Technical Information

ATTANE™ SL 4101G
Ultra Low Density Polyethylene Resin

Overview

ATTANE™ SL 4101G Ultra Low Density Polyethylene Resin is designed for the production of blown film requiring a combination of excellent optical properties, outstanding tear and impact strength, and very good sealability. The product also offers very good flex crack resistance. ATTANE SL4101G Ultra Low Density Polyethylene Resin contains slip and antiblocking additives.

Applications:

- Diapers, pads, wipes, garments
- Medical packaging
- Non-food and detergent pouches
- Closure liners
- Snack foods
- Fresh-cut produce packaging
- Frozen foods
- Liquid foods
- Fresh & processed foods
- Industrial liners
- Thin gauge industrial & consumer films
- Misc. heavy duty films

Complies with:

- EU, No 10/2011
- U.S. FDA FCN 424

Consult the regulations for complete details.

Additive

- Antiblock: 2750 ppm
- Slip: 1000 ppm
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density [1]	0.912	g/cm³	0.912	g/cm³	ASTM D792
Melt Index [1] (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ISO 1133
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Coefficient of Friction					ASTM D1894
vs. Itself - Dynamic	0.12		0.12		
vs. Metal - Dynamic	0.15		0.15		
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1.6	mil	40	µm	
Tensile Modulus					ISO 527-3
MD : 1.6 mil (40 µm)	18900	psi	130	MPa	
TD : 1.6 mil (40 µm)	22300	psi	154	MPa	
Tensile Stress					ISO 527-3
MD : Yield, 1.6 mil (40 µm)	943	psi	6.50	MPa	
TD : Yield, 1.6 mil (40 µm)	899	psi	6.20	MPa	
MD : Break, 1.6 mil (40 µm)	4640	psi	32.0	MPa	
TD : Break, 1.6 mil (40 µm)	4350	psi	30.0	MPa	
Tensile Elongation					ISO 527-3
MD : Break, 1.6 mil (40 µm)	680	%	680	%	
TD : Break, 1.6 mil (40 µm)	800	%	800	%	
Dart Drop Impact (1.6 mil (40 µm))	2700	g	2700	g	ISO 7765-1/A
Elmendorf Tear Strength					ASTM D1922
MD : 1.6 mil (40 µm)	600	g	600	g	
TD : 1.6 mil (40 µm)	800	g	800	g	

Thermal	Nominal Value (English)		Nominal Value (SI)		Test Method
Vicat Softening Temperature [1]	198	°F	92.0	°C	ASTM D1525

Optical	Nominal Value (English)		Nominal Value (SI)		Test Method
Gloss (20°, 1.57 mil (40.0 µm))	45		45		ASTM D2457
Haze (1.57 mil (40.0 µm))	8.0	%	8.0	%	ISO 14782

Extrusion	Nominal Value (English)		Nominal Value (SI)	
Melt Temperature	374 to 464	°F	190 to 240	°C

Extrusion Notes

Fabrication Conditions for Blown Film Extrusion:

- Die Gap 1.6 to 2.5 mm
- Melt Temperature: 190 to 240°C
- Blow-Up Ratio: 1.5 to 3.5
- Recommended Gauge Range: 10 to 80 µm

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] Compression moulded samples