



# AFFINITY™ PL 1888G

## Polyolefin Plastomer

### Overview

AFFINITY\* PL 1888G Polyolefin Plastomer for Packaging films is used for high speed packaging applications requiring low seal initiation temperature and good machinability (low consistent coefficient of friction and low block force). This resin is designed to give a COF of < 0.2 for an ~1.0 mil sealant layer in a coextruded film and run fast and trouble-free on most extrusion equipment, including blown film dies equipped with narrow die gaps.

- For use in monolayer films and as the sealant layer in multilayer films
- For fresh-cut produce, meat, cheese, and other high speed packaging applications requiring good machinability
- Fast processing on narrow die gaps

Complies with:

- U.S. FDA FCN 424
- EU, No 10/2011

Consult the regulations for complete details.

### Additive

- Antiblock: 3000 ppm
- Slip: 1500 ppm
- Processing Aid: Yes

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.904 g/cm <sup>3</sup>	0.904 g/cm <sup>3</sup>	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	< 0.20	< 0.20	ASTM D1894
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))	53.0 in·lb	5.99 J	Dow Method
Film Puncture Force (2.0 mil (51 µm))	15.1 lbf	67.2 N	Dow Method
Film Puncture Resistance (2.0 mil (51 µm))	189 ft·lb/in <sup>3</sup>	15.6 J/cm <sup>3</sup>	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD: 2.0 mil (51 µm)	10200 psi	70.2 MPa	
2% Secant, TD: 2.0 mil (51 µm)	9960 psi	68.7 MPa	
Tensile Strength			ASTM D882
MD: Yield, 2.0 mil (51 µm)	858 psi	5.92 MPa	
TD: Yield, 2.0 mil (51 µm)	868 psi	5.98 MPa	
MD: Break, 2.0 mil (51 µm)	7150 psi	49.3 MPa	
TD: Break, 2.0 mil (51 µm)	5770 psi	39.8 MPa	
Tensile Elongation			ASTM D882
MD: Break, 2.0 mil (51 µm)	600 %	600 %	
TD: Break, 2.0 mil (51 µm)	570 %	570 %	
Dart Drop Impact (2.0 mil (51 µm))	> 830 g	> 830 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD: 2.0 mil (51 µm)	430 g	430 g	
TD: 2.0 mil (51 µm)	720 g	720 g	
Seal Initiation Temperature 2.0 mil (51 µm)	176 °F	80.0 °C	Dow Method <sup>1</sup>
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	185 °F	85.0 °C	ASTM D1525
Melting Temperature (DSC)	208 °F	98.0 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.00 mil (50.8 µm))	81	81	ASTM D2457
Clarity (2.00 mil (50.8 µm))	95.0	95.0	ASTM D1746 <sup>2</sup>
Haze (2.00 mil (50.8 µm))	3.4 %	3.4 %	ASTM D1003

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<b>Extrusion</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>
Melt Temperature	430 to 450 °F	221 to 232 °C

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#### **Extrusion Notes**

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Fabrication Conditions For Blown Film:

- Screw Type: Modified LDPE or moderate-work barrier
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 430-450°F (221-232°C)
- Blow-Up Ratio: 2.5:1

#### **Notes**

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

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<sup>1</sup> 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. Pulled on Instron at 10 in./min (250 mm/sec).

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<sup>2</sup> ASTM Method under development. BYK-Gardner-Hazeguard Plus utilized.

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Published: 2004-03-25

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