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

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

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Linear Low Density Polyethylene (LLDPE)/Butene, Film". 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-LLDPEButene-Film.php

Physical Properties	Metric	English	Comments
Density	0.916 - 0.938 g/cc	0.0331 - 0.0339 lb/in³	Average value: 0.920 g/cc Grade Count:84
Thickness	10.0 - 50.0 microns	0.394 - 1.97 mil	Average value: 32.1 microns Grade Count:41
Melt Flow	0.570 - 4.10 g/10 min	0.570 - 4.10 g/10 min	Average value: 1.34 g/10 min Grade Count:84

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	9.00 - 17.0 MPa	1310 - 2470 psi	Average value: 11.1 MPa Grade Count:48
Film Tensile Strength at Yield, TD	8.00 - 18.0 MPa	1160 - 2610 psi	Average value: 10.9 MPa Grade Count:48
Film Elongation at Break, MD	498 - 1220 %	498 - 1220 %	Average value: 702 % Grade Count:80
Film Elongation at Break, TD	675 - 1440 %	675 - 1440 %	Average value: 866 % Grade Count:80
Film Elongation at Yield, MD	19.0 - 47.0 %	19.0 - 47.0 %	Average value: 28.4 % Grade Count:5
Film Elongation at Yield, TD	12.0 - 35.0 %	12.0 - 35.0 %	Average value: 18.0 % Grade Count:5
Secant Modulus, MD	0.0900 - 0.390 GPa	13.1 - 56.6 ksi	Average value: 0.196 GPa Grade Count:63
Secant Modulus, TD	0.100 - 0.450 GPa	14.5 - 65.3 ksi	Average value: 0.224 GPa Grade Count:63
Coefficient of Friction	0.100 - 1.00	0.100 - 1.00	Average value: 0.414 Grade Count:50
Elmendorf Tear Strength MD	20.0 - 160 g	20.0 - 160 g	Average value: 104 g Grade Count:20
Elmendorf Tear Strength TD	180 - 520 g	180 - 520 g	Average value: 351 g Grade Count:20
Elmendorf Tear Strength, MD	0.530 - 7.10 g/micron	13.5 - 180 g/mil	Average value: 4.02 g/micron Grade Count:70

Mechanical Properties	Metric	English	Comments
Elmendorf Tear Strength, TD	2.04 - 25.6 g/micron	51.8 - 650 g/mil	Average value: 15.0 g/micron Grade Count:19
Dart Drop	1.58 - 5.31 g/micron	40.1 - 135 g/mil	Average value: 3.27 g/micron Grade Count:51
Dart Drop Test	45.0 - 250 g	0.0992 - 0.551 lb	Average value: 118 g Grade Count:41
Film Tensile Strength at Break, MD	25.0 - 52.0 MPa	3630 - 7540 psi	Average value: 36.6 MPa Grade Count:80
Film Tensile Strength at Break, TD	18.6 - 284 MPa	2700 - 41100 psi	Average value: 32.9 MPa Grade Count:80

Thermal Properties	Metric	English	Comments
Melting Point	120 - 127 °C	248 - 261 °F	Average value: 122 °C Grade Count:18
Vicat Softening Point	84.0 - 118 °C	183 - 244 °F	Average value: 99.9 °C Grade Count:29
Brittleness Temperature	-90.0 - -60.0 °C	-130 - -76.0 °F	Average value: -68.9 °C Grade Count:21

Optical Properties	Metric	English	Comments
Haze	1.30 - 61.0 %	1.30 - 61.0 %	Average value: 14.9 % Grade Count:80
Gloss	19.0 - 140 %	19.0 - 140 %	Average value: 62.0 % Grade Count:80

Processing Properties	Metric	English	Comments
Processing Temperature	170 - 220 °C	338 - 428 °F	Average value: 194 °C Grade Count:5
Melt Temperature	123 - 260 °C	253 - 500 °F	Average value: 211 °C Grade Count:43
Die Opening	0.0900 - 0.250 cm	0.0354 - 0.0984 in	Average value: 0.181 cm Grade Count:7

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