+135-3858-6433 (GuangDong)
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TOTAL

Refining & Chemicals
Polymers

Polyethylene Lumicene® mPE M6012 EP

Technical data sheet
Metallocene Polyethylene BLOWN FILM
Produced in Europe

Description

Lumicene® mPE M6012 EP is a metallocene High Density homopolymer Polyethylene designed to have High Water Vapour Barrier (low WVTR).

Lumicene® mPE M6012 EP can be processed at high output rates with low extrusion pressure, excellent bubble stability and gauge control. The outstanding Water Vapour Barrier gives a significant down-gauging potential for some applications as dry food packaging.

Characteristics

Property	Method	Unit	Typical value
Density	ISO 1183	g/cm³	0.960
Melt Flow Rate (190°C/2.16 kg)	ISO 1133	g/10 min	1.2
Melting temperature	ISO 11357	°C	134

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.

Processing

Lumicene® mPE M6012 EP is typically extruded at a melt temperature around 210°C.
Lumicene® mPE M6012 EP can be blown easily at any of the following conditions:

- Temperature: 200 to 230°C
- BUR : 1.5:1 to 4.5:1
- Die gap : 0.8 to 2.8 mm

An excellent blending ability of Lumicene® mPE M6012 EP with HDPE and easy-peal ionomers was observed.

Additives

Antioxidant : yes
PPA : yes

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Blown film properties

These values have been measured on a 40 µm blown film.

Property	Method	Unit	Typical value
Tensile Strength at Yield MD/TD**	ISO 527-3	MPa	27.5/31.5
Tensile Strength at Break MD/TD**	ISO 527-3	MPa	52.5/52
Elongation at Break MD/TD**	ISO 527-3	%	870/1040
Elmendorf MD/TD**	ISO 6383-2	N/mm	8/28
Dart test	ISO 7765-1	g	55
Haze	ISO 14782	%	15
Gloss 45°	ASTM D2457		54
Water Vapour Transmission Rate (38°C, 90%RH)***	ASTM E 96 E	g.35µm/m².day	1.6

(*) Figures stated hereabove are obtained using laboratory test specimens produced with the following extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.5:1, temperature = 210°C.

(**) MD: Machine Direction TD: Transverse Direction

(***) Result stated hereabove is obtained using film sample of 35µm produced with the following extrusion conditions: 45 mm screw diameter, L/D = 30, die diameter = 120 mm, die gap = 1.4 mm, BUR = 2.1:1, temperature = 210°C.