

## Overview of materials for Polypropylene, Mineral Reinforced

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Mineral Reinforced

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene, Mineral Reinforced". 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-Mineral-Reinforced.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Polypropylene-Mineral-Reinforced.php)

Physical Properties	Metric	English	Comments
Density	0.905 - 3.15 g/cc	0.0327 - 0.114 lb/in <sup>3</sup>	Average value: 1.19 g/cc Grade Count:247
Filler Content	10.0 - 75.0 %	10.0 - 75.0 %	Average value: 43.5 % Grade Count:22
Maximum Moisture Content	0.0100	0.0100	Average value: 0.0100 Grade Count:19
Linear Mold Shrinkage	0.000900 - 0.0600 cm/cm	0.000900 - 0.0600 in/in	Average value: 0.00964 cm/cm Grade Count:177
Linear Mold Shrinkage, Transverse	0.00460 - 0.0170 cm/cm	0.00460 - 0.0170 in/in	Average value: 0.0117 cm/cm Grade Count:29
Melt Flow	0.500 - 100 g/10 min	0.500 - 100 g/10 min	Average value: 15.2 g/10 min Grade Count:223
Ash	10.0 - 40.0 %	10.0 - 40.0 %	Average value: 25.0 % Grade Count:40

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	43.0 - 100	43.0 - 100	Average value: 77.7 Grade Count:53
Hardness, Shore D	55.0 - 78.0	55.0 - 78.0	Average value: 71.3 Grade Count:24
Ball Indentation Hardness	23.0 - 90.0 MPa	3340 - 13100 psi	Average value: 49.3 MPa Grade Count:31
Tensile Strength, Ultimate	10.0 - 65.0 MPa	1450 - 9430 psi	Average value: 23.8 MPa Grade Count:133
	7.00 - 16.0 MPa @ Temperature 60.0 - 120 °C	1020 - 2320 psi @ Temperature 140 - 248 °F	Average value: 11.4 MPa Grade Count:4
Tensile Strength, Yield	10.0 - 85.3 MPa	1450 - 12400 psi	Average value: 26.8 MPa Grade Count:173
Elongation at Break	1.60 - 500 %	1.60 - 500 %	Average value: 44.6 % Grade Count:174

Mechanical Properties	6.00 - 35.0 % Metric	6.00 - 35.0 % English	Comments Average value: 58.3 % Grade Count:5
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	
Elongation at Yield	2.00 - 100 %	2.00 - 100 %	Average value: 8.83 % Grade Count:114
	3.40 - 10.0 %	3.40 - 10.0 %	Average value: 6.61 % Grade Count:5
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	
Modulus of Elasticity	0.950 - 5.40 GPa	138 - 783 ksi	Average value: 2.41 GPa Grade Count:147
	0.500 - 4.90 GPa	72.5 - 711 ksi	Average value: 1.37 GPa Grade Count:5
	@Temperature 60.0 - 90.0 °C	@Temperature 140 - 194 °F	
Flexural Yield Strength	14.0 - 127 MPa	2030 - 18500 psi	Average value: 38.4 MPa Grade Count:143
Flexural Modulus	0.239 - 9.00 GPa	34.7 - 1310 ksi	Average value: 2.42 GPa Grade Count:208
	0.560 - 1.25 GPa	81.2 - 181 ksi	Average value: 0.893 GPa Grade Count:1
	@Temperature 60.0 - 120 °C	@Temperature 140 - 248 °F	
Izod Impact, Notched	0.200 - 100 J/cm	0.375 - 187 ft-lb/in	Average value: 0.620 J/cm Grade Count:119
	0.150 - 10.0 J/cm	0.281 - 18.7 ft-lb/in	Average value: 0.495 J/cm Grade Count:13
	@Temperature -40.0 - 0.000 °C	@Temperature -40.0 - 32.0 °F	
	0.196133 - 0.220 J/cm	0.367438 - 0.412 ft-lb/in	Average value: 0.495 J/cm Grade Count:10
	@Temperature -30.0 - -10.0 °C	@Temperature -22.0 - 14.0 °F	
	0.196133 - 0.220 J/cm	0.367438 - 0.412 ft-lb/in	Average value: 0.495 J/cm Grade Count:10
	@Thickness 3.20 - 6.40 mm	@Thickness 0.126 - 0.252 in	
Izod Impact, Unnotched	1.33 J/cm - NB	2.49 ft-lb/in - NB	Average value: 5.36 J/cm Grade Count:8
	1.0678 - 1.0678 J/cm	2.0004 - 2.0004 ft-lb/in	Average value: 1.07 J/cm Grade Count:1
	@Temperature -18.0 - -18.0 °C	@Temperature -0.400 - -0.400 °F	
Izod Impact, Notched (ISO)	2.00 - 57.0 kJ/m <sup>2</sup>	0.952 - 27.1 ft-lb/in <sup>2</sup>	Average value: 17.5 kJ/m <sup>2</sup> Grade Count:63
	1.70 - 43.0 kJ/m <sup>2</sup>	0.809 - 20.5 ft-lb/in <sup>2</sup>	

Mechanical Properties	Metric @ Temperature -40.0 - 10.0 °C	English @ Temperature -40.0 - 50.0 °F	Comments Average value: 5.81 kJ/m <sup>2</sup> Grade Count:1
Izod Impact, Unnotched (ISO)	15.0 kJ/m <sup>2</sup> - NB	7.14 ft-lb/in <sup>2</sup> - NB	Average value: 59.7 kJ/m <sup>2</sup> Grade Count:9
	21.0 - 200 kJ/m <sup>2</sup> @Temperature -20.0 - - 20.0 °C	9.99 - 95.2 ft-lb/in <sup>2</sup> @Temperature -4.00 - - 4.00 °F	Average value: 72.5 kJ/m <sup>2</sup> Grade Count:4
Charpy Impact Unnotched	0.700 J/cm <sup>2</sup> - NB	3.33 ft-lb/in <sup>2</sup> - NB	Average value: 4.68 J/cm <sup>2</sup> Grade Count:87
	0.500 J/cm <sup>2</sup> - NB @Temperature -40.0 - - 20.0 °C	2.38 ft-lb/in <sup>2</sup> - NB @Temperature -40.0 - - 4.00 °F	Average value: 4.14 J/cm <sup>2</sup> Grade Count:56
Charpy Impact, Notched	0.150 - 7.00 J/cm <sup>2</sup>	0.714 - 33.3 ft-lb/in <sup>2</sup>	Average value: 1.46 J/cm <sup>2</sup> Grade Count:100
	0.0300 - 2.00 J/cm <sup>2</sup> @Temperature -30.0 - - 20.0 °C	0.143 - 9.52 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 4.00 °F	Average value: 0.413 J/cm <sup>2</sup> Grade Count:58
Gardner Impact	0.678 - 10.2 J	0.500 - 7.52 ft-lb	Average value: 5.93 J Grade Count:4

Thermal Properties	Metric	English	Comments
CTE, linear	30.0 - 140 μm/m-°C	16.7 - 77.8 μin/in-°F	Average value: 63.7 μm/m-°C Grade Count:20
Melting Point	160 - 168 °C	320 - 334 °F	Average value: 164 °C Grade Count:47
Maximum Service Temperature, Air	75.0 - 140 °C	167 - 284 °F	Average value: 111 °C Grade Count:11
Deflection Temperature at 0.46 MPa (66 psi)	72.0 - 156 °C	162 - 313 °F	Average value: 115 °C Grade Count:165
Deflection Temperature at 1.8 MPa (264 psi)	44.0 - 150 °C	111 - 302 °F	Average value: 69.7 °C Grade Count:192
Vicat Softening Point	36.0 - 161 °C	96.8 - 322 °F	Average value: 111 °C Grade Count:110
UL RTI, Electrical	65.0 - 120 °C	149 - 248 °F	Average value: 76.0 °C Grade Count:9
UL RTI, Mechanical with Impact	65.0 - 120 °C	149 - 248 °F	Average value: 76.0 °C Grade Count:9
UL RTI, Mechanical without Impact	65.0 - 120 °C	149 - 248 °F	Average value: 76.0 °C Grade Count:9
Flammability, UL94	HB - 5VB	HB - 5VB	Grade Count:72
Flame Spread	22.0 - 22.1 mm/min	0.866 - 0.870 in/min	Average value: 22.1 mm/min Grade Count:4
Oxygen Index	22.0 - 29.0 %	22.0 - 29.0 %	Average value: 25.6 % Grade Count:14

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 - 1.00e+15 ohm-cm	1.00e+13 - 1.00e+15 ohm-cm	Average value: 7.50e+14 ohm-cm Grade Count:22
Surface Resistance	3000 - 1.00e+15 ohm	3000 - 1.00e+15 ohm	Average value: 1.35e+14 ohm Grade Count:23
Dielectric Strength	24.0 - 43.0 kV/mm	610 - 1090 kV/in	Average value: 41.1 kV/mm Grade Count:11
Comparative Tracking Index	400 - 600 V	400 - 600 V	Average value: 589 V Grade Count:27

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