Dow AFFINITY™ PL 1850G Polyolefin Plastomer (POP)

Category : Polymer , Film , Thermoplastic , Polyolefin

Material Notes:

AFFINITY™ PL 1840G Polyolefin Plastomer (POP) is produced via INSITE™ Technologies. It is designed to provide blown and cast film products with low temperature sealability, excellent optics and good abuse resistance. It can be used as a sealant layer in multilayer film structures for dry and liquid packaging.Information provided by Dow

Order this product through the following link:
http://www.lookpolymers.com/polymer_Dow-AFFINITY-PL-1850G-Polyolefin-Plastomer-POP.php

Physical Properties	Metric	English	Comments
Density	0.902 g/cc	0.0326 lb/in³	ASTM D792
Thickness	20.3 microns	0.800 mil	
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	9.93 MPa	1440 psi	ASTM D882
Film Tensile Strength at Yield, TD	5.45 MPa	790 psi	ASTM D882
Film Elongation at Break, MD	350 %	350 %	ASTM D882
Film Elongation at Break, TD	570 %	570 %	ASTM D882
Secant Modulus, MD	0.108 GPa	15.7 ksi	2% Secant; ASTM D882
Secant Modulus, TD	0.115 GPa	16.7 ksi	2% Secant; ASTM D882
Impact	10.7	10.7	[lb_f]; Puncture Resistance Force; Dow Method
	380	380	[ft-lbf/in³]; Puncture Resistance; Dow Method
Puncture Energy	4.28 J	3.16 ft-lb	Dow Method
Elmendorf Tear Strength MD	120 g	120 g	Modified rectangular test specimen; ASTM D1922
Elmendorf Tear Strength TD	410 g	410 g	Modified rectangular test specimen; ASTM D1922
Elmendorf Tear Strength, MD	5.91 g/micron	150 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	20.18 g/micron	512.5 g/mil	ASTM D1922
Dart Drop Test	>= 830 g	>= 1.83 lb	Method B; ASTM D1709
Film Tensile Strength at Break, MD	44.6 MPa	6470 psi	ASTM D882

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Break, TD	29.6 MPa	4320 psi	ASTM D882
Heat Seal Strength Initiation Temperature	94.0 °C	201 °F	1 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	98.0 °C	208 °F	Dow Method (DSC)
Vicat Softening Point	85.0 °C	185 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	0.70 %	0.70 %	ASTM D1003
Gloss	144 %	144 %	20°; ASTM D2457

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