



# AFFINITY PL 1880G

## Polyolefin Plastomer

- Low seal initiation temperature
- Excellent hot tack strength
- High performance sealant layer in flexible packaging
- Complies with U.S. FDA FCN 424 (SEE NOTES)

Consult the regulations for complete details.

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.

Note: When used unmodified for food contact applications, this resin will comply with the Federal Food, Drug, and Cosmetic Act as a food contact substance (FCN) as a result of a premarket notification with an effective date of October 7, 2004 under FCN 424. This notification allows for use of this product as articles or components of articles used in contact with all food types under Conditions of Use A through H, as described in U.S. FDA Table 2 of 21 CFR § 176.170(c).

Physical Properties	Test Method	Values <sup>(1)</sup> English (SI)
<b>Resin Properties</b>		
Melt Index, g/10 min	ASTM D 1238	1.0
Density, g/cc	ASTM D 792	0.9020
DSC Melting Point, °F (°C)	Dow Method	210 (99)
Vicat Softening Point, °F (°C)	ASTM D 1525	187 (86)
<b>Film Properties, 2.0 mil (50 µm)</b>		
Puncture Resistance, ft·lbf/in. <sup>3</sup> (J/cm <sup>3</sup> )	Dow Method	270 (22)
Energy, in·lbf (J)		78 (8.6)
Force, lbf (N)		20.8 (94)
Dart Impact (Method B), g	ASTM D 1709	>830
Elmendorf Tear <sup>(2)</sup> , g	MD	550
	CD	720
Tensile Yield, psi (MPa)	MD	1050 (7.2)
	CD	1000 (6.9)
Ultimate Tensile, psi (MPa)	MD	8500 (58.6)
	CD	6480 (44.7)
Ultimate Elongation, %	MD	620
	CD	630
Tensile Modulus, 2% Secant, psi (MPa)	MD	13300 (91.7)
	CD	13400 (92.4)
Clarity	ASTM D 1746	83
Gloss, 20°	ASTM D 2457	141
Haze, %	ASTM D 1003	1.1
Seal Initiation Temperature <sup>(3)(4)</sup> , °F (°C)	Dow Method	185 (85)

### Fabrication Conditions For Blown Film:

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

- (1) Typical values, not to be construed as specifications. Users should confirm results by their own tests.
- (2) Modified rectangular test specimen.
- (3) Temperature at which 2 lb/in. (8.8 N/25.4 mm) heat seal strength is achieved.
- (4) 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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- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 50 rpm
- Frost Line Height: 25 in. (635 mm)



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## Handling Considerations

Material Safety Data (MSD) sheets for the product are available from Dow Plastics, a business group of The Dow Chemical Company and its subsidiaries, to help customers further satisfy their own safe handling and disposal needs and those that may be required by OSHA. Material Safety Data sheets on Dow products are intended to provide customers with essential information on such topics as Health and Worker Safety, Combustibility, and Disposal Considerations. Such information should be requested from the supplier(s) of any product(s) prior to working with it. As various additives and processing aids used in fabrication have their own safe use profile, their possible influence on handling and disposal must be investigated separately. For "Regulated" uses, such as food contact, your Dow sales representative can obtain compliance letters for specific resins.

### Disposal

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/provincial, and local laws and regulations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

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As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess, or manage chemicals or plastics, and that manage used drums. For more details, contact The Dow Chemical Company Customer Information Center at 1-800-441-4369. In Mexico, call 95-800-441-4369.

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### Additional Information

For more information in the United States or Canada, call 1-800-441-4369. In Mexico, call 95-800-441-4369.

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