

Overview of materials for Polypropylene with 10% Calcium Carbonate (CaCO3) Filler

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 10% Calcium Carbonate (CaCO3) Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene with 10% Calcium Carbonate (CaCO3) Filler". Specific grades with primary filler content between 5% and 14% 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-10-Calcium-Carbonate-CaCO3-Filler.php

Physical Properties	Metric	English	Comments
Density	0.900 - 1.09 g/cc	0.0325 - 0.0394 lb/in ³	Average value: 0.973 g/cc Grade Count:42
Filler Content	10.0 %	10.0 %	Average value: 10.0 % Grade Count:10
Linear Mold Shrinkage	0.00800 - 0.0190 cm/cm	0.00800 - 0.0190 in/in	Average value: 0.0141 cm/cm Grade Count:35
Melt Flow	1.00 - 21.0 g/10 min	1.00 - 21.0 g/10 min	Average value: 11.8 g/10 min Grade Count:34
Ash	9.80 - 33.0 %	9.80 - 33.0 %	Average value: 13.0 % Grade Count:16

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	53.0 - 97.0	53.0 - 97.0	Average value: 79.4 Grade Count:14
Hardness, Shore D	66.0 - 74.0	66.0 - 74.0	Average value: 68.7 Grade Count:3
Tensile Strength, Ultimate	11.0 - 32.1 MPa	1600 - 4650 psi	Average value: 20.8 MPa Grade Count:19
Tensile Strength, Yield	13.8 - 52.0 MPa	2000 - 7540 psi	Average value: 26.6 MPa Grade Count:35
Elongation at Break	2.00 - 545 %	2.00 - 545 %	Average value: 112 % Grade Count:28
Elongation at Yield	2.80 - 100 %	2.80 - 100 %	Average value: 13.5 % Grade Count:21
Modulus of Elasticity	0.900 - 2.14 GPa	131 - 310 ksi	Average value: 1.38 GPa Grade Count:15
Flexural Yield Strength	12.0 - 85.0 MPa	1740 - 12300 psi	Average value: 35.7 MPa Grade Count:23
Flexural Modulus	0.700 - 3.00 GPa	102 - 435 ksi	Average value: 1.45 GPa Grade Count:42

Izod Impact Notched Mechanical Properties	0.267 - 6.51 J/cm Metric	0.500 - 12.2 ft-lb/in English	Average value: 1.09 J/cm Grade Count:1
Izod Impact, Unnotched	4.27 - 16.0 J/cm	8.00 - 30.0 ft-lb/in	Average value: 10.5 J/cm Grade Count:7
Izod Impact, Notched (ISO)	3.50 - 18.0 kJ/m ²	1.67 - 8.57 ft-lb/in ²	Average value: 8.53 kJ/m ² Grade Count:3
	2.20 - 2.20 kJ/m ² @Temperature -40.0 - - 40.0 °C	1.05 - 1.05 ft-lb/in ² @Temperature -40.0 - - 40.0 °F	Average value: 2.20 kJ/m ² Grade Count:1
Charpy Impact, Notched	0.400 - 0.400 J/cm ² @Temperature -20.0 - - 20.0 °C	1.90 - 1.90 ft-lb/in ² @Temperature -4.00 - - 4.00 °F	Average value: 0.400 J/cm ² Grade Count:1
Gardner Impact	0.780 - 190 J	0.575 - 140 ft-lb	Average value: 29.5 J Grade Count:14
	13.7842 - 13.7842 J @Temperature -30.0 - - 30.0 °C	10.1667 - 10.1667 ft-lb @Temperature -22.0 - - 22.0 °F	Average value: 13.8 J Grade Count:1

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	51.1 - 135 °C	124 - 275 °F	Average value: 91.2 °C Grade Count:32
Deflection Temperature at 1.8 MPa (264 psi)	37.8 - 125 °C	100 - 257 °F	Average value: 61.7 °C Grade Count:22
Vicat Softening Point	87.0 - 148 °C	189 - 298 °F	Average value: 117 °C Grade Count:3
Flammability, UL94	HB	HB	Grade Count:7

Processing Properties	Metric	English	Comments
Nozzle Temperature	200 - 224 °C	392 - 435 °F	Average value: 207 °C Grade Count:3
Melt Temperature	170 - 279 °C	338 - 534 °F	Average value: 205 °C Grade Count:6
Mold Temperature	15.6 - 65.6 °C	60.0 - 150 °F	Average value: 40.5 °C Grade Count:4
Drying Temperature	79.4 - 82.2 °C	175 - 180 °F	Average value: 80.2 °C Grade Count:5

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