

Dow ELITE™ 5100G Enhanced Polyethylene Resin

Category : Polymer , Film , Thermoplastic , Polyethylene (PE) , LLDPE

Material Notes:

ELITE™ 5100G is a copolymer produced via INSITE™ Technology from Dow Plastics. It offers excellent impact strength, good tensile and puncture properties for thick and thin gauge industrial and consumer blown film applications. This resin exhibits higher hot tack strengths than LLDPE, making it ideal for automated packaging applications. Information provided by Dow

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dow-ELITE-5100G-Enhanced-Polyethylene-Resin.php

Physical Properties	Metric	English	Comments
Density	0.920 g/cc	0.0332 lb/in ³	ASTM D792
Thickness	50.8 microns	2.00 mil	
Melt Flow	0.85 g/10 min	0.85 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	11.80 MPa	1712 psi	ASTM D882
Film Tensile Strength at Yield, TD	12.5 MPa	1810 psi	ASTM D882
Film Elongation at Break, MD	595 %	595 %	ASTM D882
Film Elongation at Break, TD	652 %	652 %	ASTM D882
Secant Modulus, MD	0.2216 GPa	32.14 ksi	2% Secant; ASTM D882
Secant Modulus, TD	0.2575 GPa	37.35 ksi	2% Secant; ASTM D882
Impact	24	24	[lb_f]; Puncture Resistance Force; Dow Method
	249	249	[ft-lbf/in³]; Puncture Resistance; Dow Method
Puncture Energy	9.04 J	6.67 ft-lb	Dow Method
Elmendorf Tear Strength MD	707 g	707 g	ASTM D1922
Elmendorf Tear Strength TD	1033 g	1033 g	ASTM D1922
Elmendorf Tear Strength, MD	13.92 g/micron	353.5 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	20.33 g/micron	516.5 g/mil	ASTM D1922
Dart Drop Test	780 g	1.72 lb	Method B; ASTM D1709
Film Tensile Strength at Break, MD	57.27 MPa	8307 psi	ASTM D882

Film Tensile Strength at Break, TD Mechanical Properties	53.47 MPa Metric	7755 psi English	ASTM D882 Comments
Heat Seal Strength Initiation Temperature	106 °C	223 °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	124 °C	255 °F	Dow Method (DSC)
Vicat Softening Point	105 °C	221 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	10 %	10 %	ASTM D1003
Gloss	67 %	67 %	45°; ASTM D2457

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