

Overview of materials for Polymethylpentene, Molded

Category : Polymer , Thermoplastic , Polymethylpentene (PMP) , Polymethylpentene, Molded

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polymethylpentene, 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-Polymethylpentene-Molded.php

Physical Properties	Metric	English	Comments
Density	0.833 - 0.913 g/cc	0.0301 - 0.0330 lb/in ³	Average value: 0.847 g/cc Grade Count:12
Water Absorption	0.0100 - 0.100 %	0.0100 - 0.100 %	Average value: 0.0190 % Grade Count:10
Linear Mold Shrinkage	0.0150 - 0.0300 cm/cm	0.0150 - 0.0300 in/in	Average value: 0.0176 cm/cm Grade Count:6
Linear Mold Shrinkage, Transverse	0.0120 cm/cm	0.0120 in/in	Average value: 0.0120 cm/cm Grade Count:4
Melt Flow	9.00 - 110 g/10 min	9.00 - 110 g/10 min	Average value: 54.6 g/10 min Grade Count:7
Spiral Flow	50.0 - 56.0 cm	19.7 - 22.0 in	Average value: 52.0 cm Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	42.0 - 91.0	42.0 - 91.0	Average value: 76.0 Grade Count:8
Tensile Strength, Ultimate	10.0 - 30.0 MPa	1450 - 4350 psi	Average value: 22.5 MPa Grade Count:11
Tensile Strength, Yield	20.0 - 30.0 MPa	2900 - 4350 psi	Average value: 27.0 MPa Grade Count:7
Elongation at Break	10.0 - 120 %	10.0 - 120 %	Average value: 28.5 % Grade Count:11
Modulus of Elasticity	0.820 - 1.93 GPa	119 - 280 ksi	Average value: 1.60 GPa Grade Count:10
Flexural Yield Strength	21.0 - 47.0 MPa	3050 - 6820 psi	Average value: 38.2 MPa Grade Count:9
Flexural Modulus	0.630 - 1.60 GPa	91.4 - 232 ksi	Average value: 1.33 GPa Grade Count:10
Izod Impact, Notched	0.200 - 0.534 J/cm	0.375 - 1.00 ft-lb/in	Average value: 0.276 J/cm Grade Count:7
Izod Impact, Unnotched (ISO)	8.00 - 129 kJ/m ²	3.81 - 61.4 ft-lb/in ²	Average value: 43.0 kJ/m ² Grade Count:7

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear	117 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	65.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 117 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:7
Melting Point	223 - 235 $^{\circ}\text{C}$	433 - 455 $^{\circ}\text{F}$	Average value: 231 $^{\circ}\text{C}$ Grade Count:8
Deflection Temperature at 0.46 MPa (66 psi)	80.0 - 127 $^{\circ}\text{C}$	176 - 261 $^{\circ}\text{F}$	Average value: 110 $^{\circ}\text{C}$ Grade Count:9
Vicat Softening Point	147 - 180 $^{\circ}\text{C}$	297 - 356 $^{\circ}\text{F}$	Average value: 169 $^{\circ}\text{C}$ Grade Count:7
Flammability, UL94	HB	HB	Grade Count:3

Optical Properties	Metric	English	Comments
Refractive Index	1.46 - 1.46	1.46 - 1.46	Average value: 1.46 Grade Count:8
Haze	0.800 - 2.10 %	0.800 - 2.10 %	Average value: 1.58 % Grade Count:9
Transmission, Visible	91.0 - 94.0 %	91.0 - 94.0 %	Average value: 93.1 % Grade Count:8

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	Average value: 1.00e+16 ohm-cm Grade Count:8
Dielectric Constant	2.10 - 2.12	2.10 - 2.12	Average value: 2.10 Grade Count:9
Dielectric Strength	65.0 - 146 kV/mm	1650 - 3710 kV/in	Average value: 75.1 kV/mm Grade Count:8

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