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Polyethylene MDPE HF 513

Refining & Chemicals
Polymers

Technical data sheet
Medium Density Polyethylene BLOWN FILM
Produced in Europe

Description

MDPE HF 513 is a medium density polyethylene produced by slurry loop low pressure process with hexene as co-monomer.

MDPE HF 513 is a semi-high molecular weight polyethylene giving excellent mechanical properties. It shows a broad molecular weight distribution ensuring outstanding processability.

MDPE HF 513 can be used alone, blended or coextruded in a wide variety of blown film applications : consumer, industrial, food or hygiene packaging.

Characteristics

Property	Method	Unit	Typical value
Density	ISO 1183	g/cm³	0.934
Melt Flow Rate at 190°C/2.16 kg	ISO 1133	g/10 min	0.15
Melt Flow Rate at 190°C/21.6 kg	ISO 1133	g/10 min	14.5
Melting temperature	ISO 11357	°C	125
Vicat temperature	ISO 306	°C	118
Flexural Modulus (0.25% max)	ISO 178	MPa	620

Values indicated are typical for this product. Density and MFR are properties routinely measured during "the standard quality control procedure". The other figures are generated by tests not included in the "standard quality control procedure", and are given for information only. Data are not intended for specification purposes.

Additives

Antioxidant: Yes

Processing

MDPE HF 513 can be processed on most HD-, LD- and LLDPE blown film equipment.

However, to get the best mechanical properties, HF 513 is advised to be extruded in HDPE configuration (high neck, high blow up ratio, small die gap).

MDPE HF 513 is typically extruded between 190 and 220°C and should never exceed 250°C.

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Blown film properties

Property	Method	Unit	Typical value (*)
Tensile Strength at Yield MD/TD	ISO 527-3	MPa	
film 20 µm			20/19
film 40 µm			18/18
Tensile Strength at Break MD/TD	ISO 527-3	MPa	
film 20 µm			65/52
film 40 µm			55/52
Elongation at Break MD/TD	ISO 527-3	%	
film 20 µm			400/500
film 40 µm			540/620
Elmendorf MD/TD	ISO 6383-2	N/mm	
film 20 µm			11/135
film 40 µm			24/185
Dart test	ISO 7765-1	g	
film 20 µm			220
film 40 µm			290

(*) Figures stated hereabove are obtained using laboratory test specimens produced with the following HDPE configuration: 70 mm screw diameter, L/D = 25, die diameter = 120 mm, die gap = 1.2 mm, BUR = 4.5:1, output = 100 kg/h, neck height = 100 cm, temperature = 210°C.