



AFFINITY™ PL 1881G

Polyolefin Plastomer

Overview AFFINITY* PL 1881G Polyolefin Plastomer (POP) is produced via INSITE* Technology. It is designed for a variety of demanding packaging applications, including high-speed form-fill-seal products.

- Excellent ultimate hot tack strength
- Low temperature sealability
- Ability to seal through contamination
- Outstanding optics

Complies with:

- U.S. FDA FCN 424
- Canadian HPFB No Objection (with limitations)
- EU, No 10/2011

Consult the regulations for complete details.

Additive • Antiblock: 2500 ppm • Slip: 750 ppm

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.904 g/cm ³	0.904 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Coefficient of Friction vs. Itself - Dynamic	0.15	0.15	ASTM D1894
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2 mil	51 µm	
Film Puncture Energy (2.0 mil (51 µm))	71.6 in-lb	8.09 J	Dow Method
Film Puncture Force (2.0 mil (51 µm))	18.5 lbf	82.3 N	Dow Method
Film Puncture Resistance (2.0 mil (51 µm))	265 ft-lb/in ³	21.9 J/cm ³	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (51 µm)	14100 psi	97.4 MPa	
2% Secant, TD : 2.0 mil (51 µm)	14100 psi	96.9 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	1170 psi	8.07 MPa	
TD : Yield, 2.0 mil (51 µm)	1040 psi	7.17 MPa	
MD : Break, 2.0 mil (51 µm)	6580 psi	45.4 MPa	
TD : Break, 2.0 mil (51 µm)	6170 psi	42.5 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (51 µm)	590 %	590 %	
TD : Break, 2.0 mil (51 µm)	630 %	630 %	
Dart Drop Impact (2.0 mil (51 µm))	> 830 g	> 830 g	ASTM D1709B
Elmendorf Tear Strength ¹			ASTM D1922
MD : 2.0 mil (51 µm)	560 g	560 g	
TD : 2.0 mil (51 µm)	730 g	730 g	
Seal Initiation Temperature ²			Dow Method
2.0 mil (51 µm)	185 °F	85.0 °C	
Block Force	70 g	70 g	ASTM D3354-89
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	187 °F	86.0 °C	ASTM D1525
Melting Temperature (DSC)	212 °F	100 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 2.00 mil (50.8 µm))	112	112	ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Clarity (2.00 mil (50.8 µm))	83.0	83.0	ASTM D1746
Haze (2.00 mil (50.8 µm))	3.20 %	3.20 %	ASTM D1003

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	430 °F	221 °C

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: DSB II
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 430°F (221°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 40 rpm

Notes

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

¹ Modified rectangular test specimen.

² Temperature at which 2 lb/in. (8.8 N/25.4 mm) heat seal strength is achieved.

Heat Seal Strengths, Topwave HT Tester 0.5 S dwell, 40 psi bar pressure, pull speed 10 in./min (250 mm/sec).



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