Refining & Chemicals
Polymers

Technical data sheet
Metallocene Polyethylene CAST FILM
Produced in Europe

Description

Lumicene® mPE M 6040 is a second generation metallocene high density Polyethylene.

Lumicene® mPE M 6040 can be processed at high output rates with low extrusion pressure, low neck-in, excellent drawability and gauge control in comparison with conventional LLDPE and first generation metallocene based polyethylene. The high stiffness combined with good optical properties brings a significant down-gauging potential.

Lumicene® mPE M 6040 is a versatile resin that can be used in pure or in blend for the production of both monolayer and multilayer film. Typical applications are: specialty film, hygiene film, embossed film, compounds and consumer and automatic packaging, such as produce bags, mailing and hygiene overwrap film. The high density of Lumicene® mPE M 6040 enables its use in applications with moisture barrier requirements, such as dry food packaging, and brings improved heat resistance, compared to commonly used HDPE.

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	4.0
Melting temperature	ISO 11357	°C	134
Vicat temperature	ISO 306	°C	132

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

On a cast film line Lumicene® mPE M 6040 can be easily extruded in the following conditions:

- Melt temperature : 220 to 280°C
- Chill roll temperature : 20 to 80 °C

Additives

Antioxidant : yes
PPA : no

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Cast film properties

These values have been measured on a 20 µm cast film.

Property	Method	Unit	Typical value (*)
Tensile Strength at Yield MD/TD(**)	ISO 527-3	MPa	23/24
Tensile Strength at Break MD/TD(**)	ISO 527-3	MPa	26/34
Elongation at Break MD/TD(**)	ISO 527-3	%	520/850
Elmendorf MD/TD(**)	ISO 6383-2	N/mm	8/70
Dart test	ISO 7765-1	g	40
Haze	ISO 14782	%	12
Gloss 45°	ASTM D2457		51

(*) Figures stated hereabove are obtained using laboratory test specimens produced at the following extrusion conditions: die gap = 250 µm, chill roll temperature = 20°C, throughput = 7 kg/h, melt temperature = 260 °C

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

Handling and storage

Please refer to the safety data sheet (SDS) for handling and storage information. It is advisable to convert the product within one year after delivery provided storage conditions are used as given in the SDS of our product. SDS may be obtained from the website: www.totalrefiningchemicals.com

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