

Lumicene® mPE M 6040

High Density Polyethylene

TOTAL PETROCHEMICALS

Technical Data

Product 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.

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet (English)		
Search for UL Yellow Card	• TOTAL PETROCHEMICALS		
Availability	• Europe		
Additive	• Antioxidant		
Features	• Antioxidant • Good Processability	• High Stiffness • Low Neck-In	• Opticals
Uses	• Bags • Film	• Food Packaging • Multilayer Film	• Packaging
Processing Method	• Film Extrusion		

Physical	Nominal Value Unit	Test Method
Density	0.960 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0 g/10 min	ISO 1133

Films	Nominal Value Unit	Test Method
Film Thickness - Tested	20 µm	
Tensile Stress		ISO 527-3
MD: Yield, 20 µm, Cast Film	23.0 MPa	
TD: Yield, 20 µm, Cast Film	24.0 MPa	
MD: Break, 20 µm, Cast Film	26.0 MPa	
TD: Break, 20 µm, Cast Film	34.0 MPa	
Tensile Elongation		ISO 527-3
MD: Break, 20 µm, Cast Film	520 %	
TD: Break, 20 µm, Cast Film	850 %	
Dart Drop Impact (20 µm, Cast Film)	40 g	ISO 7765-1
Elmendorf Tear Strength ³		ISO 6383-2
MD: 20.0 µm	8.0 kN/m	
TD: 20.0 µm	70.0 kN/m	

Thermal	Nominal Value Unit	Test Method
Vicat Softening Temperature	132 °C	ISO 306
Melting Temperature	134 °C	ISO 11357-3

Optical	Nominal Value Unit	Test Method
Gloss (45°, 20.0 µm, Cast Film)	51	ASTM D2457
Haze (20.0 µm, Cast Film)	12 %	ISO 14782

Extrusion	Nominal Value Unit
Melt Temperature	220 to 280 °C
Take-Off Roll	20.0 to 80.0 °C