



AFFINITY™ PL 1880G Polyolefin Plastomer

Product Description

AFFINITY* PL 1880G Polyolefin Plastomer (POP) is produced via INSITE* Technology. It is an ethylene alpha-olefin resin designed for use in a variety of demanding packaging applications, including high-speed, form-fill-seal packaging. This resin offers excellent ultimate hot tack strength and low temperature seal initiation, even through contamination in the package.

- Low seal initiation temperature
- Excellent hot tack strength
- High performance sealant layer in flexible packaging

Complies with:

- U.S. FDA FCN 424
- U.S. FDA-DMF
- U.S. USP 23
- HPFB No Objection (with limitations)
- EU, No 10/2011
- Japan Hygienic Olefin and Styrene lastics Association

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.902 g/cm ³	0.902 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Energy (2.0 mil (51 µm))	78.0 in-lb	8.81 J	Dow Method
Film Puncture Force (2.0 mil (51 µm))	20.8 lbf	92.5 N	Dow Method
Film Puncture Resistance (2.0 mil (51 µm))	270 ft-lb/in ³	22.3 J/cm ³	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD: 2.0 mil (51 µm)	13300 psi	91.7 MPa	
2% Secant, TD: 2.0 mil (51 µm)	13400 psi	92.4 MPa	
Tensile Strength			ASTM D882
MD: Yield, 2.0 mil (51 µm)	1050 psi	7.24 MPa	
TD: Yield, 2.0 mil (51 µm)	1000 psi	6.89 MPa	
MD: Break, 2.0 mil (51 µm)	8500 psi	58.6 MPa	
TD: Break, 2.0 mil (51 µm)	6480 psi	44.7 MPa	
Tensile Elongation			ASTM D882
MD: Break, 2.0 mil (51 µm)	620 %	620 %	
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			ASTM D1922 ¹
MD: 2.0 mil (51 µm)	550 g	550 g	
TD: 2.0 mil (51 µm)	720 g	720 g	
Seal Initiation Temperature			Dow Method ²
2.0 mil (51 µm)	185 °F	85.0 °C	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	187 °F	86.0 °C	ASTM D1525
Melting Temperature (DSC)	210 °F	99.0 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 2.00 mil (50.8 µm))	141	141	ASTM D2457
Clarity (2.00 mil (50.8 µm))	83.0	83.0	ASTM D1746
Haze (2.00 mil (50.8 µm))	1.1 %	1.1 %	ASTM D1003



Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	408 °F	209 °C

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: SFDM
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 408°F (209°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 50 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).

