



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

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm ³	0.910 g/cm ³	ASTM D792
Melt Index (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 ¹			ASTM D882
MD : Break, 0.98 mil (25 µm), Cast Film	6530 psi	45.0 MPa	
TD : Break, 0.98 mil (25 µm), Cast Film	4790 psi	33.0 MPa	
Tensile Elongation ¹			ASTM D882
MD : Break, 0.98 mil (25 µm), Cast Film	530 %	530 %	
TD : Break, 0.98 mil (25 µm), Cast Film	670 %	670 %	
Dart Drop Impact ¹			ASTM D1709B
0.98 mil (25 µm), Cast Film	470 g	470 g	
Elmendorf Tear Strength ¹			ASTM D1922
MD : 0.98 mil (25 µm), Cast Film	180 g	180 g	
TD : 0.98 mil (25 µm), Cast Film	360 g	360 g	
Seal Initiation Temperature			Dow Method
0.79 mil (20 µm) ²	203 °F	95.0 °C	
0.98 mil (25 µm), Cast Film ³	210 °F	99.0 °C	
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			ASTM D2457
20°, 0.787 mil (20.0 µm) ⁴	96	96	
20°, 0.984 mil (25.0 µm), Cast Film ¹	145	145	
Clarity ¹ (0.984 mil (25.0 µm), Cast Film)	75.0	75.0	ASTM D1746
Haze			ASTM D1003
0.787 mil (20.0 µm) ⁴	1.20 %	1.20 %	
0.984 mil (25.0 µm), Cast Film ¹	0.700 %	0.700 %	

Notes

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

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

² BOPP Film; 1 µm sealant layer each side
Temperature at which 1.8 N/15 mm heat seal strength is reached

³ 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

⁴ BOPP Film; 1 µm sealant layer each side

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