

AFFINITY™ PL 1840G

Polyolefin Plastomer
The Dow Chemical Company

Message:

AFFINITY* PL 1840G Polyolefin Plastomer (POP) is produced via INSITE* Technology. It is an ethylene alpha-olefin resin designed to provide blown film with low temperature sealability, good puncture resistance, optics and organoleptic properties. It also has excellent compatibility with other polyolefins, allowing efficient blending and coextrusion.

Outstanding low temperature sealability and toughness

Suitable as a sealant in liquid & dry food pouch applications

Applications:

Cast Film

Complies with:

Canadian HPFP No Objection

EU, No 10/2011

U.S. FDA FCN 424

U.S. FDA-DMF

Consult the regulations for complete details.

General Information			
Agency Ratings	DMF not rated		
	FDA FCN 424		
	HPFB (Canada) No Objection		
	Europe No 10/2011		
Forms	Particle		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.909	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	51	µm	
Film Puncture Energy (51 µm)	9.16	J	Internal method
Film Puncture Force (51 µm)	93.0	N	Internal method
Film Puncture Resistance (51 µm)	25.2	J/cm ³	Internal method
secant modulus			ASTM D882
2% secant, MD: 51 µm	123	MPa	ASTM D882
2% secant, TD: 51 µm	123	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 51 µm	8.76	MPa	ASTM D882
TD: Yield, 51 µm	8.07	MPa	ASTM D882
MD: Fracture, 51 µm	47.8	MPa	ASTM D882
TD: Fracture, 51 µm	45.4	MPa	ASTM D882
Tensile Elongation			ASTM D882

MD: Fracture, 51 μm	620	%	ASTM D882
TD: Fracture, 51 μm	580	%	ASTM D882
Dart Drop Impact (51 μm)	> 830	g	ASTM D1709B
Elmendorf Tear Strength ¹			ASTM D1922
MD : 51 μm	560	g	ASTM D1922
TD : 51 μm	840	g	ASTM D1922
Seal Initiation Temperature ² (51 μm)	92.8	°C	Internal method
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	95.0	°C	ASTM D1525
Melting Temperature (DSC)	106	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (20°, 50.8 μm)	128		ASTM D2457
Clarity (50.8 μm)	63.0		ASTM D1746
Haze (50.8 μm)	2.5	%	ASTM D1003
Extrusion	Nominal Value	Unit	
Melt Temperature	221	°C	

Extrusion instructions

吹塑薄膜的制造条件:
 螺杆尺寸:2.5 英寸 (63.5 mm);24:1 L/D
 螺杆类型:DSB11
 模具间隙:70 密尔 (1.8 mm)
 熔体温度:429°F (220°C)
 输出:模具周长的 6 磅/小时/英寸
 模具直径:6 英寸
 放大比:2.5:1
 螺杆速度:40 rpm

NOTE

- Modified rectangular test piece.

Achieve a temperature of 2 psig (8.8 N/25.4mm) heat seal strength. Heat seal strength, Topwave HT tester 0.5 S holding pressure, 40 psi pressure, pulling speed 10 inches/min (250 mm/s).
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