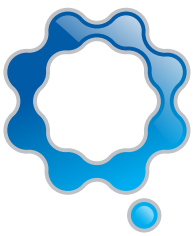
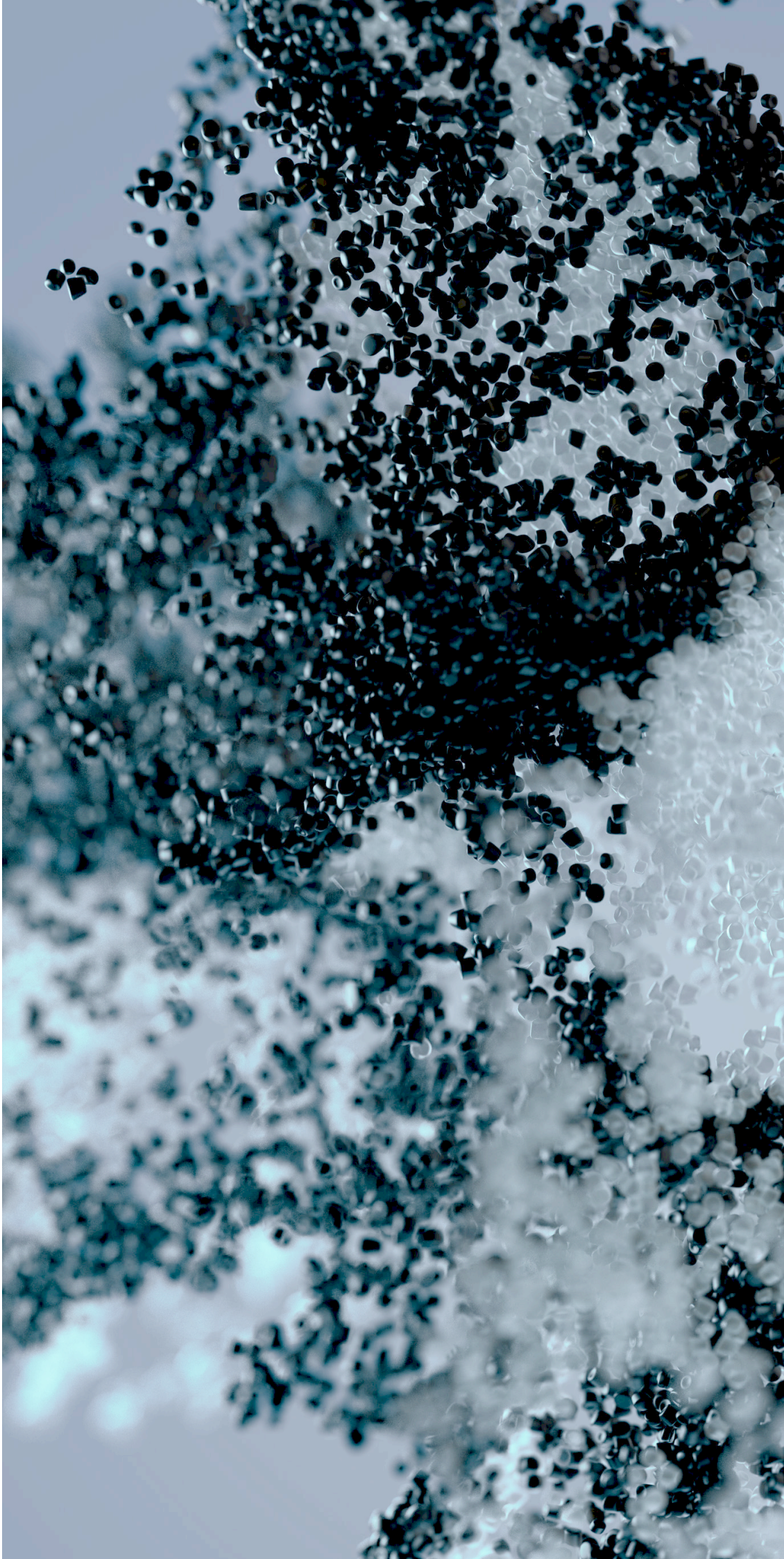


POLYETHYLENE AT A GLANCE



Qenos



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 | 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. |
| HDF193N | 0.3 | 0.952 | 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. |
| HCR193B' | 0.2 | 0.959 | High Density black PE100 type resin with high stress crack resistance (HSCR) certified to AS/NZS 4131 and in accordance with PIPA guideline POP016, for use in pressure pipes and fittings. Designed for trenchless installations and high abuse environments. |

Notes: 1. PE100 HSCR striping compounds available upon request in blue, yellow, cream, purple and white.

Alkadyne® PE Pipe Extrusion Grades

| Grade | Melt Index* (g/10 min@190°C, 5.00kg) | Density# (g/cm ³) | Applications |
|--------|--------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------|
| GM7655 | 0.6 | 0.954 | High Density natural high molecular weight resin for extrusion into a full range of non standard pipe products. |

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 | Extrusion applications including stretched tape, monofilament, tarpaulins, and blown film. |

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, IBCs 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.

| Alkathene® LDPE Film Grades | | | | Additives | | | Applications | | | | | | |
|-----------------------------|--------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------------|--------------|---------|------------|-------|------------|--------------|----------|
| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density#1 (g/cm³) | Applications | Antiblock | Slip² | 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 | 0.920 | 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. | ✓ | M³ | ✓ | | | ✓ | | | | ✓ |
| 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 dry-cleaning film. Additive free. | | | | | | | | ✓ | | |

Notes: 1. Base resin density; antiblock adds 0.001 – 0.002 g/cm³. 2. VH = Very High Slip, H = High Slip, M = Medium Slip 3. Based on antistatic additive.

| Alkatuff® LLDPE Film Grades | | | | Additives | | | Applications | | | | | | | | | |
|-----------------------------|--------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|----------------|-----------------|---------|-------------------|-----------------|--------------|------------|-----|--------------|----------|-------------|
| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density#1 (g/cm³) | Applications | Antiblock | Slip² | Processing Aid | Heavy Duty Bags | Stretch | Agricultural Film | General Purpose | Garbage Bags | Lamination | FFS | Freezer Film | Overwrap | Bubble wrap |
| 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. | | | | | ✓ | | | | | | | | ✓ |
| LL525 | 2.5 | 0.935 | General purpose cast film applications requiring high tensile strength and stiffness, such as bubble wrap and personal care products. | | | | | | ✓ | | | | | | | ✓ |

Notes: 1. Base resin density; antiblock adds 0.001 – 0.002 g/cm³. 2. VH = Very High Slip, H = High Slip, M = Medium Slip

| Alkamax® mLLDPE Film Grades | | | | Additives | | | | | | | | | | Applications | | | | | | | | | |
|-----------------------------|--------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|------------|-------|-------------------|-----------------|--------------|------------|-----|--------------|----------|--------|---|---|---|---|
| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density#1 (g/cm³) | Applications | Antiblock | Slip² | 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. Base resin density; antiblock adds 0.001 – 0.002 g/cm³. 2. 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/cm³) | Applications | Carry Bags | General Purpose | Liners |
| | | | | GM4755F | 0.10 | 0.955 |
| HD0195F | 1.3 | 0.960 | Moisture barrier and blend component into LDPE and LLDPE films to enhance stiffness. Blend component in core layer for high clarity coextruded films. | | ✓ | |

| Alkatane® HDPE Blow Moulding Grades | | | |
|-------------------------------------|--------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density# (g/cm³) | Applications |
| GM7655 | 0.09 | 0.954 | Blow moulded containers including household and industrial chemical (HIC). Suitable for larger part mouldings. Exceptional ESCR. |
| GF7660 | 0.30 | 0.959 | Household and industrial chemical (HIC) containers, including detergent and pharmaceutical bottles. Excellent ESCR. |
| GE4760 | 0.60 | 0.964 | Blow moulded water, dairy and fruit juice bottles. |

Alkathene® LDPE Extrusion Coating Grades

| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|--------|--------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XLC177 | 4.5 | 0.922 | 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. |
| XJF143 | 2.5 | 0.920 | 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 caps, 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. |

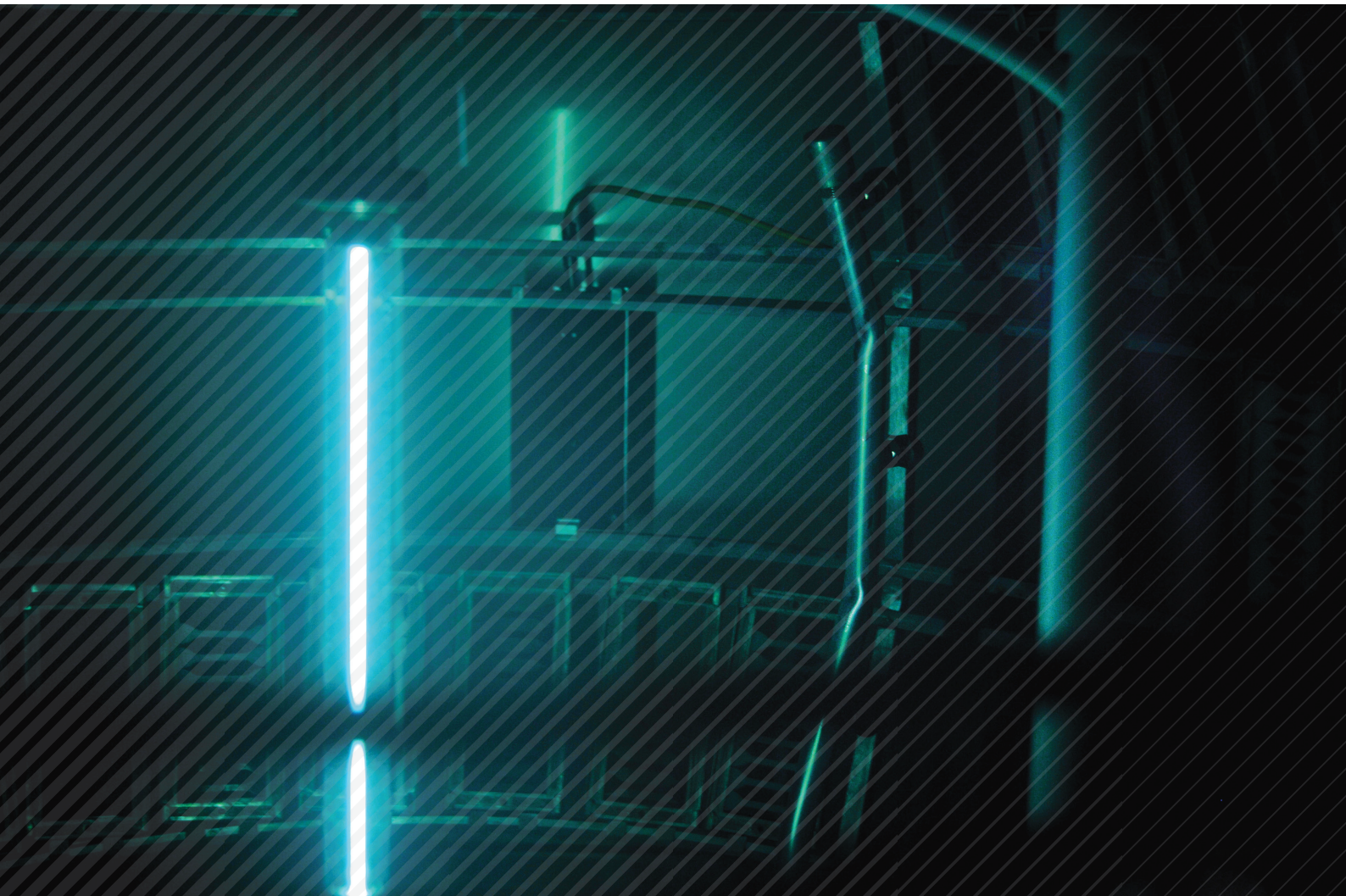
Alkatane® HDPE Injection Moulding Grades

| Grade | Melt Index* (g/10 min@190°C, 2.16kg) | Density# (g/cm ³) | Applications |
|--------|--------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| HD0390 | 4 | 0.955 | Mobile garbage bins, stackable crates for transport, storage and bottles and industrial mouldings where very good mechanical properties are desirable. |
| HD0490 | 4.5 | 0.955 | Mobile garbage bins, stackable crates for transport, storage and bottles, and industrial mouldings where very good mechanical properties are desirable. |
| HD0790 | 7 | 0.956 | Mobile garbage bin lids, 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. |
| 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. |

Genos imported polymers and additives

In addition to Genos manufactured Polyethylene, Genos eXsource offers a world class range of local and international specialty and sustainable polymers and chemicals from manufacturers including Viva Energy Polymers, LyondellBassel, Repsol, and BASF. These polymers and additives are used across a broad spectrum of industries such as Consumer & Industrial Films, Fluid Engineering (pipes and fittings), Building and Construction (residential and infrastructure), Food Packaging (flexible and rigid), General Industrial and Consumer Housewares. For the full range, please visit www.exsource.com or call your Account Manager.

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



Front Cover: Qenos produces natural polyethylene for a wide range of applications and black polyethylene for pipe extrusion.

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”.

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