

## Overview of materials for Polypropylene, Glass Reinforced, Impact Modified

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Glass Reinforced, Impact Modified

### Material Notes:

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

Physical Properties	Metric	English	Comments
Density	0.960 - 1.44 g/cc	0.0347 - 0.0520 lb/in <sup>3</sup>	Average value: 1.12 g/cc Grade Count:37
Filler Content	10.0 - 40.0 %	10.0 - 40.0 %	Average value: 24.2 % Grade Count:18
Water Absorption	0.0100 - 0.0600 %	0.0100 - 0.0600 %	Average value: 0.0264 % Grade Count:14
Linear Mold Shrinkage	0.00100 - 0.0226 cm/cm	0.00100 - 0.0226 in/in	Average value: 0.00526 cm/cm Grade Count:33
Linear Mold Shrinkage, Transverse	0.00930 - 0.0210 cm/cm	0.00930 - 0.0210 in/in	Average value: 0.0140 cm/cm Grade Count:5
Melt Flow	0.900 - 16.0 g/10 min	0.900 - 16.0 g/10 min	Average value: 7.14 g/10 min Grade Count:17

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	80.0 - 115	80.0 - 115	Average value: 95.9 Grade Count:18
Tensile Strength, Ultimate	20.0 - 115 MPa	2900 - 16700 psi	Average value: 53.0 MPa Grade Count:31
Tensile Strength, Yield	31.0 - 95.0 MPa	4500 - 13800 psi	Average value: 64.4 MPa Grade Count:7
Elongation at Break	2.00 - 11.0 %	2.00 - 11.0 %	Average value: 5.55 % Grade Count:30
Elongation at Yield	0.600 - 2.50 %	0.600 - 2.50 %	Average value: 1.87 % Grade Count:3
Modulus of Elasticity	1.50 - 9.50 GPa	218 - 1380 ksi	Average value: 4.46 GPa Grade Count:23
Flexural Yield Strength	4.48 - 145 MPa	650 - 21000 psi	Average value: 75.9 MPa Grade Count:31
Flexural Modulus	1.50 - 7.85 GPa	218 - 1140 ksi	Average value: 4.04 GPa Grade Count:36
Izod Impact, Notched	0.518 - 2.14 J/cm	0.970 - 4.00 ft-lb/in	Average value: 1.24 J/cm Grade Count:30

Mechanical Properties	Metric	English	Comments
	1.30 J/cm	.44 ft-lb/in	Average value: 1.30 J/cm Grade Count:2
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	
Izod Impact, Unnotched	2.14 - 10.7 J/cm	4.00 - 20.0 ft-lb/in	Average value: 5.31 J/cm Grade Count:21
	4.80 - 4.80 J/cm	8.99 - 8.99 ft-lb/in	Average value: 4.80 J/cm Grade Count:2
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	
Izod Impact, Notched (ISO)	6.50 - 16.0 kJ/m <sup>2</sup>	3.09 - 7.61 ft-lb/in <sup>2</sup>	Average value: 11.0 kJ/m <sup>2</sup> Grade Count:4
Charpy Impact Unnotched	1.60 - 7.50 J/cm <sup>2</sup>	7.61 - 35.7 ft-lb/in <sup>2</sup>	Average value: 4.16 J/cm <sup>2</sup> Grade Count:7
	1.00 - 4.70 J/cm <sup>2</sup>	4.76 - 22.4 ft-lb/in <sup>2</sup>	Average value: 2.98 J/cm <sup>2</sup> Grade Count:4
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	
Charpy Impact, Notched	0.200 - 1.00 J/cm <sup>2</sup>	0.952 - 4.76 ft-lb/in <sup>2</sup>	Average value: 0.617 J/cm <sup>2</sup> Grade Count:6
	0.100 - 0.800 J/cm <sup>2</sup>	0.476 - 3.81 ft-lb/in <sup>2</sup>	Average value: 0.425 J/cm <sup>2</sup> Grade Count:4
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	

Thermal Properties	Metric	English	Comments
Melting Point	145 - 168 °C	293 - 334 °F	Average value: 161 °C Grade Count:8
Deflection Temperature at 0.46 MPa (66 psi)	127 - 166 °C	260 - 331 °F	Average value: 150 °C Grade Count:26
Deflection Temperature at 1.8 MPa (264 psi)	67.0 - 160 °C	153 - 320 °F	Average value: 132 °C Grade Count:29
Vicat Softening Point	105 - 165 °C	221 - 329 °F	Average value: 151 °C Grade Count:7
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:18
Glow Wire Test	650 - 960 °C	1200 - 1760 °F	Average value: 857 °C Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 1.00e+16 ohm-cm	1.00e+14 - 1.00e+16 ohm-cm	Average value: 7.08e+15 ohm-cm Grade Count:16
Surface Resistance	1.00e+12 - 1.00e+14 ohm	1.00e+12 - 1.00e+14 ohm	Average value: 6.70e+13 ohm Grade Count:3

Processing Properties	Metric	English	Comments
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Processing Temperature Processing Properties	193 - 227 °C Metric	380 - 440 °F English	Average value: 211 °C Grade Count:15 Comments
Melt Temperature	170 - 250 °C	338 - 482 °F	Average value: 225 °C Grade Count:8
Mold Temperature	32.2 - 80.0 °C	90.0 - 176 °F	Average value: 52.3 °C Grade Count:19
Injection Pressure	68.9 - 120 MPa	10000 - 17400 psi	Average value: 88.1 MPa Grade Count:18

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