

Dow TUFLIN™ HSE-1003 NT 7 Linear Low Density Polyethylene Resin

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

Material Notes:

Industrial pallet wrap stretch film applications Premium film packaging applications Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a

TUFLIN™ HSE-1003 NT 7 is an ethylene-hexene-1 copolymer, designed for cast stretch film applications such as industrial pallet wrap.

Films containing HSE-1003 offer outstanding puncture, toughness and load holding properties. Information provided by Dow

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dow-TUFLIN-HSE-1003-NT-7-Linear-Low-Density-Polyethylene-Resin.php

Physical Properties	Metric	English	Comments
Density	0.9178 g/cc	0.03316 lb/in ³	ASTM D792
Thickness	50.8 microns	2.00 mil	
Melt Flow	2.45 g/10 min @Load 2.16 kg, Temperature 190 °C	2.45 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	10.21 MPa	1481 psi	ASTM D882
Film Tensile Strength at Yield, TD	9.984 MPa	1448 psi	ASTM D882
Film Elongation at Break, MD	723 %	723 %	ASTM D882
Film Elongation at Break, TD	899 %	899 %	ASTM D882
Elongation at Break	516 %	516 %	on-pallet testing: Ultimate Stretch; Highlight Industries Method
Secant Modulus, MD	0.1420 GPa	20.60 ksi	2% Secant; ASTM D882
Secant Modulus, TD	0.1416 GPa	20.54 ksi	2% Secant; ASTM D882
Impact	19	19	[lb_f]; Puncture Resistance Force; Dow Method
	252	252	[ft-lbf/in³]; Puncture Resistance; Dow Method
	3077	3077	[ft-lbf/in³]; Toughness MD; ASTM D882
	4039	4039	[ft-lbf/in³]; Toughness TD; ASTM D882
Puncture Energy	8.25 J	6.08 ft-lb	Dow Method
Elmendorf Tear Strength MD	781 g	781 g	Method B; ASTM D1922

Elmendorf Tear Strength TD Mechanical Properties	1145 g Metric	1145 g English	Method B; ASTM D1922 Comments
Elmendorf Tear Strength, MD	15.37 g/micron	390.5 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	22.54 g/micron	572.5 g/mil	ASTM D1922
Dart Drop Test	170 g	0.375 lb	Method B; ASTM D1709
	270 g	0.595 lb	Method A; ASTM D1709
Film Tensile Strength at Break, MD	38.36 MPa	5564 psi	ASTM D882
Film Tensile Strength at Break, TD	44.17 MPa	6406 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Melting Point	124 °C	255 °F	Dow Method (DSC)
Vicat Softening Point	99.0 °C	210 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	4.0 %	4.0 %	ASTM D1003
Gloss	91 %	91 %	45°; ASTM D2457
	146 %	146 %	20°; ASTM D2457

Descriptive Properties	Value	Comments
Cling g	276	ASTM D5458, unstretched

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