

Dow AFFINITY™ PL 1840G Polyolefin Plastomer (POP)

Category : Polymer , Film , Thermoplastic , Polyolefin

Material Notes:

AFFINITY™ PL 1840G is an ethylene alpha-olefin resin produced via INSITE™ Technologies. It is designed to provide blown film with low temperature sealability, good puncture resistance, optics and organoleptic properties. Information provided by Dow

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dow-AFFINITY-PL-1840G-Polyolefin-Plastomer-POP.php

Physical Properties	Metric	English	Comments
Density	0.909 g/cc	0.0328 lb/in ³	ASTM D792
Thickness	50.8 microns	2.00 mil	
Melt Flow	1.0 g/10 min	1.0 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	8.76 MPa	1270 psi	ASTM D882
Film Tensile Strength at Yield, TD	8.07 MPa	1170 psi	ASTM D882
Film Elongation at Break, MD	620 %	620 %	ASTM D882
Film Elongation at Break, TD	580 %	580 %	ASTM D882
Secant Modulus, MD	0.123 GPa	17.8 ksi	2% Secant; ASTM D882
Secant Modulus, TD	0.123 GPa	17.8 ksi	2% Secant; ASTM D882
Impact	20.9	20.9	[lb_f]; Puncture Resistance Force; Dow Method
	304	304	[ft-lbf/in³]; Puncture Resistance; Dow Method
Puncture Energy	9.16 J	6.76 ft-lb	Dow Method
Elmendorf Tear Strength MD	560 g	560 g	Modified rectangular test specimen; ASTM D1922
Elmendorf Tear Strength TD	840 g	840 g	Modified rectangular test specimen; ASTM D1922
Elmendorf Tear Strength, MD	11.0 g/micron	280 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	16.5 g/micron	420 g/mil	ASTM D1922
Dart Drop Test	>= 830 g	>= 1.83 lb	Method B; ASTM D1709
Film Tensile Strength at Break, MD	47.8 MPa	6930 psi	ASTM D882

Film Tensile Strength at Break, TD Mechanical Properties	45.4 MPa Metric	6580 psi English	ASTM D882 Comments
Heat Seal Strength Initiation Temperature	93.0 °C	199 °F	2 lb/in heat seal strength; 0.5 sec dwell, 40 psi bar pressure, pull speed 10 (in./min.); Dow Method

Thermal Properties	Metric	English	Comments
Melting Point	105.5 °C	221.9 °F	Dow Method (DSC)
Vicat Softening Point	95.0 °C	203 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	2.5 %	2.5 %	ASTM D1003
Gloss	128 %	128 %	20°; ASTM D2457
Transmission, Visible	63 %	63 %	Clarity; ASTM D1746

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