

## Overview of materials for Polypropylene with 40% Calcium Carbonate (CaCO3) Filler

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with 40% Calcium Carbonate (CaCO3) Filler

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene with 40% Calcium Carbonate (CaCO3) 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-Calcium-Carbonate-CaCO3-Filler.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Polypropylene-with-40-Calcium-Carbonate-CaCO3-Filler.php)

Physical Properties	Metric	English	Comments
Density	1.02 - 1.45 g/cc	0.0368 - 0.0524 lb/in <sup>3</sup>	Average value: 1.24 g/cc Grade Count:79
Filler Content	40.0 %	40.0 %	Average value: 40.0 % Grade Count:31
Water Absorption	0.0200 - 0.0400 %	0.0200 - 0.0400 %	Average value: 0.0250 % Grade Count:10
Linear Mold Shrinkage	0.00700 - 0.0160 cm/cm	0.00700 - 0.0160 in/in	Average value: 0.0108 cm/cm Grade Count:59
Linear Mold Shrinkage, Transverse	0.00800 - 0.0156 cm/cm	0.00800 - 0.0156 in/in	Average value: 0.0113 cm/cm Grade Count:5
Melt Flow	1.00 - 30.0 g/10 min	1.00 - 30.0 g/10 min	Average value: 11.3 g/10 min Grade Count:54
Ash	39.6 - 40.0 %	39.6 - 40.0 %	Average value: 40.0 % Grade Count:15
	24.0 - 63.0 % @Temperature 600 - 900 °C	24.0 - 63.0 % @Temperature 1110 - 1650 °F	Average value: 35.3 % Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	44.0 - 99.0	44.0 - 99.0	Average value: 84.5 Grade Count:33
Hardness, Shore D	68.0 - 75.0	68.0 - 75.0	Average value: 72.8 Grade Count:8
Tensile Strength, Ultimate	11.0 - 28.0 MPa	1600 - 4060 psi	Average value: 20.3 MPa Grade Count:38
Tensile Strength, Yield	13.0 - 31.0 MPa	1890 - 4500 psi	Average value: 22.3 MPa Grade Count:52
Elongation at Break	2.00 - 470 %	2.00 - 470 %	Average value: 59.2 % Grade Count:55

Elongation at Yield Mechanical Properties	2.00 - 90.0 % Metric	2.00 - 90.0 % English	Average value: 10.6 % Grade Count:32 Comments
Modulus of Elasticity	1.40 - 3.30 GPa	203 - 479 ksi	Average value: 2.46 GPa Grade Count:26
Flexural Yield Strength	17.0 - 48.3 MPa	2470 - 7000 psi	Average value: 35.7 MPa Grade Count:43
Flexural Modulus	0.241 - 3.85 GPa	35.0 - 558 ksi	Average value: 2.17 GPa Grade Count:76
Izod Impact, Notched	0.240 - 7.74 J/cm	0.450 - 14.5 ft-lb/in	Average value: 0.842 J/cm Grade Count:66
Izod Impact, Unnotched	3.20 - 5340 J/cm	6.00 - 10000 ft-lb/in	Average value: 8.92 J/cm Grade Count:19
Izod Impact, Notched (ISO)	2.80 - 45.0 kJ/m <sup>2</sup>	1.33 - 21.4 ft-lb/in <sup>2</sup>	Average value: 10.6 kJ/m <sup>2</sup> Grade Count:8
	2.00 - 3.70 kJ/m <sup>2</sup> @Temperature -30.0 - - 20.0 °C	0.952 - 1.76 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 4.00 °F	Average value: 2.45 kJ/m <sup>2</sup> Grade Count:4
Charpy Impact Unnotched	5.00 - 1000 J/cm <sup>2</sup>	23.8 - 4760 ft-lb/in <sup>2</sup>	Average value: 5.50 J/cm <sup>2</sup> Grade Count:3
	1.40 - 2.00 J/cm <sup>2</sup> @Temperature -40.0 - - 20.0 °C	6.66 - 9.52 ft-lb/in <sup>2</sup> @Temperature -40.0 - - 4.00 °F	Average value: 1.85 J/cm <sup>2</sup> Grade Count:4
Charpy Impact, Notched	0.300 - 0.350 J/cm <sup>2</sup>	1.43 - 1.67 ft-lb/in <sup>2</sup>	Average value: 0.338 J/cm <sup>2</sup> Grade Count:4
	0.100 - 0.100 J/cm <sup>2</sup> @Temperature -20.0 - - 20.0 °C	0.476 - 0.476 ft-lb/in <sup>2</sup> @Temperature -4.00 - - 4.00 °F	Average value: 0.100 J/cm <sup>2</sup> Grade Count:1
Gardner Impact	1.47 - 33.9 J	1.08 - 25.0 ft-lb	Average value: 14.6 J Grade Count:21
	3.62004 - 19.4334 J @Temperature -30.0 - - 5.56 °C	2.67000 - 14.3334 ft-lb @Temperature -22.0 - 22.0 °F	Average value: 8.81 J Grade Count:4

Thermal Properties	Metric	English	Comments
CTE, linear	50.4 - 63.0 µm/m-°C	28.0 - 35.0 µin/in-°F	Average value: 55.7 µm/m-°C Grade Count:6
Thermal Conductivity	0.231 - 0.288 W/m-K	1.60 - 2.00 BTU-in/hr-ft <sup>2</sup> -°F	Average value: 0.269 W/m-K Grade Count:3
Melting Point	150 - 182 °C	302 - 360 °F	Average value: 164 °C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	53.9 - 127 °C	129 - 260 °F	Average value: 108 °C Grade Count:60
Deflection Temperature at 1.8 MPa	44.4 - 96.1 °C	112 - 205 °F	Average value: 67.3 °C Grade

<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Count:46 Comments</b>
Vicat Softening Point	76.0 - 154 °C	169 - 309 °F	Average value: 122 °C Grade Count:11
Flammability, UL94	HB	HB	Grade Count:22

<b>Optical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Gloss	45.0 - 55.0 %	45.0 - 55.0 %	Average value: 51.3 % Grade Count:4

<b>Electrical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Electrical Resistivity	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	Average value: 8.71e+15 ohm-cm Grade Count:7
Dielectric Strength	19.7 - 23.0 kV/mm	500 - 584 kV/in	Average value: 20.8 kV/mm Grade Count:3
Comparative Tracking Index	600 V	600 V	Average value: 600 V Grade Count:3

<b>Processing Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Processing Temperature	193 - 227 °C	380 - 440 °F	Average value: 210 °C Grade Count:7
Nozzle Temperature	200 - 238 °C	392 - 460 °F	Average value: 219 °C Grade Count:6
Melt Temperature	170 - 279 °C	338 - 534 °F	Average value: 217 °C Grade Count:15
Mold Temperature	15.6 - 70.0 °C	60.0 - 158 °F	Average value: 47.5 °C Grade Count:20
Drying Temperature	65.6 - 100 °C	150 - 212 °F	Average value: 79.2 °C Grade Count:10
Moisture Content	0.0100 - 0.0500 %	0.0100 - 0.0500 %	Average value: 0.0340 % Grade Count:5
Injection Pressure	2.76 - 120 MPa	400 - 17400 psi	Average value: 69.7 MPa Grade Count:14

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