

## Overview of materials for Nylon 66, 10% Glass Fiber Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 10% Glass Fiber Filled

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, 10% Glass Fiber Filled". Specific grades with glass 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-Nylon-66-10-Glass-Fiber-Filled.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Nylon-66-10-Glass-Fiber-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.09 - 1.70 g/cc	0.0394 - 0.0614 lb/in <sup>3</sup>	Average value: 1.23 g/cc Grade Count:215
	1.03 - 1.03 g/cc @Temperature 295 - 295 °C	0.0372 - 0.0372 lb/in <sup>3</sup> @Temperature 563 - 563 °F	Average value: 1.03 g/cc Grade Count:1
Filler Content	5.00 - 15.0 %	5.00 - 15.0 %	Average value: 11.3 % Grade Count:47
Water Absorption	0.350 - 8.00 %	0.350 - 8.00 %	Average value: 1.78 % Grade Count:110
	2.60 - 2.80 % @Temperature 70.0 - 70.0 °C	2.60 - 2.80 % @Temperature 158 - 158 °F	Average value: 2.70 % Grade Count:2
Moisture Absorption at Equilibrium	1.80 - 3.00 %	1.80 - 3.00 %	Average value: 2.17 % Grade Count:27
Water Absorption at Saturation	5.50 - 8.00 %	5.50 - 8.00 %	Average value: 6.97 % Grade Count:12
Viscosity Test	140 - 150 cm <sup>3</sup> /g	140 - 150 cm <sup>3</sup> /g	Average value: 147 cm <sup>3</sup> /g Grade Count:4
Linear Mold Shrinkage	0.00100 - 0.0550 cm/cm	0.00100 - 0.0550 in/in	Average value: 0.00760 cm/cm Grade Count:191
Linear Mold Shrinkage, Transverse	0.00500 - 0.0150 cm/cm	0.00500 - 0.0150 in/in	Average value: 0.0102 cm/cm Grade Count:32
Melt Flow	1.00 - 80.0 g/10 min	1.00 - 80.0 g/10 min	Average value: 25.0 g/10 min Grade Count:9

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70.0 - 95.0	70.0 - 95.0	Average value: 86.5 Grade Count:12
Hardness, Rockwell R	95.0 - 122	95.0 - 122	Average value: 116 Grade Count:81

Hardness: Shore D Mechanical Properties	73.0 - 81.0 Metric	73.0 - 81.0 English	Average value: 76.0 Grade Count:3 Comments
Ball Indentation Hardness	102 - 165 MPa	14800 - 23900 psi	Average value: 139 MPa Grade Count:5
Tensile Strength, Ultimate	29.6 - 175 MPa	4300 - 25400 psi	Average value: 96.8 MPa Grade Count:156
	35.0 - 70.0 MPa @Temperature 60.0 - 150 °C	5080 - 10200 psi @Temperature 140 - 302 °F	Average value: 53.8 MPa Grade Count:1
	57.5 - 57.5 MPa @Temperature 130 - 175 °C	8340 - 8340 psi @Temperature 266 - 347 °F	Average value: 53.8 MPa Grade Count:1
	57.5 - 57.5 MPa @Time 1.80e+7 - 7.20e+7 sec	8340 - 8340 psi @Time 5000 - 20000 hour	Average value: 53.8 MPa Grade Count:1
Tensile Strength, Yield	10.3 - 252 MPa	1500 - 36500 psi	Average value: 104 MPa Grade Count:75
Elongation at Break	1.50 - 20.0 %	1.50 - 20.0 %	Average value: 4.91 % Grade Count:190
	6.50 - 12.0 % @Temperature 60.0 - 150 °C	6.50 - 12.0 % @Temperature 140 - 302 °F	Average value: 10.1 % Grade Count:1
Elongation at Yield	2.75 - 8.00 %	2.75 - 8.00 %	Average value: 4.30 % Grade Count:16
	4.00 - 8.00 % @Temperature 60.0 - 150 °C	4.00 - 8.00 % @Temperature 140 - 302 °F	Average value: 6.63 % Grade Count:1
Modulus of Elasticity	1.79 - 36.5 GPa	260 - 5290 ksi	Average value: 4.98 GPa Grade Count:78
	1.50 - 6.543 GPa @Temperature -40.0 - 150 °C	218 - 949.0 ksi @Temperature -40.0 - 302 °F	Average value: 3.47 GPa Grade Count:3
Flexural Yield Strength	43.0 - 407 MPa	6240 - 59000 psi	Average value: 149 MPa Grade Count:173
Flexural Modulus	0.483 - 36.2 GPa	70.0 - 5250 ksi	Average value: 4.87 GPa Grade Count:205
Compressive Yield Strength	89.6 - 172 MPa	13000 - 24900 psi	Average value: 122 MPa Grade Count:3
Shear Modulus	>= 0.0971 GPa @Temperature -50.0 - 250 °C	>= 14.1 ksi @Temperature -58.0 - 482 °F	Average value: 0.632 GPa Grade Count:2

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	42.0 - 76.0 MPa	6090 - 11000 psi	Average value: 58.9 MPa Grade Count:151
	0.320 - 2.94 J/cm	0.600 - 5.50 ft-lb/in	
	0.69407 - 0.69407 J/cm	1.3003 - 1.3003 ft-lb/in	Average value: 1.05 J/cm Grade Count:1
	@Temperature -40.0 - -40.0 °C	@Temperature -40.0 - -40.0 °F	
	1.0678 - 1.0678 J/cm	2.0004 - 2.0004 ft-lb/in	Average value: 1.05 J/cm Grade Count:9
	@Temperature -40.0 - -40.0 °C	@Temperature -40.0 - -40.0 °F	
	1.0678 - 1.0678 J/cm	2.0004 - 2.0004 ft-lb/in	Average value: 1.05 J/cm Grade Count:9
	@Thickness 3.17 - 3.17 mm	@Thickness 0.125 - 0.125 in	
Izod Impact, Unnotched	0.481 - 5340 J/cm	0.900 - 10000 ft-lb/in	Average value: 4.50 J/cm Grade Count:45
Izod Impact, Notched (ISO)	3.00 - 18.0 kJ/m <sup>2</sup>	1.43 - 8.57 ft-lb/in <sup>2</sup>	Average value: 8.38 kJ/m <sup>2</sup> Grade Count:42
	3.00 - 12.0 kJ/m <sup>2</sup>	1.43 - 5.71 ft-lb/in <sup>2</sup>	Average value: 5.62 kJ/m <sup>2</sup> Grade Count:17
	@Temperature -40.0 - -20.0 °C	@Temperature -40.0 - -4.00 °F	
Izod Impact, Unnotched (ISO)	35.0 - 100 kJ/m <sup>2</sup>	16.7 - 47.6 ft-lb/in <sup>2</sup>	Average value: 58.9 kJ/m <sup>2</sup> Grade Count:12
	28.0 - 90.0 kJ/m <sup>2</sup>	13.3 - 42.8 ft-lb/in <sup>2</sup>	Average value: 52.3 kJ/m <sup>2</sup> Grade Count:6
	@Temperature -30.0 - -30.0 °C	@Temperature -22.0 - -22.0 °F	
Charpy Impact Unnotched	2.00 J/cm <sup>2</sup> - NB	9.52 ft-lb/in <sup>2</sup> - NB	Average value: 5.25 J/cm <sup>2</sup> Grade Count:44
	2.40 - 9.00 J/cm <sup>2</sup>	11.4 - 42.8 ft-lb/in <sup>2</sup>	Average value: 4.51 J/cm <sup>2</sup> Grade Count:28
	@Temperature -40.0 - -20.0 °C	@Temperature -40.0 - -4.00 °F	
Charpy Impact, Notched	0.400 - 1.80 J/cm <sup>2</sup>	1.90 - 8.57 ft-lb/in <sup>2</sup>	Average value: 0.840 J/cm <sup>2</sup> Grade Count:51
	0.200 - 1.20 J/cm <sup>2</sup>	0.952 - 5.71 ft-lb/in <sup>2</sup>	Average value: 0.566 J/cm <sup>2</sup> Grade Count:34
	@Temperature -40.0 - -20.0 °C	@Temperature -40.0 - -4.00 °F	
Tensile Creep Modulus, 1 hour	3100 - 4030 MPa	450000 - 585000 psi	Average value: 3430 MPa Grade Count:4
Tensile Creep Modulus, 1000 hours	2200 - 3180 MPa	319000 - 461000 psi	Average value: 2520 MPa Grade Count:4

Electrical Properties	Metric	English	Comments
Electrical Resistivity	10.0 - 1.00e+15 ohm-cm	10.0 - 1.00e+15 ohm-cm	Average value: 4.60e+14 ohm-cm Grade Count:89
Surface Resistance	10.0 - 1.00e+15 ohm	10.0 - 1.00e+15 ohm	Average value: 5.40e+13 ohm Grade Count:31
Static Decay	0.100 - 2.00 sec	0.100 - 2.00 sec	Average value: 1.62 sec Grade Count:5
Dielectric Constant	3.10 - 9.80	3.10 - 9.80	Average value: 4.46 Grade Count:16
Dielectric Strength	17.3 - 111 kV/mm	440 - 2820 kV/in	Average value: 26.2 kV/mm Grade Count:59
Dissipation Factor	0.00650 - 0.250	0.00650 - 0.250	Average value: 0.0515 Grade Count:17
Dielectric Loss Index	0.0150 - 0.150	0.0150 - 0.150	Average value: 0.0825 Grade Count:4
Arc Resistance	0.000 - 120 sec	0.000 - 120 sec	Average value: 81.9 sec Grade Count:5

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