



# AFFINITY™ PL 1845G Polyolefin Plastomer

**Overview** AFFINITY™ PL 1845G Polyolefin Plastomer is a Polyolefin Plastomer (POP) produced using INSITE™ Technology from Dow Plastics. It is specifically designed for use as a sealant layer in flexible structures prepared using the cast process. Its low heat seal initiation temperature, its outstanding optical properties and its coextrusion capability with polypropylene polymers make AFFINITY PL 1845G Polyolefin Plastomer the ideal resin for use as low temperature sealing skin layer in coextruded cast bioriented polypropylene (BOPP) film structures.

AFFINITY PL 1845G Polyolefin Plastomer does not contain any slip nor antiblock agent. In order to optimise the application performance, it is recommended to add slip/antiblock master batches based on polyolefin plastomers.

- Complies with:
- Canadian HPFB No Objection
  - Europe EU-Directive 2002/72/EC
  - U.S. FDA FCN 424

Consult the regulations for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm <sup>3</sup>	0.910 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.5 g/10 min	3.5 g/10 min	ISO 1133
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D882 <sup>1</sup>
MD: Break, 0.984 mil (25.0 µm), Cast Film	6530 psi	45.0 MPa	
TD: Break, 0.984 mil (25.0 µm), Cast Film	4790 psi	33.0 MPa	
Tensile Elongation			ASTM D882 <sup>1</sup>
MD: Break, 0.984 mil (25.0 µm), Cast Film	530 %	530 %	
TD: Break, 0.984 mil (25.0 µm), Cast Film	670 %	670 %	
Dart Drop Impact			ASTM D1709B <sup>1</sup>
0.984 mil (25.0 µm), Cast Film	470 g	470 g	
Elmendorf Tear Strength			ASTM D1922 <sup>1</sup>
MD: 0.984 mil (25.0 µm), Cast Film	180 g	180 g	
TD: 0.984 mil (25.0 µm), Cast Film	360 g	360 g	
Seal Initiation Temperature			
0.984 mil (25.0 µm), Cast Film	210 °F	99.0 °C	Dow Method <sup>2</sup>
0.787 mil (20.0 µm)	203 °F	95.0 °C	Dow Method <sup>3</sup>
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	203 °F	95.0 °C	ISO 306/A
Melting Temperature	217 °F	103 °C	DSC
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss			
20°, 0.787 mil (20.0 µm)	96	96	ASTM D2457 <sup>4</sup>
20°, 0.984 mil (25.0 µm), Cast Film	145	145	ASTM D2457 <sup>1</sup>
Clarity (0.984 mil (25.0 µm), Cast Film)	75.0	75.0	ASTM D1746 <sup>1</sup>
Haze			
0.787 mil (20.0 µm)	1.2 %	1.2 %	ASTM D1003 <sup>4</sup>
0.984 mil (25.0 µm), Cast Film	0.70 %	0.70 %	ASTM D1003 <sup>1</sup>

## Notes

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

<sup>1</sup> Single layer cast film, extruded at 274 °C , 0.5 mm die gap.

<sup>2</sup> Single layer cast film, extruded at 274 °C , 0.5 mm die gap.  
Temperature required to reach 5.25 N/15 mm heat seal strength

<sup>3</sup> BOPP Film; 1 µm sealant layer each side  
Temperature at which 1.8 N/15 mm heat seal strength is reached

<sup>4</sup> BOPP Film; 1 µm sealant layer each side

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