Technical Information

ATTANE™ SL 4102G
Ultra Low Density Polyethylene Resin

Overview

ATTANE™ SL 4102G Ultra Low-Density Linear Polyethylene Copolymer is an ethylene-octene copolymer. It is specifically designed for the production of blown film requiring a combination of good processability, outstanding sealing, hot tack and toughness, coupled with excellent optical properties.

Applications:

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

Complies with:

- EU, No 10/2011
- U.S. FDA 21 CFR 176.170(c)
- U.S. FDA FCN 424

Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density [1]	0.905	g/cm³	0.905	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ISO 1133
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	2	mil	40	µm	
Secant Modulus					ASTM D882
MD : 1.6 mil (40 µm)	13100	psi	90.0	MPa	
TD : 1.6 mil (40 µm)	13800	psi	95.0	MPa	
Tensile Stress					ISO 527-3
MD : Yield, 1.6 mil (40 µm)	827	psi	5.70	MPa	
TD : Yield, 1.6 mil (40 µm)	783	psi	5.40	MPa	
MD : Break, 1.6 mil (40 µm)	4790	psi	33.0	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)	670	%	670	%	
TD : Break, 1.6 mil (40 µm)	790	%	790	%	
Dart Drop Impact (1.6 mil (40 µm))	> 850	g	> 850	g	ISO 7765-1/B
Elmendorf Tear Strength					ASTM D1922
MD : 1.6 mil (40 µm)	660	g	660	g	
TD : 1.6 mil (40 µm)	800	g	800	g	
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Shore Hardness [1] (Shore D)	40		40		DIN 53505
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature [1]	183	°F	84.0	°C	ASTM D1525
Melting Temperature	252	°F	122	°C	DSC
Peak Crystallization Temperature (DSC)	210	°F	99.0	°C	ISO 3146

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 1.57 mil (40.0 µm))	78	78	ASTM D2457
Haze (1.57 mil (40.0 µm))	7.00 %	7.00 %	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:

- Melt Temperature: 190 to 240°C (Ideal: 215-225°C)
- Blown-Up Ratio: 1.5:1 to 3.5:1
- 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