GREEN MUSCAT / COMMERCIAL RESIN PORTFOLIO

Virgin polyethylene for industrial conversion.

Find virgin PE for injection molding, blow molding, pipe, film and rotational molding.

19	7	4
Catalogue grades	Product families	PE families



THE VIRGIN PE PORTFOLIO

Select by process.

Start with your process, compare grades, then ask us for a quote and the technical sheet for your order.



GREEN MUSCAT / VIRGIN POLYETHYLENE

Range at a glance

Choose a process to compare the available grade options.

HDPE injection molding Rigid molded parts	GMHD-IM	03
HDPE blow molding Bottles and containers	GMHD-BM	05
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HDPE INJECTION MOLDING

GMHD-IM01

Crates, pallets and rigid boxes

PRODUCT OVERVIEW

Choose this HDPE for injection molded parts that need stiffness and impact resistance.

TYPICAL APPLICATIONS

Crates **Pallets** **Industrial boxes**



Stacked injection molded crates Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ASTM D1505	g/cm³	0.960–0.964
Melt flow rate (190°C / 2.16 kg)	ASTM D1238	g/10 min	6–8
Vicat softening point	ASTM D1525	°C	133
Tensile yield stress (TD)	ASTM D638	MPa	30
Elongation at break	ASTM D638	%	500
Flexural modulus	ASTM D790	MPa	1,300
Izod impact	ASTM D256	J/m	50

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

HDPE INJECTION MOLDING

GMHD-IM02

High-flow housewares

PRODUCT OVERVIEW

A higher-flow HDPE for housewares and other injection molded components.



Molded housewares Application illustration

TYPICAL APPLICATIONS

Housewares **Molded components**

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ASTM D1505	g/cm³	0.952
Melt index	ASTM D1238	g/10 min	18
Flexural modulus	ASTM D790	MPa	1,350
Vicat softening point	ASTM D1525	°C	122
Notched Izod impact (23°C)	ASTM D256/A	J/m	25

Ask us to confirm the melt index test load when you request a quote.

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

HDPE BLOW MOLDING

GMHD-BM01

Bottles and small containers

PRODUCT OVERVIEW

Choose this grade for extrusion blow molding when your bottles need stiffness and good flow during processing.

TYPICAL APPLICATIONS

Bottles **Small containers**



Small blow molded bottles Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183	g/cm³	0.954
Melt index (190°C / 5 kg)	ISO 1133	g/10 min	1.2
Melt index (190°C / 21.6 kg)	ISO 1133	g/10 min	23
Notched impact (23°C)	ISO 179/1eA	kJ/m²	9
Flow rate ratio (21.6 kg / 5 kg)	ISO 1133	—	19

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

HDPE BLOW MOLDING

GMHD-BM02

Rigid household bottles

PRODUCT OVERVIEW

For rigid detergent and toiletry bottles. Tell us your bottle size and impact targets so we can recommend a grade for your line.

TYPICAL APPLICATIONS

Detergent bottles **Toiletry bottles**



Household detergent bottles Application illustration

REQUEST A GRADE MATCH

Tell us what your product needs

Share your application and target density and melt flow rate.

For bottles, include impact, stiffness and stress crack resistance targets.

PE PIPE EXTRUSION

GMPE-PX01

PE100 pipe compound

PRODUCT OVERVIEW

Looking for a black HDPE compound for a PE100 project? Send your pipe standard and approval requirements with your enquiry.



Large-diameter pipe Application illustration

TYPICAL APPLICATIONS

Pressure pipe projects

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density at 23°C	ASTM D1505	kg/m³	959
Melt flow rate (190°C / 5 kg)	ISO 1133	g/10 min	0.23
Carbon black content	ISO 6964	%	2.25
Melt flow rate (190°C / 21.6 kg)	ISO 1133	g/10 min	6.2
Oxidation induction time (210°C)	EN 728	min	>20
Tensile strength at yield	ASTM D638	MPa	23
Tensile modulus	ASTM D638	MPa	900

Values are for a reference resin. Ask for the offered grade’s technical sheet and approval documents.

PE PIPE EXTRUSION

GMPE-PX02

PE80 pipe compound

PRODUCT OVERVIEW

For PE80 projects that call for a black MDPE compound. Ask us to confirm the resin and documents for your application.

TYPICAL APPLICATIONS

Pressure pipe projects



Coiled utility pipe Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183-1	kg/m³	954
Melt flow rate (190°C / 5 kg)	ISO 1133-1	g/10 min	0.8
Oxidation induction time (210°C)	ISO 11357-6	min	≥20
Carbon black content	ISO 6964	wt%	2.0–2.5
Carbon black dispersion	ISO 18553	rating	≤3
Slow crack growth (8 bar / 80°C)	ISO 13479	h	>2,000
Tensile modulus (1 mm/min)	ISO 527-2	MPa	800

Values are for a reference resin. Ask for the offered grade’s technical sheet and approval documents.

PE PIPE EXTRUSION

GMPE-PX03

PE63 pipe resin

PRODUCT OVERVIEW

For projects specifying natural HDPE under IS 4984:2016. Ask us to confirm the grade against your pipe specification.

TYPICAL APPLICATIONS

Pipe extrusion projects



Natural polyethylene pipe Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density at 23°C	ASTM D1505	g/cm³	0.9500
Melt flow index (190°C / 5 kg)	ASTM D1238	g/10 min	0.90
Density at 27°C	IS 4984:2016	g/cm³	0.9480
Tensile strength at yield (Type IV)	ASTM D638	MPa	28
Elongation at break (Type IV)	ASTM D638	%	>800
Flexural modulus	ASTM D790	MPa	1,050
Vicat softening point (10 N)	ASTM D1525	°C	126

Values are for a reference resin. Ask for the offered grade’s technical sheet and approval documents.

HDPE FILM EXTRUSION

GMHD-FL01

Thin carrier bags and liners

PRODUCT OVERVIEW

A low-flow HDPE for thin blown film that needs stiffness and tensile strength.



Thin carrier bags Application illustration

TYPICAL APPLICATIONS

Carrier bags **Thin liners**

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density at 23°C	ISO 1183	g/cm³	0.952
Melt flow rate (190°C / 2.16 kg)	ASTM D1238	g/10 min	0.04
Melting point	ASTM D2117	°C	131
Tensile stress at yield	ASTM D638	MPa	24.5
Tensile stress at break	ASTM D638	MPa	38.2
Elongation at break	ASTM D638	%	>500
Environmental stress crack resistance	ASTM D1693	h	>600

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

HDPE FILM EXTRUSION

GMHD-FL02

Shopping bags and thin packaging

PRODUCT OVERVIEW

A high molecular weight HDPE for thin bags and multilayer packaging film. Compare the tear values in both film directions below.

TYPICAL APPLICATIONS

Shopping bags | **Grocery sacks** | **Multilayer films**



Lightweight shopping bags Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183	g/cm³	0.951
High load melt index (190°C / 21.6 kg)	ISO 1133	g/10 min	10
Tensile modulus	ISO 527-1/-2	MPa	1,050
Tensile strength (MD / TD)	ISO 527-1/-3	MPa	55 / 55
Tensile strain at break (MD / TD)	ISO 527-1/-3	%	580 / 620
Elmendorf tear (MD / TD)	ISO 6383-2	mN	250 / 800
Melting temperature	ISO 3146	°C	132

Film properties: 20 µm blown film at 220°C, blow-up ratio 3. Modulus measured on a molded specimen.

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

HDPE FILM EXTRUSION

GMHD-FL03

Stiff blown film and pouches

PRODUCT OVERVIEW

A bimodal HDPE for stiff blown film used in pouches, bags and packaging layers.



Film pouches Application illustration

TYPICAL APPLICATIONS

Film bags **Pouches** **Film layers**

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183	g/cm³	0.949
Melt flow rate (190°C / 5 kg)	ISO 1133	g/10 min	0.28
Melt flow rate (190°C / 21.6 kg)	ISO 1133	g/10 min	8.0
Flow rate ratio (21.6 kg / 5 kg)	ISO 1133	—	29
Fish-eye rating	Internal test	rating	≤3

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

MDPE ROTATIONAL MOLDING

GMMD-RM01

Rotomolded tanks and containers

PRODUCT OVERVIEW

Choose this MDPE copolymer for tanks and hollow parts that need impact resistance and a smooth finish.

TYPICAL APPLICATIONS

Tanks **Containers** **Hollow parts**



Rotomolded tank Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1872/1	kg/m³	938
Melt flow rate (2.16 kg)	ISO 1133	g/10 min	4
Flexural modulus	ISO 178	MPa	750
Tensile strength at yield	BP 13B/1	MPa	18
Elongation at break	BP 13B/1	%	1,400
Charpy impact resistance	BP 13C/26	kJ/m²	20
ESCR (F50 / 23°C)	ASTM D1693	h	200

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LLDPE FILM EXTRUSION

GMLL-FL01

Agricultural and industrial films

PRODUCT OVERVIEW

A lower melt index LLDPE for film lines that need melt strength as the film is drawn down.

TYPICAL APPLICATIONS

Agricultural films | **Shrink films** | **Lamination**



Agricultural film — Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ASTM D1505	g/cm³	0.922
Melt index (190°C / 2.16 kg)	ASTM D1238	g/10 min	0.6
Flexural modulus	ASTM D790	MPa	385
Tensile strength at yield (MD / TD)	ASTM D882	MPa	11.5 / 12
Tensile strength at break (MD / TD)	ASTM D882	MPa	47 / 28
Elongation at break	ASTM D882	%	>600
Elmendorf tear (MD / TD)	ASTM D1922	g	130 / 470

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LLDPE FILM EXTRUSION

GMLL-FL02

Stiff blown and cast film

PRODUCT OVERVIEW

A butene LLDPE for stiffer film, whether you run blown film, cast film or a lamination line.

TYPICAL APPLICATIONS

Blown film | **Cast film** | **Lamination**



Clear packaging film rolls Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Melt index (190°C / 2.16 kg)	ASTM D1238	g/10 min	1.8–2.2
Haze	ASTM D1003	%	13
Dart impact	ASTM D1709	g	60
Tensile strength at yield (MD / TD)	ASTM D882	MPa	12 / 13
Tensile strength at break (MD / TD)	ASTM D882	MPa	40 / 38
Elongation at break (MD / TD)	ASTM D882	%	850 / 1,000

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LLDPE FILM EXTRUSION

GMLL-FL03

Film for bags, liners and blends

PRODUCT OVERVIEW

Use this butene LLDPE for general purpose blown film or blend it with LDPE to suit your line.

TYPICAL APPLICATIONS

Film blends | **Bags** | **Flexible packaging**



Heavy-duty film sack Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183	kg/m³	920
Melt flow rate (190°C / 2.16 kg)	ISO 1133	g/10 min	0.9
Tensile strength at yield (MD / TD)	ISO 527	MPa	10 / 11
Tensile strength at break (MD / TD)	ISO 527	MPa	41 / 32
Elongation at break (MD / TD)	ISO 527	%	620 / 840
Dart drop impact	ASTM D1709	g	150

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LDPE FILM EXTRUSION

GMLD-FL01

General packaging film

PRODUCT OVERVIEW

For packaging film and bags. Tell us your target thickness, clarity and additives so we can match your requirements.

TYPICAL APPLICATIONS

Packaging film **Bags**



Unprinted packaging pouches Application illustration

REQUEST A GRADE MATCH

Tell us what your product needs

Share your application and target density and melt flow rate.

For film, include your haze, gloss, tensile strength, impact and additive targets.

LDPE FILM EXTRUSION

GMLD-FL02

Heavy-duty shrink film and liners

PRODUCT OVERVIEW

A low melt index LDPE for industrial film, shrink film and liners that need impact strength and stiffness.

TYPICAL APPLICATIONS

Industrial film | **Shrink film** | **Bin liners**



Shrink-wrapped multipack Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Melt flow index	ASTM D1238	g/10 min	0.68–0.85
Vicat softening point	ASTM D1525	°C	93–97
Dart impact	ASTM D1709	g	min. 120
Elongation at break (MD / TD)	ASTM D882	%	≥290 / ≥450

Ask us to confirm the melt index test load when you request a quote.

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LDPE FILM EXTRUSION

GMLD-FL03

Blown film for bags and liners

PRODUCT OVERVIEW

An LDPE film grade for bags and liners that need a balance of stiffness, impact strength and ease of extrusion.

TYPICAL APPLICATIONS

Packaging film **Bags** **Liners**



Packaging film roll and bag Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	TSTM 209B	g/cm³	0.920
Melt flow index (190°C / 2.16 kg)	ASTM D1238	g/10 min	2
Vicat softening point	ASTM D1525	°C	94
Haze	ASTM D1003	%	≤15
Gloss (60°)	ASTM D523	GU	≥60
Elongation at break (MD / TD)	ASTM D882	%	≥330 / ≥600
Dart impact	ASTM D1709	g	≥100

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LDPE FILM EXTRUSION

GMLD-FL04

Flexible packaging film

PRODUCT OVERVIEW

For flexible bags and packaging film. Compare haze, gloss and tear resistance to your film targets.



Flexible film sheets Application illustration

TYPICAL APPLICATIONS

Packaging film **Flexible bags**

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183 (A)	g/cm³	0.921
Melt flow rate (190°C / 2.16 kg)	ISO 1133	g/10 min	1.9
Haze	ASTM D1003A	%	12
Gloss	ASTM D2457	GU	53
Tear strength (MD / TD)	ISO 6383-2	kN/m	70 / 25
Yield stress (MD / TD)	ISO 527	MPa	11 / 11
Modulus (MD / TD)	ISO 527	MPa	190 / 190

Film properties: 25 µm blown film, blow-up ratio 3.

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

LDPE FILM EXTRUSION

GMLD-FL05

Pouches, liners and lamination

PRODUCT OVERVIEW

A general purpose LDPE for flexible films across a range of widths and thicknesses.

TYPICAL APPLICATIONS

Pouches **Liners** **Lamination films**



Pouches and lamination film Application illustration

TECHNICAL DATA

Property	Test method	Unit	Reference value
Density	ISO 1183 (A)	kg/m³	921
Haze	ASTM D1003A	%	11
Gloss	ASTM D2457	%	50 ± 5
Yield stress (MD / TD)	ISO R527-1	MPa	13 / 11
Tear strength (MD / TD)	ISO 6383-2	kN/m	60 / 25
Elongation at break (TD)	ISO R527-1	%	>500
Modulus (MD / TD)	ISO R527-1	MPa	190 / 200

Use these values to compare grades. Ask for the technical data sheet and batch certificate with your quote.

REQUEST A QUOTE

Let’s match the resin to your process.

Send us the catalogue code or tell us what you make, how you process it and which properties your product needs.

Grade and application / Target properties
Required volume / Delivery destination

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