

AFFINITY™ PL 1845G

Polyolefin Plastomer
The Dow Chemical Company

Message:

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.

General Information			
Agency Ratings	EU No 10/2011		
	FDA FCN 424		
	HPFB (Canada) No Objection		
Forms	Pellets		
Processing Method	Cast Film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.910	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.5	g/10 min	ISO 1133
Films	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D882
MD : Break, 25 µm,Cast Film	45.0	MPa	
TD : Break, 25 µm,Cast Film	33.0	MPa	
Tensile Elongation ²			ASTM D882
MD : Break, 25 µm,Cast Film	530	%	
TD : Break, 25 µm,Cast Film	670	%	
Dart Drop Impact ³ (25 µm, Cast Film)	470	g	ASTM D1709B
Elmendorf Tear Strength ⁴			ASTM D1922
MD : 25 µm, Cast Film	180	g	
TD : 25 µm, Cast Film	360	g	
Seal Initiation Temperature			Internal Method
20 µm ⁵	95.0	°C	
25 µm, Cast Film ⁶	99.0	°C	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	95.0	°C	ISO 306/A
Melting Temperature	103	°C	DSC

Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
20°, 20.0 μm ⁷	96		
20°, 25.0 μm , Cast Film ⁸	145		
Clarity ⁹ (25.0 μm , Cast Film)	75.0		ASTM D1746
Haze			ASTM D1003
20.0 μm ¹⁰	1.2	%	
25.0 μm , Cast Film ¹¹	0.70	%	

NOTE		
1.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
2.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
3.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
4.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
5.	BOPP Film; 1 μm sealant layer each side Temperature at which 1.8 N/15 mm heat seal strength is reached	
6.	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	
7.	BOPP Film; 1 μm sealant layer each side	
8.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
9.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	
10.	BOPP Film; 1 μm sealant layer each side	
11.	Single layer cast film, extruded at 274 °C , 0.5 mm die gap.	

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