

Overview of materials for High Density Polyethylene (HDPE), Rotational Molding Grade

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Rotational Molding Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "High Density Polyethylene (HDPE), Rotational Molding 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-High-Density-Polyethylene-HDPE-Rotational-Molding-Grade.php

Physical Properties	Metric	English	Comments
Density	0.941 - 0.952 g/cc	0.0340 - 0.0344 lb/in³	Average value: 0.946 g/cc Grade Count:26
Environmental Stress Crack Resistance	8.00 - 1000 hour	8.00 - 1000 hour	Average value: 373 hour Grade Count:19
	>= 1000 hour @Temperature 50.0 - 50.0 °C	>= 1000 hour @Temperature 122 - 122 °F	Average value: 1000 hour Grade Count:2
Melt Flow	1.70 - 6.00 g/10 min	1.70 - 6.00 g/10 min	Average value: 3.52 g/10 min Grade Count:26

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	64.0 - 67.0	64.0 - 67.0	Average value: 65.3 Grade Count:9
Tensile Strength, Yield	17.9 - 26.6 MPa	2600 - 3860 psi	Average value: 22.1 MPa Grade Count:30
Elongation at Break	350 - 700 %	350 - 700 %	Average value: 517 % Grade Count:22
Elongation at Yield	12.0 - 20.0 %	12.0 - 20.0 %	Average value: 18.4 % Grade Count:10
Flexural Modulus	0.600 - 1.15 GPa	87.0 - 167 ksi	Average value: 0.875 GPa Grade Count:30
Izod Impact, Notched	2.29577 - 2.40255 J/cm @Temperature -40.0 - -40.0 °C	4.30092 - 4.50096 ft-lb/in @Temperature -40.0 - -40.0 °F	Average value: 2.32 J/cm Grade Count:4

Thermal Properties	Metric	English	Comments
Melting Point	126 - 133 °C	259 - 271 °F	Average value: 131 °C Grade Count:16
Deflection Temperature at 0.46 MPa (66 psi)	52.0 - 142 °C	126 - 288 °F	Average value: 76.3 °C Grade Count:21

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	41.8 – 59.0 °C	105 – 210 °F	Average value: 53.7 °C Grade Count:20

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