

Dow TUFLIN™ HS-7046 NT 7 Linear Low Density Polyethylene Resin

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

Material Notes:

Hexene Linear Low Density Resin Slot Cast Extrusion Outstanding Drawdown Capability Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a
TUFLIN™ HS-7046 NT 7 is an ethylene-hexene copolymer, designed for slot cast extrusion. This product is recommended for slot cast thin film applications requiring both clarity and superior toughness as the core layer in co-extruded structures. Information provided by Dow

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dow-TUFLIN-HS-7046-NT-7-Linear-Low-Density-Polyethylene-Resin.php

Physical Properties	Metric	English	Comments
Density	0.9188 g/cc	0.03319 lb/in ³	ASTM D792
Thickness	50.8 microns	2.00 mil	
Melt Flow	1.0 g/10 min @Load 2.16 kg, Temperature 190 °C	1.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	11.80 MPa	1711 psi	ASTM D882
Film Tensile Strength at Yield, TD	14.42 MPa	2091 psi	ASTM D882
Film Elongation at Break, MD	795 %	795 %	ASTM D882
Film Elongation at Break, TD	820 %	820 %	ASTM D882
Secant Modulus, MD	0.1957 GPa	28.39 ksi	2% Secant; ASTM D882
Secant Modulus, TD	0.2188 GPa	31.74 ksi	2% Secant; ASTM D882
Impact	19	19	[lb_f]; Puncture Resistance Force; Dow Method
	216	216	[ft-lbf/in³]; Puncture Resistance; Dow Method
	3995	3995	[ft-lbf/in³]; Toughness MD; ASTM D882
	4359	4359	[ft-lbf/in³]; Toughness TD; ASTM D882
Puncture Energy	6.78 J	5.00 ft-lb	Dow Method
Elmendorf Tear Strength MD	953 g	953 g	Method B; ASTM D1922
Elmendorf Tear Strength TD	1294 g	1294 g	Method B; ASTM D1922
Elmendorf Tear Strength, MD			ASTM D1922

Mechanical Properties	18.75 g/micron Metric	476.5 g/mil English	Comments
Elmendorf Tear Strength, TD	25.5 g/micron	647 g/mil	ASTM D1922
Dart Drop Test	196 g	0.432 lb	Method B; ASTM D1709
	348 g	0.767 lb	Method A; ASTM D1709
Film Tensile Strength at Break, MD	54.24 MPa	7867 psi	ASTM D882
Film Tensile Strength at Break, TD	53.63 MPa	7778 psi	ASTM D882
Heat Seal Strength, Ultimate	20.5 N	4.61 lb (f)	at 150°C, 0.5 sec dwell, 40 psi bar pressure, pull speed 10 (in./min.); Dow Method
Heat Seal Strength Initiation Temperature	120 °C	248 °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	124 °C	255 °F	Dow Method (DSC)
Vicat Softening Point	104 °C	219 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	14 %	14 %	ASTM D1003
Gloss	59 %	59 %	45°; ASTM D2457
	64 %	64 %	20°; ASTM D2457

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