

Polyethylene
at a Glance

Alkadyne™ PE100 Pipe Extrusion Grades

| Grade | Melt Index* (g/10 min @ 190°C, 5.00kg) | Density# (g/cm ³) | Applications |
|---------|--|----------------------------------|---|
| HDF193B | 0.3 | 0.961 ⁽¹⁾ | High Density black PE100 type resin certified to AS/NZS 4131, for use in pressure pipes and fittings. Excellent low sag properties and throughput, suitable for the majority of PE100 pipe dimensions. |
| HDF145B | 0.2 | 0.961 ⁽¹⁾ | High Density black PE100 type resin certified to AS/NZS 4131, for use in pressure pipes and fittings. Exceptional low sag properties and throughput, suitable for the most challenging pipe dimensions. |
| HDF193N | 0.3 | 0.952 ⁽¹⁾ | High Density natural resin for extrusion into a full range of non standard pipe products and as a base for PE100 type striping and jacket compounds. |

Notes: ⁽¹⁾ ASTM D1505/D2839

Alkadyne™ PE Pipe Extrusion Grades

| Grade | Melt Index* (g/10 min @ 190°C, 5.00kg) | Density# (g/cm ³) | Applications |
|--------|--|----------------------------------|---|
| MD0898 | 0.7 | 0.952 ⁽¹⁾ | Medium Density black PE80B type resin certified to AS/NZS 4131 for use in pressure pipes and fittings. |
| MD0592 | 0.6 | 0.942 ⁽¹⁾ | Medium Density natural resin for extrusion into a full range of non standard pipe products and as a base for PE80 type striping and jacket compounds. |
| GM7655 | 0.6 | 0.954 ⁽¹⁾ | High Density natural high molecular weight resin for extrusion into a full range of non standard pipe products. |
| MDF169 | 1.0 | 0.943 ⁽¹⁾ | Medium Density natural high molecular weight resin for extrusion into a full range of non standard pipe products. |
| LL0228 | 1.7 ⁽²⁾ | 0.923 ⁽¹⁾ | Linear Low Density resin for use in pipe extrusion applications. |

Notes: ⁽¹⁾ ASTM D1505/D2839 ⁽²⁾ D1238@190°C, 2.16kg

Alkadyne™ PE Wire and Cable Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|----------|--|----------------------------------|---|
| MD0592 | 0.12 | 0.942 ⁽¹⁾ | Designed for extrusion into a full range of wire and cable products where natural Medium Density resins are required. |
| MD0898-1 | 0.12 | 0.953 ⁽¹⁾ | Designed as general purpose jacketing compound for buried wires and cables where abrasion and cut through resistance is required. |

Notes: ⁽¹⁾ ASTM D1505/D2839

Alkatane™ HDPE Tape and Monofilament Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|----------|--|----------------------------------|---|
| GF7740F2 | 0.4 | 0.950 ⁽¹⁾ | Extrusion applications including stretched tape, monofilament, tarpaulins, and over-pouches for medicinal products. |

Notes: ⁽¹⁾ ASTM D1505/D2839

Alkatuff® LLDPE Rotational Moulding Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|---------|--|----------------------------------|---|
| LL711UV | 3 | 0.938 | Applications requiring excellent ESCR, chemical resistance ⁽¹⁾ , stiffness, toughness and UV protection, such as water and chemical tanks, septic systems and kayaks. |
| LL705UV | 5 | 0.935 | Applications requiring high ESCR, chemical resistance ⁽¹⁾ , toughness, stiffness and high level UV stabiliser, such as leisure craft, playground equipment and agricultural tanks. |
| LL755 | 5 | 0.935 | Applications requiring high ESCR, chemical resistance ⁽¹⁾ , toughness and stiffness. Incorporation of suitable UV stabilisation is required for outdoor applications. |
| LL710UV | 10 | 0.930 | High speed intricate applications requiring good ESCR, chemical resistance ⁽¹⁾ , toughness and UV protection, such as consumer goods and playground equipment. |

Notes: ⁽¹⁾ The level of chemical resistance is a function of product design and environmental conditions. Contact Qenos for further information.

*Melt Index according to ASTM D1238 unless otherwise annotated #Density according to ASTM D1505 unless otherwise annotated

| Alkathene® LDPE Film Grades | | | | Additives | | Applications | | | | | | | |
|-----------------------------|--|----------------------------------|--|-----------|---------------------|-----------------|--------|---------|------------|-------|------------|--------------|----------|
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications | Antiblock | Slip ⁽²⁾ | Heavy Duty Bags | Shrink | Produce | Carry Bags | Bread | Cling Wrap | Freezer Film | Overwrap |
| XDS34 | 0.30 | 0.922 | Heavy duty sacks, pallet wrap and industrial applications requiring heavy gauge film. Additive free. | | | ✓ | ✓ | | | | | | |
| LDF433 | 0.45 | 0.925 | Heavy duty sacks, pallet wrap and industrial applications requiring medium to heavy gauge film with increased stiffness. | ✓ | | ✓ | ✓ | | | | | | |
| LDD201 | 0.45 | 0.922 | General purpose medium to heavy gauge film for heavy duty bags and shrink film and for use as a blend component. | | | ✓ | ✓ | | | | | | |
| LDD203 | 0.45 | 0.922 | General purpose medium to heavy gauge film for heavy duty bags and shrink film requiring antiblock, and for use as a blend component. | ✓ | | ✓ | ✓ | | | | | | |
| LDD204 | 0.45 | 0.922 | General purpose medium to heavy gauge film for heavy duty bags and shrink film where a medium level of slip is required. | ✓ | M | ✓ | ✓ | | | | | | |
| LDD205 | 0.45 | 0.922 | General purpose medium to heavy gauge film for heavy duty bags, frozen food and produce bags where a high level of slip is required or for use as a blend component. | ✓ | H | ✓ | ✓ | ✓ | | | | ✓ | |
| LDH210 | 1.0 | 0.922 | Bundle shrink and other medium gauge film applications such as produce bags, carry bags and for blending into other film grades. | | | | ✓ | ✓ | ✓ | | | | |
| LDH215 | 1.0 | 0.922 | General purpose medium gauge film for produce bags and carry bags, frozen food where a high level of slip is required or for use as a blend component. | ✓ | H | | | ✓ | ✓ | | | | |
| XJF143 | 2.5 | 0.921 | Additive free, general purpose low gauge film for overwrap and other applications and for use as a blend component. | | | | | | | | | | ✓ |
| LDJ226 | 2.5 | 0.922 | Bundle shrink, low gauge shrink film and general purpose applications where a medium level of slip and antistatic are required. | ✓ | M ⁽¹⁾ | | ✓ | | ✓ | | | | ✓ |
| LD0220MS | 2.5 | 0.922 | High quality low gauge film for lamination and overwrap applications where a medium level of slip is required. | ✓ | M | | | | | | | | ✓ |
| LDJ225 | 2.5 | 0.922 | High quality, low gauge film primarily intended for bread bags and overwrap but also general purpose applications where a very high level of slip is required. | ✓ | VH | | | | | ✓ | | | ✓ |
| XLF197 | 5.5 | 0.920 | High quality, very thin gauge and high clarity film primarily intended for food and packaging wrap and for drycleaning film. Additive free. | | | | | | | | ✓ | | |

Notes: ⁽¹⁾ Based on antistat additive ⁽²⁾ VH = Very High Slip, H = High Slip, M = Medium Slip

| Alkatuff® LLDPE Film Grades | | | | Additives | | Applications | | | | | | | | | |
|-----------------------------|--|----------------------------------|---|-----------|---------------------|----------------|-----------------|---------|-------------------|-----------------|--------------|------------|-----|--------------|----------|
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications | Antiblock | Slip ⁽¹⁾ | Processing Aid | Heavy Duty Bags | Stretch | Agricultural Film | General Purpose | Garbage Bags | Lamination | FFS | Freezer Film | Overwrap |
| LL438 | 0.8 | 0.922 | Heavy duty sacks, agricultural films, lamination and form, fill and seal packaging where enhanced toughness and sealing characteristics are desired. | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| LL501 | 1.0 | 0.925 | General purpose industrial, agricultural and heavy duty films and as a blend component to improve film handling in converting and packaging operations. | | | | ✓ | | | ✓ | | | | | |
| LL601 | 1.0 | 0.925 | General purpose industrial, agricultural and heavy duty films and as a blend component to improve film handling in converting and packaging operations. | ✓ | H | | | | | ✓ | ✓ | | | | ✓ |
| LL425 | 2.5 | 0.918 | High quality cast film for applications that require toughness, high clarity and processability. | | | | | ✓ | | | | | | | |

Notes: ⁽¹⁾ VH = Very High Slip, H = High Slip, M = Medium Slip

*Melt Index according to ASTM D1238 unless otherwise annotated #Density according to ASTM D1505 unless otherwise annotated

| Alkamax® mLLDPE Film Grades | | | | Additives | | | Applications | | | | | | | | | | | | | |
|-----------------------------|--|----------------------------------|--|-----------|---------------------|----------------|-----------------|---------|---------|------------|-------|-------------------|-----------------|----------|------------|-----|--------------|----------|--------|---|
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications | Antiblock | Slip ⁽¹⁾ | Processing aid | Heavy Duty Bags | Stretch | Produce | Carry Bags | Bread | Agricultural Film | General Purpose | Ice Bags | Lamination | FFS | Freezer Film | Overwrap | Liners | |
| ML1810PN | 1.0 | 0.918 | Heavy duty bags, industrial and agricultural films, and form, fill and seal applications and ice bags where outstanding toughness, sealing and hot tack properties are desirable or for downgauging of existing film structures. | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ML1810PS | 1.0 | 0.918 | Heavy duty bags, industrial and form, fill and seal applications and ice bags where outstanding toughness, sealing, hot tack properties and high slip are desirable or for downgauging of existing film structures. | ✓ | H | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ML2610PN | 1.0 | 0.926 | Heavy duty bags, lamination, industrial and form, fill and seal applications where outstanding stiffness, toughness, optical and sealing properties are desirable or for downgauging of existing film structures. | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | ✓ |
| ML1710SC | 1.0 | 0.917 | Stretch cling films (with addition of appropriate cling additive) and other film applications where outstanding toughness, optical and sealing properties are desirable or for downgauging of existing film structures. | | | ✓ | | ✓ | | | | ✓ | | | | | | | | |

Notes: ⁽¹⁾ VH = Very High Slip, H = High Slip, M = Medium Slip

| Alkatane™ HDPE Film Grades | | | | Applications | | | |
|----------------------------|--|----------------------------------|--|--------------|-----------------|--------|--------------|
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications | Carry Bags | General Purpose | Liners | Barrier Film |
| GM4755F | 0.10 | 0.955 ⁽¹⁾ | Carry bags and liners where high impact, toughness and stiffness are desirable and as a blend component into LDPE and LLDPE films for heavy duty applications. | ✓ | ✓ | ✓ | |
| HDF895 | 0.80 | 0.960 ⁽¹⁾ | Moisture barrier and blend component into LDPE and LLDPE films to enhance stiffness. Blend component in core layer for high clarity coextruded films. | ✓ | ✓ | ✓ | ✓ |

Notes: ⁽¹⁾ ASTM D1505/D2839

| Alkatane™ HDPE Blow Moulding Grades | | | |
|-------------------------------------|---|----------------------------------|--|
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
| HD0840 | 0.06 | 0.953 ⁽¹⁾ | Large part blow mouldings, especially blow moulded self-supported drums and tanks (25 - 220 litres). Exceptional ESCR. |
| HD1155 | 0.07 | 0.953 ⁽¹⁾ | Large part blow mouldings, including 25 litre to 220 litre tanks and drums. Exceptional ESCR. |
| GM7655 | 0.09 | 0.954 ⁽¹⁾ | Blow moulded containers including household and industrial chemical (HIC). Suitable for larger part mouldings. Exceptional ESCR. |
| GF7660 | 0.30 | 0.959 ⁽¹⁾ | Household and industrial chemical (HIC) containers, including detergent and pharmaceutical bottles. Excellent ESCR. |
| GE4760 | 0.60 | 0.964 ⁽¹⁾ | Blow moulded water, dairy and fruit juice bottles. |
| HD5148 | 0.83 | 0.962 ⁽¹⁾ | High speed dairy packaging applications and other thin walled bottles such as milk, cream, fruit juice and cordial. |

Notes: ⁽¹⁾ ASTM D1505/D2839

Qenos imported polymers and additives

Complementing our Australian manufactured Polyethylene grades, Qenos acts as a local distributor for a wide range of imported polymers and additives including rubbers, elastomers, adhesives, plastomers, EVA, BOPP Film, EPS, antioxidants and titanium dioxide. For the full Qenos range, please refer to the Qenos website, Customer Service or your Account Manager.

* Melt Index according to ASTM D1238 unless otherwise annotated # Density according to ASTM D1505 unless otherwise annotated

Alkathene® LDPE Extrusion Coating Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|--------|--|----------------------------------|--|
| XLC177 | 4.5 | 0.923 | Applications including milkboard and fabric extrusion coating where very good drawdown, low moisture vapour transmission rates and excellent hot tack are desirable. Additive free. |
| WNC199 | 8.0 | 0.918 | Liquids packaging and other sensitive food packaging laminates where excellent heat seal, low extractables, good melt strength and low odour and taint are desirable. Additive free. |
| LDN248 | 7.6 | 0.922 | Liquids packaging and other sensitive food packaging laminates where low extractables and low odour and taint are desirable. Additive free. |
| LD1217 | 12 | 0.918 | Liquids packaging and other sensitive food packaging laminates where high line speed, low neck-in, low extractables and low odour and taint are desirable. Additive free. |

Alkathene® LDPE Injection Moulding Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|--------|--|----------------------------------|---|
| XDS34 | 0.3 | 0.922 | Small part injection moulded caps and closures. Additive free. |
| WJG117 | 1.7 | 0.918 | Thick section mouldings, caps and closures, industrial containers where a high level of toughness is desirable. Additive free. |
| XJF143 | 2.5 | 0.921 | Injection moulded caps and closures, and thick-walled sections. Additive free. |
| LDN248 | 7.6 | 0.922 | Injection moulded caps and closures. Additive free. |
| WRM124 | 22 | 0.920 | High flow resin for reseal lids, housewares and toys where excellent gloss, low warpage and flow to toughness ratio are desirable. Additive free. |
| LD6622 | 70 | 0.922 | High flow resin for lids and other thin wall injection moulding applications. Additive free. |

Alkatuff® LLDPE Injection Moulding Grades

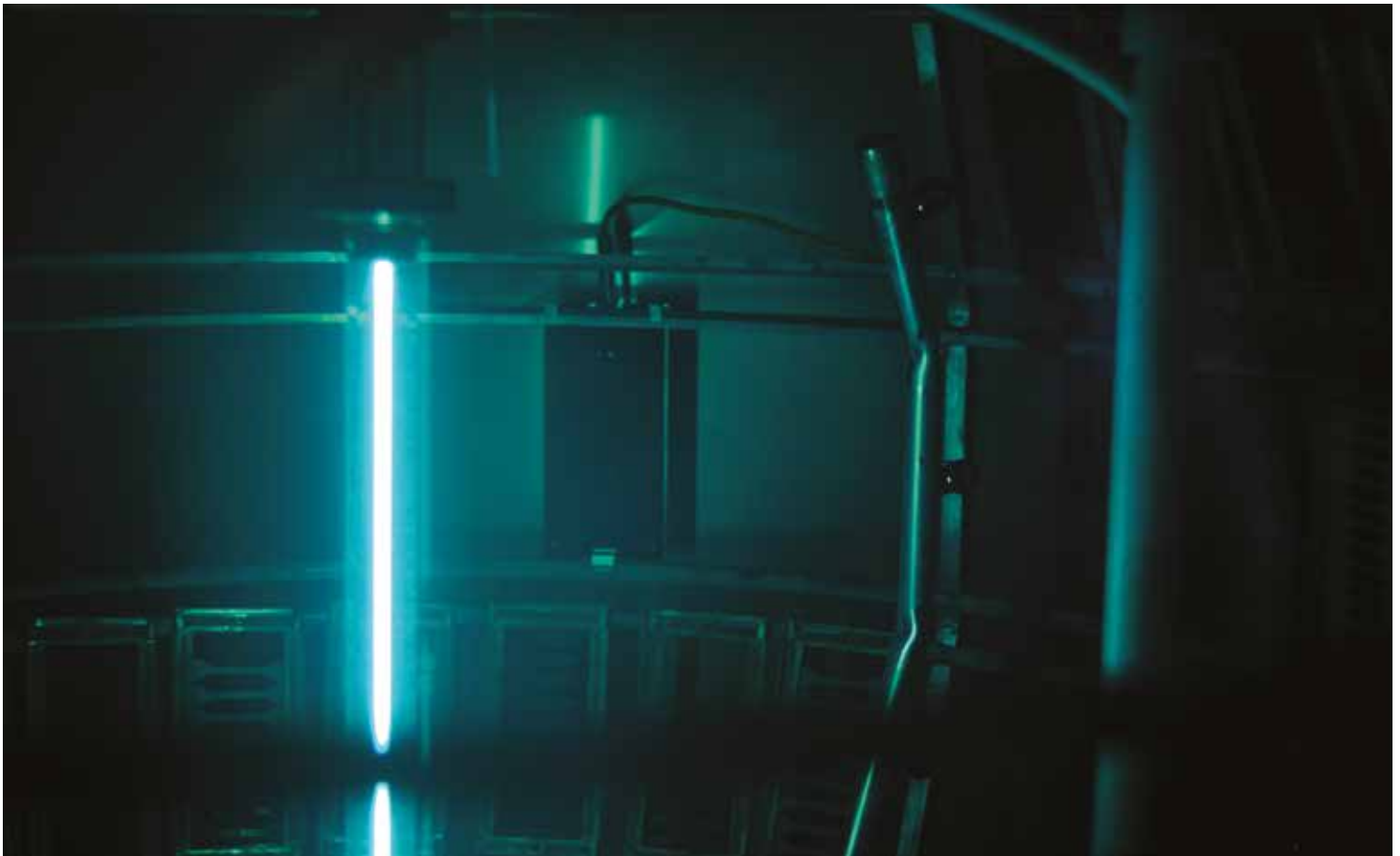
| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|-------|--|----------------------------------|--|
| LL820 | 20 | 0.925 | Injection moulding and compounding applications such as housewares and lids. |

Alkatane™ HDPE Injection Moulding Grades

| Grade | Melt Index* (g/10 min @ 190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|----------|--|----------------------------------|---|
| HD0390 | 4 | 0.955 | Stackable crates for transport, storage and bottles and industrial mouldings where very good mechanical properties are desirable. |
| HD0397UV | 4 | 0.955 | Mouldings requiring long-term weatherability, including mobile garbage bins, crates, and industrial mouldings where very good mechanical properties are desirable. |
| HD0490 | 4.5 | 0.955 | Stackable crates for transport, storage and bottles, and industrial mouldings where very good mechanical properties are desirable. |
| HD0499UV | 4.5 | 0.955 | Mouldings requiring long-term weatherability, including mobile garbage bins, crates, and industrial mouldings where very good mechanical properties are desirable. |
| HD0790 | 7 | 0.956 | Industrial pails, crates, closures and sealant cartridges where a good balance between flow and impact resistance is desirable. |
| HD1090 | 10 | 0.956 | Industrial pails, crates, closures and sealant cartridges where a good balance between flow and impact resistance is desirable. |
| HD1099UV | 10 | 0.956 | Mouldings requiring long term weatherability including industrial pails, crates, and tote boxes where a good balance between flow and impact resistance is desirable. |
| HD2090 | 20 | 0.956 | Housewares, thin-walled containers and closures where excellent mould flow and flexibility is required. |
| HD3690 | 36 | 0.956 | Housewares, thin-walled mouldings and closures where excellent mould flow and flexibility is required. |

*Melt Index according to ASTM D1238 unless otherwise annotated

#Density according to ASTM D1505 unless otherwise annotated



Qenos Pty. Ltd.
ABN: 62 054 196 771

Cnr Kororoit Creek Road & Maidstone Street,
Altona Victoria 3018, Australia

T: 1800 063 573 F: 1800 638 981
customer.service@qenos.com
qenos.com



Front Cover: Pellet geometry and pellet quality can have a significant effect on material flow and the efficiency of feeding polyethylene into an extruder. Qenos measures pellet quality using a pellet shape and size distribution analyser, a device that photographs around 10,000 pellets in 4 minutes, digitally analyses the images and generates a report on pellet quality. Where a drift in the pellet quality is detected, adjustments are made proactively to maintain high product integrity.

Rear Cover: The standard for UV performance for PE Water Tanks specified in AS/NZS 4766 PE Tanks for the Storage of Chemicals and Water is 8,000 hours of uninterrupted exposure to an intense and specifically developed UV light source. Qenos exhaustively tests the long term UV performance of its Rotational Moulding Resins under conditions of controlled irradiance, chamber temperature and humidity and repeated rain cycles. Alkatuff® 711UV achieves a class leading UV performance exceeding 20,000 hours against the required standards, ensuring that Alkatuff® 711UV is "Tough in the Sun".

The contents of this document are offered solely for your consideration and verification and should not be construed as a warranty or representation for which Qenos Pty Ltd assumes legal liability, except to the extent that such liability is imposed by legislation and cannot be excluded. Values quoted are the result of tests on representative samples and the product supplied may not conform in all respects. Qenos Pty Ltd reserves the right to make any improvements or amendments to the composition of any grade or product without alteration to the code number. The applications listed are based on the usage by existing Qenos customers. In using Qenos Pty Ltd's products, you must establish for yourself the most suitable formulation, production method and control tests to ensure the uniformity and quality of your product is in compliance with all laws and your requirements.