

Overview of materials for Linear Low Density Polyethylene (LLDPE)/Hexene, Film Grade

Category : Polymer , Film , Thermoplastic , Polyethylene (PE) , LLDPE , Linear Low Density Polyethylene (LLDPE)/Hexene, Film Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Linear Low Density Polyethylene (LLDPE)/Hexene, Film Grade". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Overview-of-materials-for-Linear-Low-Density-Polyethylene-LLDPEHexene-Film-Grade.php

Physical Properties	Metric	English	Comments
Density	0.910 - 0.942 g/cc	0.0329 - 0.0340 lb/in ³	Average value: 0.921 g/cc Grade Count:84
Thickness	8.00 - 50.0 microns	0.315 - 1.97 mil	Average value: 29.0 microns Grade Count:64
Melt Flow	0.350 - 4.80 g/10 min	0.350 - 4.80 g/10 min	Average value: 1.27 g/10 min Grade Count:84

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	7.40 - 17.0 MPa	1070 - 2470 psi	Average value: 11.0 MPa Grade Count:48
Film Tensile Strength at Yield, TD	7.60 - 17.0 MPa	1100 - 2470 psi	Average value: 11.4 MPa Grade Count:48
Film Elongation at Break, MD	380 - 1320 %	380 - 1320 %	Average value: 584 % Grade Count:80
Film Elongation at Break, TD	580 - 1400 %	580 - 1400 %	Average value: 772 % Grade Count:80
Film Elongation at Yield, MD	19.0 - 43.0 %	19.0 - 43.0 %	Average value: 27.5 % Grade Count:4
Film Elongation at Yield, TD	12.0 - 36.0 %	12.0 - 36.0 %	Average value: 18.8 % Grade Count:4
Secant Modulus, MD	0.117 - 0.420 GPa	17.0 - 60.9 ksi	Average value: 0.218 GPa Grade Count:57
Secant Modulus, TD	0.130 - 0.450 GPa	18.9 - 65.3 ksi	Average value: 0.253 GPa Grade Count:57
Coefficient of Friction	0.100 - 1.00	0.100 - 1.00	Average value: 0.510 Grade Count:41
Elmendorf Tear Strength MD	20.0 - 465 g	20.0 - 465 g	Average value: 257 g Grade Count:27
Elmendorf Tear Strength TD	30.0 - 920 g	30.0 - 920 g	Average value: 660 g Grade Count:27
Elmendorf Tear Strength, MD	1.00 - 17.7 g/micron	25.4 - 450 g/mil	Average value: 11.4 g/micron Grade Count:64

Mechanical Properties	Metric	English	Comments
Dart Drop	2.20 - 8.54 g/micron	56.0 - 217 g/mil	Average value: 5.23 g/micron Grade Count:55
Dart Drop Test	70.0 - 850 g	0.154 - 1.87 lb	Average value: 226 g Grade Count:41
Film Tensile Strength at Break, MD	25.5 - 74.5 MPa	3700 - 10800 psi	Average value: 44.0 MPa Grade Count:80
Film Tensile Strength at Break, TD	20.0 - 58.0 MPa	2900 - 8410 psi	Average value: 34.8 MPa Grade Count:80

Thermal Properties	Metric	English	Comments
Melting Point	116 - 127 °C	241 - 261 °F	Average value: 124 °C Grade Count:25
Vicat Softening Point	95.0 - 119 °C	203 - 246 °F	Average value: 105 °C Grade Count:13
Brittleness Temperature	-70.0 °C	-94.0 °F	Average value: -70.0 °C Grade Count:8

Optical Properties	Metric	English	Comments
Haze	1.00 - 30.4 %	1.00 - 30.4 %	Average value: 12.0 % Grade Count:74
Gloss	9.00 - 150 %	9.00 - 150 %	Average value: 69.9 % Grade Count:75
Transmission, Visible	90.0 %	90.0 %	Average value: 90.0 % Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	180 - 270 °C	356 - 518 °F	Average value: 222 °C Grade Count:14
Melt Temperature	195 - 300 °C	383 - 572 °F	Average value: 221 °C Grade Count:25
Die Opening	0.0640 - 0.280 cm	0.0252 - 0.110 in	Average value: 0.0991 cm Grade Count:14

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