL DEGRADATION of POLYETHYLENE  
When discussing the degradation of Polyethylene it is important to distinguish between the burning and fuming of the product.  
Fumes from Polyethylene: During processing of polyethylene ie whenever the polymer is heated, fumes will be evolved - the extent and content of which will largely depend on the temperature and duration of the exposure.  
Because of the wide range of processing conditions which will influence the degradation process and therefore the composition of the fumes, the precise nature of which will vary according to conditions but likely to include butane and other alkanes and alkenes, the general recommendation is given that the inhalation of fumes should be avoided and that the area be well ventilated ie. the level of fumes evolved should be kept as low as possible. It is recommended that general ventilation be provided at the rate of at least six air changes per hour. In some circumstances, based on risk assessment, local exhaust ventilation may be required. (1)  
Where continued inhalation of the fumes has occurred or there has been a build

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up of fumes, a number of effects have been reported relating to irritation of the eyes, respiratory tract and throat. Headaches may also occur. In certain situations, based on risk management processes, respiratory protection (eg supplied air or organic canister) may also be used to control exposure to polyethylene fume. Only approved respiratory protective equipment to AS/NZ1715 and AS/NZ1716 should be worn.

Burning of Polyethylene: Polyethylene film is a hydrocarbon and therefore will burn readily. It will not however easily self ignite. When burning, polyethylene will drip and run ignited particles. Rolls of polyethylene films and paper, particularly tissue paper, should be stored separately if at all possible - the former is hard to ignite, but burns strongly once alight, the latter will easily ignite and smoulder. Once established, burning polyethylene has at least 50% higher calorific value, therefore the flame will be more than twice the intensity.

If separate storage is not possible, extra high hazard sprinkler system should be concentrated over the area reserved for polyethylene film.

The fire brigade code does not treat rolls of polyethylene film any differently than for paper with respect to hazards from fumes evolved during a fire.

The gases evolved during burning will differ with increasing temperature. However, the major component of the gases will be carbon monoxide, carbon dioxide, very low levels of acrolein, formaldehyde, other aldehydes, ketones, methane, ethane and acetylene. Probably the most attention has been given to the formation of acrolein which can be evolved in toxicologically significant amounts. It is this chemical which causes irritation to the nose, eyes and throat and can cause headaches, and hence the need for any enclosed area to be well ventilated.

It is recommended that fire crew wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

(1) UK HSE Publication; Plastics Processing Sheet No 13.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	Solid
<b>Appearance</b>	Translucent pellets or powder.
<b>Decomposition Temperature</b>	>250°C
<b>Melting Point</b>	100 - 130°C
<b>Boiling Point</b>	None allocated
<b>Vapour Pressure</b>	Not applicable
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Combustible solid. May form flammable dust clouds in air. Polymer may burn in presence of extreme heat and oxygen. Avoid extreme heat.
<b>Auto-Ignition Temperature</b>	350°C approx.
<b>Flammable Limits - Lower</b>	None allocated
<b>Other Information</b>	Density (Range): 0.910 - 0.945 g/cm <sup>3</sup> Water Solubility: Negligible

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	STABILITY (Thermal, Light, etc): Stable;
<b>Conditions to Avoid</b>	Extreme Heat
<b>Incompatible Materials</b>	INCOMPATIBILITY (Materials to Avoid): Strong oxidising agents
<b>Hazardous Decomposition Products</b>	Carbon Monoxide, Aldehydes, Acetic Acid, Ketones, Acrolein, Ethane and Methane;
<b>Hazardous Polymerization</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

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**Toxicology Information** Polyethylene has been classified by the international Agency for research on Cancer (IARC) as a Group 3 agent. Group 3 - The agent is not classifiable as to its carcinogenicity to humans. Data available is insufficient for assessment to be made. (IARC Monograph Sup.7, P.70, UK 1987)

**Inhalation** Inhalation of fines may cause irritation of nose and throat. Fumes given off during processing can cause respiratory irritation, headache and nausea.

**Ingestion** No known effects/minimal toxicity. May cause choking if swallowed.

**Skin** Skin contact may result in mechanical injury or abrasion. This is a low risk hazard. Thermal burns may result from exposure to hot material.

**Eye** Pellets, fines and powder may scratch eye surfaces/cause mechanical irritation to eyes. Fumes given off during processing may cause eye irritation.

**Chronic Effects** None known.

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## 12. ECOLOGICAL INFORMATION

**Environ. Protection** Pellets of resin considered environmentally inert.

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## 13. DISPOSAL CONSIDERATIONS

**Disposal Considerations** Dispose of in compliance with Federal, state and local government regulations. Disposal options include: recycling, incineration and landfilling.

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## 14. TRANSPORT INFORMATION

**Storage and Transport** Keep containers closed at all times. Check regularly for spills. The products listed in this MSDS are not classified as dangerous goods in the Australian Dangerous Goods Code.

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## 15. REGULATORY INFORMATION

**Poisons Schedule** Not Scheduled

**Packaging & Labelling** No special requirements.

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## 16. OTHER INFORMATION

**Manufacturers Advice** Conveying lines and equipment in material handling systems should be grounded to eliminate or reduce the build up of static electricity. Avoid sources of ignition in areas where fines may occur.

**Literature References** Commonwealth of Australia, 'Australian Code for the Transport of Dangerous Goods by Road and Rail', Australian Government Publishing Service (1992).

**Other Information** This MSDS summarises to our best knowledge at the date of issue, the health, safety and environmental hazards of the material and general guidance on how to safely handle the material in the workplace. Since Qenos cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Qenos representative or Qenos at the contact details on page 1.

...End Of MSDS...