

Overview of materials for Polypropylene with 40% Mica Filler

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 40% Mica Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene with 40% Mica Filler".

Specific grades with primary filler content between 35% and 44% are included. 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-Polypropylene-with-40-Mica-Filler.php

Physical Properties	Metric	English	Comments
Density	1.17 - 1.27 g/cc	0.0423 - 0.0459 lb/in ³	Average value: 1.22 g/cc Grade Count:25
Filler Content	35.0 - 40.0 %	35.0 - 40.0 %	Average value: 39.5 % Grade Count:10
Water Absorption	0.0300 - 0.0400 %	0.0300 - 0.0400 %	Average value: 0.0367 % Grade Count:3
Linear Mold Shrinkage	0.00400 - 0.0130 cm/cm	0.00400 - 0.0130 in/in	Average value: 0.00719 cm/cm Grade Count:24
Melt Flow	2.00 - 17.0 g/10 min	2.00 - 17.0 g/10 min	Average value: 9.87 g/10 min Grade Count:19
Ash	40.0 %	40.0 %	Average value: 40.0 % Grade Count:9

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	33.0 - 104	33.0 - 104	Average value: 61.8 Grade Count:13
Hardness, Shore D	70.0 - 73.0	70.0 - 73.0	Average value: 72.0 Grade Count:4
Tensile Strength, Ultimate	14.0 - 32.4 MPa	2030 - 4700 psi	Average value: 26.4 MPa Grade Count:21
	5.00 - 15.0 MPa @Temperature 60.0 - 90.0 °C	725 - 2180 psi @Temperature 140 - 194 °F	Average value: 10.0 MPa Grade Count:1
Tensile Strength, Yield	15.0 - 46.9 MPa	2180 - 6800 psi	Average value: 31.3 MPa Grade Count:14
Elongation at Break	3.00 - 10.0 %	3.00 - 10.0 %	Average value: 6.07 % Grade Count:15
	5.00 - 20.0 % @Temperature 60.0 - 90.0 °C	5.00 - 20.0 % @Temperature 140 - 194 °F	Average value: 12.5 % Grade Count:1

Elongation at Yield Mechanical Properties	2.00 - 5.00 % Metric	2.00 - 5.00 % English	Average value: 2.83 % Grade Count:12 Comments
	3.00 - 3.50 %	3.00 - 3.50 %	
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	Average value: 3.25 % Grade Count:1
Modulus of Elasticity	2.50 - 4.83 GPa	363 - 700 ksi	Average value: 3.86 GPa Grade Count:12
	1.20 - 2.50 GPa	174 - 363 ksi	
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	Average value: 1.85 GPa Grade Count:1
Flexural Yield Strength	22.0 - 65.0 MPa	3190 - 9430 psi	Average value: 42.9 MPa Grade Count:15
Flexural Modulus	2.83 - 7.60 GPa	410 - 1100 ksi	Average value: 4.61 GPa Grade Count:25
Izod Impact, Notched	0.214 - 1.07 J/cm	0.400 - 2.00 ft-lb/in	Average value: 0.442 J/cm Grade Count:24
Izod Impact, Unnotched	1.60 - 5.34 J/cm	3.00 - 10.0 ft-lb/in	Average value: 2.76 J/cm Grade Count:7
Izod Impact, Notched (ISO)	1.90 - 1.90 kJ/m²	0.904 - 0.904 ft-lb/in²	
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	Average value: 1.90 kJ/m² Grade Count:1
Charpy Impact Unnotched	0.800 - 0.800 J/cm²	3.81 - 3.81 ft-lb/in²	
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	Average value: 0.800 J/cm² Grade Count:1
Charpy Impact, Notched	0.100 - 0.100 J/cm²	0.476 - 0.476 ft-lb/in²	
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	Average value: 0.100 J/cm² Grade Count:1
Gardner Impact	0.300 - 2.26 J	0.221 - 1.67 ft-lb	Average value: 1.01 J Grade Count:8

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	101 - 149 °C	214 - 300 °F	Average value: 129 °C Grade Count:24
Deflection Temperature at 1.8 MPa (264 psi)	62.8 - 113 °C	145 - 235 °F	Average value: 85.4 °C Grade Count:21
Flammability, UL94	HB	HB	Grade Count:4

Processing Properties	Metric	English	Comments
Nozzle Temperature	218 - 238 °C	425 - 460 °F	Average value: 229 °C Grade Count:5
Melt Temperature	191 - 249 °C	375 - 480 °F	Average value: 224 °C Grade Count:7

Mold Temperature Processing Properties	26.7 - 65.6 °C Metric	80.0 - 150 °F English	Average value: 43.5 °C Grade Count: 8 Comments
Drying Temperature	65.6 - 90.0 °C	150 - 194 °F	Average value: 77.5 °C Grade Count: 7
Moisture Content	0.0500 %	0.0500 %	Average value: 0.0500 % Grade Count: 4
Injection Pressure	2.76 - 103 MPa	400 - 15000 psi	Average value: 33.1 MPa Grade Count: 6

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