TOTAL Polyethylene Lumicene® M 1820 EP

Linear Low Density Polyethylene

TOTAL Refining & Chemicals

Message:

Lumicene ® mPE M 1820 EP is a Metallocene based Low Density Polyethylene with hexene as comonomer.

Lumicene® mPE M 1820 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 M 1820 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 general metallocene based polyethylene. Furthermore, Lumicene[®] mPe M 1820 EP has a very low gel level. Lumicene[®] mPE M1820 EP is suited for many applications such as:

Food Packaging

Lamination Film

Blown Stretch Film

Deep-Freeze Packaging

FFS bags

General Information				
Additive	Processing aid			
	Antioxidation			
Features	Low density			
	Low speed solidification crystal point			
	Low temperature heat sealability			
	Optical			
	hexene comonomer			
	Antioxidation			
Uses	Packaging			
	Films			
	Laminate			
	Bags			
	Food packaging			
Agency Ratings	EC 1907/2006 (REACH)			
Processing Method	Blow film			
Physical	Nominal Value	Unit	Test Method	
Density	0.918	g/cm³	ISO 1183	
Melt Mass-Flow Rate (MFR) (190°C/2.16				
kg)	2.0	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	10.0	MPa	ISO 527-3	
TD: Yield, 40 μm , blown film	10.0	MPa	ISO 527-3	

MD: Broken, 40 µm, blown film	59.0	MPa	ISO 527-3
TD: Broken, 40 µm, blown film	55.0	MPa	ISO 527-3
Tensile Elongation			ISO 527-3
MD: Broken, 40 µm, blown film	640	%	ISO 527-3
TD: Broken, 40 µm, blown film	710	%	ISO 527-3
Dart Drop Impact (40 µm, Blown Film)	> 1000	g	ISO 7765-1
Elmendorf Tear Strength			ISO 6383-2
MD : 40.0 µm	114.0	kN/m	ISO 6383-2
TD : 40.0 μm	162.0	kN/m	ISO 6383-2
Thermal	Nominal Value	Unit	Test Method
Thermal Vicat Softening Temperature	Nominal Value	Unit °C	Test Method ISO 306
Thermal Vicat Softening Temperature Melting Temperature	Nominal Value 103 110	Unit °C °C	Test Method ISO 306 ISO 11357-3
Thermal Vicat Softening Temperature Melting Temperature Optical	Nominal Value 103 110 Nominal Value	Unit °C °C Unit	Test Method ISO 306 ISO 11357-3 Test Method
ThermalVicat Softening TemperatureMelting TemperatureOpticalGloss (45°, 40.0 μm, Blown Film)	Nominal Value 103 110 Nominal Value 72	Unit °C °C Unit	Test Method ISO 306 ISO 11357-3 Test Method ASTM D2457
ThermalVicat Softening TemperatureMelting TemperatureOpticalGloss (45°, 40.0 μm, Blown Film)Haze (40.0 μm, Blown Film)	Nominal Value103110Nominal Value725.2	Unit °C °C Unit	Test MethodISO 306ISO 11357-3Test MethodASTM D2457ISO 14782
ThermalVicat Softening TemperatureMelting TemperatureOpticalGloss (45°, 40.0 μm, Blown Film)Haze (40.0 μm, Blown Film)Extrusion	Nominal Value103110Nominal Value725.2Nominal Value	Unit °C °C Unit % Unit	Test MethodISO 306ISO 11357-3Test MethodASTM D2457ISO 14782
ThermalVicat Softening TemperatureMelting TemperatureOpticalGloss (45°, 40.0 μm, Blown Film)Haze (40.0 μm, Blown Film)ExtrusionMelt Temperature	Nominal Value103110Nominal Value725.2Nominal Value200	Unit °C °C Unit % Unit Unit	Test Method ISO 306 ISO 11357-3 Test Method ASTM D2457 ISO 14782

BUR: 1.5:1 to 4.5:1Die Gap: 0.8 to 2.8 mmLaboratory 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.

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