ATTANE™ SL 4100G
Ultra Low Density Polyethylene Resin

Overview

ATTANE™ SL 4100G 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.

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.

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
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1.6	mil	40	µm	
Tensile Modulus					ISO 527-3
2% Secant, MD : 1.6 mil (40 µm)	17400	psi	120	MPa	
2% Secant, TD : 1.6 mil (40 µm)	19600	psi	135	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)	4500	psi	31.0	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)	640	%	640	%	
TD : Break, 1.6 mil (40 µm)	760	%	760	%	
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)	690	g	690	g	
TD : 1.6 mil (40 µm)	850	g	850	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature [1]	198	°F	92.0	°C	ASTM D1525
Melting Temperature [1]	252	°F	122	°C	DSC
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (20°, 1.57 mil (40.0 µm))	75		75		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 (Ideal: 215-225°C)
- Blow-Up Ratio: 1.5 to 3.5
- Recommended Gauge Range: 10 to 80 µm