

Overview of materials for Linear Medium Density Polyethylene (LMDPE), Rotational Molded

Category : Polymer , Thermoplastic , Polyethylene (PE) , MDPE , Linear Medium Density Polyethylene (LMDPE), Rotational Molded

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Linear Medium Density Polyethylene (LMDPE), Rotational Molded". 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-Medium-Density-Polyethylene-LMDPE-Rotational-Molded.php

Physical Properties	Metric	English	Comments
Density	0.924 - 0.945 g/cc	0.0334 - 0.0341 lb/in ³	Average value: 0.937 g/cc Grade Count:67
Environmental Stress Crack Resistance	10.0 - 1000 hour	10.0 - 1000 hour	Average value: 376 hour Grade Count:25
	>= 1000 hour @Temperature 50.0 - 50.0 °C	>= 1000 hour @Temperature 122 - 122 °F	Average value: 1000 hour Grade Count:1
Melt Flow	2.00 - 50.0 g/10 min	2.00 - 50.0 g/10 min	Average value: 6.30 g/10 min Grade Count:67

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50.0 - 67.0	50.0 - 67.0	Average value: 56.6 Grade Count:55
Tensile Strength, Ultimate	11.7 - 27.1 MPa	1700 - 3930 psi	Average value: 19.5 MPa Grade Count:10
Tensile Strength, Yield	11.0 - 22.0 MPa	1600 - 3190 psi	Average value: 18.1 MPa Grade Count:66
Elongation at Break	150 - 1000 %	150 - 1000 %	Average value: 563 % Grade Count:64
Elongation at Yield	10.0 - 12.0 %	10.0 - 12.0 %	Average value: 11.2 % Grade Count:8
Flexural Modulus	0.317 - 0.931 GPa	46.0 - 135 ksi	Average value: 0.630 GPa Grade Count:67
Falling Dart Impact	27.1164 - 65.0794 J @Temperature -40.0 - -40.0 °C	20.0000 - 48.0001 ft-lb @Temperature -40.0 - -40.0 °F	Average value: 46.1 J Grade Count:2
Dart Drop Total Energy	200 - 220 J/cm	0.375 - 0.412 ft-lb/mil	Average value: 208 J/cm Grade Count:4

Thermal Properties	Metric	English	Comments
Melting Point	125 - 128 °C	257 - 262 °F	Average value: 126 °C Grade Count:11
Deflection Temperature at 0.46 MPa (66 psi)	49.0 - 60.0 °C	120 - 140 °F	Average value: 54.4 °C Grade Count:13
Deflection Temperature at 1.8 MPa (264 psi)	37.0 - 42.0 °C	98.6 - 108 °F	Average value: 39.1 °C Grade Count:7
Vicat Softening Point	113 - 121 °C	235 - 250 °F	Average value: 117 °C Grade Count:6
Brittleness Temperature	-71.0 - -70.0 °C	-95.8 - -94.0 °F	Average value: -70.2 °C Grade Count:5

Optical Properties	Metric	English	Comments
Transmission, Visible	90.0 %	90.0 %	Average value: 90.0 % Grade Count:4

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