TOTAL Polyethylene Lumicene® M 5510 EP

High Density Polyethylene

TOTAL Refining & Chemicals

Message:

Lumicene ® mPE M5510 EP is a second generation metallocene high density homopolymer Polyethylene.

Lumicene ® mPE M5510 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. The outstanding stiffness combined with good optical properties brings a significant down-gauging potential.

The high density of Lumicene[®] mPE M5510 EP enables its use in applications with moisture barrier requirements, such as dry food packaging, and brings improved heat resistance, compared to commonly used HDPE.

Lumicene ® mPE M5510 EP is suited for many applications in the field of consumer, industrial, food or hygiene packaging such as bags, heavy-duty sacks, automatic packaging specialty film, mailing film and lamination.

General Information			
Additive	Processing aid		
	Antioxidation		
Features	Rigid, good		
	High density		
	Optical		
	Homopolymer		
	Antioxidation		
	Compliance of Food Exposure		
Uses	Packaging		
	Films		
	Laminate		
	Bags		
	Heavy packing bag		
Agency Ratings	EC 1907/2006 (REACH)		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	0.955	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16			
kg)	1.2	g/10 min	ISO 1133
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	40	μm	
Tensile Stress			ISO 527-3
MD: Yield, 40 µm, blown film	27.5	MPa	ISO 527-3
TD: Yield, 40 μm , blown film	28.0	MPa	ISO 527-3
MD: Broken, 40 µm, blown film	57.0	MPa	ISO 527-3
TD: Broken, 40 µm, blown film	45.0	MPa	ISO 527-3

Tensile Elongation			ISO 527-3
MD: Broken, 40 µm, blown film	870	%	ISO 527-3
TD: Broken, 40 µm, blown film	910	%	ISO 527-3
Dart Drop Test - Blown Film (40.0 μm)	100	g	ISO 7765-1
Elmendorf Tear Strength ¹			ISO 6383-2
MD : 40.0 µm	11.0	kN/m	ISO 6383-2
TD : 40.0 μm	90.0	kN/m	ISO 6383-2
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	133	°C	ISO 306
Melting Temperature	134	°C	ISO 11357-3
Optical	Nominal Value	Unit	Test Method
Gloss (45°, 40.0 μm, Blown Film)	40		ASTM D2457
Haze (40.0 µm, Blown Film)	24	%	ISO 14782
Extrusion	Nominal Value	Unit	
Melt Temperature	200 - 230	°C	
Extrusion instructions			
BUR: 1.5:1 to 4.5:1Die Gap: 0.8 to 2.8 mm			
NOTE			
1.	Blown Film		

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