

## Overview of materials for Nylon 66/6, 60% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6, 60% Glass Fiber Reinforced

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66/6, 60% Glass Fiber Reinforced". Specific grades with glass content between 55% and 64% 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-666-60-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Nylon-666-60-Glass-Fiber-Reinforced.php)

Physical Properties	Metric	English	Comments
Density	1.58 - 1.72 g/cc	0.0571 - 0.0621 lb/in <sup>3</sup>	Average value: 1.69 g/cc Grade Count:14
Filler Content	60.0 %	60.0 %	Average value: 60.0 % Grade Count:6
Water Absorption	0.350 - 5.00 %	0.350 - 5.00 %	Average value: 2.98 % Grade Count:8
Moisture Absorption at Equilibrium	1.10 - 1.20 %	1.10 - 1.20 %	Average value: 1.18 % Grade Count:5
Linear Mold Shrinkage	0.00100 - 0.00600 cm/cm	0.00100 - 0.00600 in/in	Average value: 0.00257 cm/cm Grade Count:14
Linear Mold Shrinkage, Transverse	0.00200 - 0.00900 cm/cm	0.00200 - 0.00900 in/in	Average value: 0.00544 cm/cm Grade Count:11

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	198 - 350 MPa	28700 - 50800 psi	Average value: 281 MPa Grade Count:4
Tensile Strength, Ultimate	155 - 280 MPa	22500 - 40600 psi	Average value: 230 MPa Grade Count:13
	150 - 160 MPa	21800 - 23200 psi	Average value: 155 MPa Grade Count:2
	@Temperature 80.0 - 80.0 °C	@Temperature 176 - 176 °F	
Tensile Strength, Yield	180 - 270 MPa	26100 - 39200 psi	Average value: 230 MPa Grade Count:3
	135 - 135 MPa	19600 - 19600 psi	Average value: 135 MPa Grade Count:1
	@Temperature 130 - 175 °C	@Temperature 266 - 347 °F	
	135 - 135 MPa	19600 - 19600 psi	Average value: 135 MPa Grade Count:1
	@Time 1.80e+7 - 7.20e+7 sec	@Time 5000 - 20000 hour	

Mechanical Properties	Metric	English	Comments
	2.30 - 2.80 % @Temperature 80.0 - 80.0 °C	2.30 - 2.80 % @Temperature 176 - 176 °F	Average value: 2.53 % Grade Count:16
Modulus of Elasticity	13.0 - 22.5 GPa	1890 - 3260 ksi	Average value: 18.0 GPa Grade Count:12
	10.0 - 13.0 GPa @Temperature 80.0 - 80.0 °C	1450 - 1890 ksi @Temperature 176 - 176 °F	Average value: 11.5 GPa Grade Count:2
Flexural Yield Strength	290 - 450 MPa	42100 - 65300 psi	Average value: 389 MPa Grade Count:9
	290 - 290 MPa @Temperature 80.0 - 80.0 °C	42100 - 42100 psi @Temperature 176 - 176 °F	Average value: 290 MPa Grade Count:2
Flexural Modulus	1.76 - 22.5 GPa	255 - 3260 ksi	Average value: 16.4 GPa Grade Count:9
	13.0 - 13.0 GPa @Temperature 80.0 - 80.0 °C	1890 - 1890 ksi @Temperature 176 - 176 °F	Average value: 13.0 GPa Grade Count:2
Izod Impact, Notched	1.66 - 1.87 J/cm	3.10 - 3.50 ft-lb/in	Average value: 1.77 J/cm Grade Count:3
Izod Impact, Unnotched (ISO)	76.0 - 80.0 kJ/m <sup>2</sup> @Temperature -30.0 - -30.0 °C	36.2 - 38.1 ft-lb/in <sup>2</sup> @Temperature -22.0 - -22.0 °F	Average value: 78.0 kJ/m <sup>2</sup> Grade Count:2
Charpy Impact Unnotched	8.60 - 11.5 J/cm <sup>2</sup>	40.9 - 54.7 ft-lb/in <sup>2</sup>	Average value: 10.1 J/cm <sup>2</sup> Grade Count:12
	7.60 - 10.5 J/cm <sup>2</sup> @Temperature -30.0 - 30.0 °C	36.2 - 50.0 ft-lb/in <sup>2</sup> @Temperature -22.0 - 86.0 °F	Average value: 8.93 J/cm <sup>2</sup> Grade Count:8
Charpy Impact, Notched	1.30 - 5.00 J/cm <sup>2</sup>	6.19 - 23.8 ft-lb/in <sup>2</sup>	Average value: 3.01 J/cm <sup>2</sup> Grade Count:12
	1.10 - 4.50 J/cm <sup>2</sup> @Temperature -30.0 - 30.0 °C	5.24 - 21.4 ft-lb/in <sup>2</sup> @Temperature -22.0 - 86.0 °F	Average value: 3.03 J/cm <sup>2</sup> Grade Count:8
Puncture Energy	31.0 - 31.0 J @Temperature -30.0 - -30.0 °C	22.9 - 22.9 ft-lb @Temperature -22.0 - -22.0 °F	Average value: 31.0 J Grade Count:1

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Transverse to Flow	40.0 - 87.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	22.2 - 48.3 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Average value: 51.8 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Grade Count:4
Melting Point	238 - 265 $^\circ\text{C}$	460 - 509 $^\circ\text{F}$	Average value: 255 $^\circ\text{C}$ Grade Count:14
Maximum Service Temperature, Air	100 - 230 $^\circ\text{C}$	212 - 446 $^\circ\text{F}$	Average value: 172 $^\circ\text{C}$ Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	255 - 257 $^\circ\text{C}$	491 - 495 $^\circ\text{F}$	Average value: 256 $^\circ\text{C}$ Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	225 - 255 $^\circ\text{C}$	437 - 491 $^\circ\text{F}$	Average value: 239 $^\circ\text{C}$ Grade Count:12
Deflection Temperature at 8.0 MPa	195 - 235 $^\circ\text{C}$	383 - 455 $^\circ\text{F}$	Average value: 219 $^\circ\text{C}$ Grade Count:9
Flammability, UL94	HB	HB	Grade Count:11

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+10 - 1.00e+15 ohm-cm	1.00e+10 - 1.00e+15 ohm-cm	Average value: 9.50e+13 ohm-cm Grade Count:8
Surface Resistance	1.00e+10 - 8.00e+13 ohm	1.00e+10 - 8.00e+13 ohm	Average value: 1.34e+13 ohm Grade Count:7
Dielectric Strength	18.9 - 40.0 kV/mm	480 - 1020 kV/in	Average value: 25.7 kV/mm Grade Count:5
Comparative Tracking Index	55.0 - 600 V	55.0 - 600 V	Average value: 493 V Grade Count:6

Processing Properties	Metric	English	Comments
Melt Temperature	225 - 320 $^\circ\text{C}$	437 - 608 $^\circ\text{F}$	Average value: 288 $^\circ\text{C}$ Grade Count:5
Mold Temperature	71.1 - 100 $^\circ\text{C}$	160 - 212 $^\circ\text{F}$	Average value: 89.1 $^\circ\text{C}$ Grade Count:3
Drying Temperature	70.0 - 90.0 $^\circ\text{C}$	158 - 194 $^\circ\text{F}$	Average value: 79.9 $^\circ\text{C}$ Grade Count:5
Moisture Content	0.0500 - 0.200 %	0.0500 - 0.200 %	Average value: 0.155 % Grade Count:4
	1.10 - 1.10 %	1.10 - 1.10 %	Average value: 1.10 % Grade Count:4
	@Temperature 70.0 - 70.0 $^\circ\text{C}$	@Temperature 158 - 158 $^\circ\text{F}$	
Injection Pressure	34.5 - 150 MPa	5000 - 21800 psi	Average value: 119 MPa Grade Count:4

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China