



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)
- Europe EU-Directive 2002/72/EC

Consult the regulations for complete details.

Slip Additive: 750 ppm

Antiblock Additive: 2500 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	2.00 mil	50.8 µm	
Film Puncture Energy (2.00 mil (50.8 µm))	71.6 in-lb	8.09 J	Dow Method
Film Puncture Force (2.00 mil (50.8 µm))	18.5 lbf	82.3 N	Dow Method
Film Puncture Resistance 2.00 mil (50.8 µm)	265 ft-lb/in ³	21.9 J/cm ³	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD: 2.00 mil (50.8 µm)	14100 psi	97.4 MPa	
2% Secant, TD: 2.00 mil (50.8 µm)	14100 psi	96.9 MPa	
Tensile Strength			ASTM D882
MD: Yield, 2.00 mil (50.8 µm)	1170 psi	8.07 MPa	
TD: Yield, 2.00 mil (50.8 µm)	1040 psi	7.17 MPa	
MD: Break, 2.00 mil (50.8 µm)	6580 psi	45.4 MPa	
TD: Break, 2.00 mil (50.8 µm)	6170 psi	42.5 MPa	
Tensile Elongation			ASTM D882
MD: Break, 2.00 mil (50.8 µm)	590 %	590 %	
TD: Break, 2.00 mil (50.8 µm)	630 %	630 %	
Dart Drop Impact (2.00 mil (50.8 µm))	> 830 g	> 830 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922 ¹
MD: 2.00 mil (50.8 µm)	560 g	560 g	
TD: 2.00 mil (50.8 µm)	730 g	730 g	
Seal Initiation Temperature 2.00 mil (50.8 µm)	185 °F	85.0 °C	Dow Method ²
Block Force	70 g	70 g	ASTM D3354-89
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	187 °F	86.1 °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
Clarity (2.00 mil (50.8 µm))	83.0	83.0	ASTM D1746
Haze (2.00 mil (50.8 µm))	3.2 %	3.2 %	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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