+135-3858-6433 (GuangDong)
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+852-6957-5415 (HongKong)

TOTAL
Refining & Chemicals
Polymers

Lumicene® mPE M1820 EP

Technical data sheet
Metallocene Polyethylene BLOWN FILM
Produced in Europe

Product Description

Lumicene® mPE M1820 EP is a Metallocene based Low Density Polyethylene with hexene as comonomer.

Lumicene® mPE M1820 EP is especially dedicated to film applications where outstanding mechanical and optical properties are required. Moreover it offers excellent sealing behavior at low temperature.

Lumicene® mPE M1820 EP can be processed at high output rates with low extrusion pressure, excellent bubble stability and gauge control in comparison with conventional LLDPE and first generation metallocene based polyethylene. Furthermore, Lumicene® mPE M1820 EP has a very low gel level.

Applications

Lumicene® mPE M1820 EP is suited for many applications such as:

- Food Packaging
- Lamination Film
- Blown Stretch Film
- Deep-Freeze Packaging
- FFS bags

Characteristics

Property	Method	Unit	Typical value
Density	ISO 1183	g/cm³	0.918
Melt Flow Rate (190°C/2.16 kg)	ISO 1133	g/10 min	2.0
Melting temperature	ISO 11357	°C	110
Vicat temperature	ISO 306	°C	102.5

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 M1820 EP is typically extruded at a melt temperature around 200°C. Lumicene® mPE M1820 EP can be blown easily at any of the following conditions:

- Temperature: 180 to 230°C
- BUR: 1.5:1 to 4.5:1
- Die Gap: 0.8 to 2.8 mm

An excellent blending-ability of mPE M1820 EP with LDPE and LLDPE was observed.

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Additives

Antioxidant: yes
PPA: yes

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	10/10
Tensile Strength at Break MD/TD (**)	ISO 527-3	MPa	59/55
Elongation at Break MD/TD (**)	ISO 527-3	%	644/705
Elmendorf MD/TD (**)	ISO 6383-2	N/mm	114/162
Dart test	ISO 7765-1	G	> 1000
Haze	ISO 14782	%	5.2
Gloss 45°	ASTM D2457		72

(*) 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