

# TOTAL Polyethylene Lumicene® M 3410 EP (EU)

Medium Density Polyethylene  
TOTAL Refining & Chemicals

Message:

Lumicene® mPE M 3410 EP is a second generation metallocene based Medium Density Polyethylene with hexene as comonomer. Lumicene® mPE M 3410 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 combination of these features brings a significant downgauging potential. Lumicene® mPE M 3410 EP is especially dedicated to film applications where high gloss and high transparency are required, particularly in blend and in coextrusion with LLDPE or LDPE. Lumicene® mPE M 3410 EP is suited for many applications in the field of consumer, industrial, food or hygiene packaging such as collation shrink, mailing film, heavy-duty sacks, bags, lamination and hygiene film.

General Information	
Additive	Antioxidant
	Processing Aid
Features	Good Heat Seal
	Good Tear Strength
	Heat Sealable
	Hexene Comonomer
	High Clarity
	High Gloss
	High Stiffness
	Puncture Resistant
Uses	Bags
	Blending
	Consumer Applications
	Film
	Food Packaging
	Heavy-duty Bags
	Laminates
	Multilayer Film
	Packaging
	Shrink Wrap
Agency Ratings	EC 1907/2006 (REACH)
Forms	Pellets
Processing Method	Blown Film

## Coextrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.934	g/cm <sup>3</sup>	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			
190°C/2.16 kg	0.90	g/10 min	ASTM D1238, ISO 1133
190°C/21.6 kg	30	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Coefficient of Friction (vs. Itself - Static, Blown Film)	0.40		ASTM D1894
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25 to 41	µm	
Secant Modulus			ASTM D882A
1% Secant, MD : Blown Film	365	MPa	
1% Secant, TD : 25 µm, Blown Film	386	MPa	
Tensile Stress			
MD : Yield, 40 µm, Blown Film	17.0	MPa	ISO 527-3
TD : Yield, 40 µm, Blown Film	18.0	MPa	ISO 527-3
MD : Break, 25 µm, Blown Film	44.1	MPa	ASTM D882A
TD : Break, 25 µm, Blown Film	42.1	MPa	ASTM D882A
MD : Break, 40 µm, Blown Film	47.0	MPa	ISO 527-3
TD : Break, 40 µm, Blown Film	43.0	MPa	ISO 527-3
Tensile Elongation			
MD : Break, 25 µm, Blown Film	400	%	ASTM D882A
TD : Break, 25 µm, Blown Film	650	%	ASTM D882A
MD : Break, 40 µm, Blown Film	630	%	ISO 527-3
TD : Break, 40 µm, Blown Film	700	%	ISO 527-3
Dart Drop Impact			
25 µm, Blown Film	60	g	ASTM D1709A
40 µm, Blown Film	100	g	ISO 7765-1
Elmendorf Tear Strength			ASTM D1922
MD : 25 µm, Blown Film	55	g	
TD : 25 µm, Blown Film	400	g	
Seal Initiation Temperature	120	°C	
Water Vapor Transmission	10	g/m <sup>2</sup> /24 hr	ASTM E96
Elmendorf Tear Strength <sup>1</sup>			ISO 6383-2
MD : 40.0 µm	20.0	kN/m	
TD : 40.0 µm	100.0	kN/m	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	123	°C	ISO 306
Melting Temperature	124	°C	ISO 11357-3, ASTM D3417
Optical	Nominal Value	Unit	Test Method

Gardner Gloss (45°, 25.4 µm, Blown Film)	65		ASTM D523
Gloss (45°, 40.0 µm, Blown Film)	60		ASTM D2457
Haze			
25.4 µm, Blown Film	9.0	%	ASTM D1003
40.0 µm, Blown Film	9.0	%	ISO 14782
Extrusion	Nominal Value	Unit	
Melt Temperature	200	°C	
NOTE			

1. Blown Film

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#### Recommended distributors for this material

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