

Overview of materials for Nylon 66, Glass/Carbon Fiber Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Glass/Carbon Fiber Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, Glass/Carbon Fiber Filled". 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-GlassCarbon-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.21 - 1.54 g/cc	0.0437 - 0.0556 lb/in ³	Average value: 1.35 g/cc Grade Count:20
Filler Content	50.0 %	50.0 %	Average value: 50.0 % Grade Count:3
Water Absorption	0.200 - 1.80 %	0.200 - 1.80 %	Average value: 0.967 % Grade Count:12
Linear Mold Shrinkage	0.00100 - 0.00600 cm/cm	0.00100 - 0.00600 in/in	Average value: 0.00332 cm/cm Grade Count:17

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115 - 120	115 - 120	Average value: 118 Grade Count:4
Tensile Strength, Ultimate	138 - 294 MPa	20000 - 42600 psi	Average value: 208 MPa Grade Count:17
Tensile Strength, Yield	131 - 165 MPa	19000 - 24000 psi	Average value: 149 MPa Grade Count:4
Elongation at Break	1.00 - 5.00 %	1.00 - 5.00 %	Average value: 2.77 % Grade Count:10
Elongation at Yield	2.00 - 3.90 %	2.00 - 3.90 %	Average value: 2.78 % Grade Count:10
Modulus of Elasticity	6.90 - 26.9 GPa	1000 - 3900 ksi	Average value: 15.3 GPa Grade Count:15
Flexural Yield Strength	179 - 432 MPa	26000 - 62700 psi	Average value: 295 MPa Grade Count:18
Flexural Modulus	6.89 - 21.4 GPa	1000 - 3100 ksi	Average value: 12.0 GPa Grade Count:20
Izod Impact, Notched	0.530 - 3.20 J/cm	0.993 - 5.99 ft-lb/in	Average value: 1.39 J/cm Grade Count:12
Izod Impact, Unnotched	4.59 - 10.0 J/cm	8.60 - 18.8 ft-lb/in	Average value: 7.76 J/cm Grade Count:5
Charpy Impact Unnotched	4.00 - 6.50 J/cm ²	19.0 - 30.9 ft-lb/in ²	Average value: 5.23 J/cm ² Grade Count:10

Mechanical Properties	Metric ^{5.00 J/cm²}	English ^{3.8 ft-lb/in²}	Comments
	@Temperature -30.0 - -30.0 °C	@Temperature -22.0 - -22.0 °F	Average value: 5.00 J/cm ² Grade Count:1
Charpy Impact, Notched	1.00 - 1.20 J/cm ²	4.76 - 5.71 ft-lb/in ²	Average value: 1.07 J/cm ² Grade Count:7
	1.00 - 1.00 J/cm ²	4.76 - 4.76 ft-lb/in ²	Average value: 1.00 J/cm ² Grade Count:1
	@Temperature -30.0 - -30.0 °C	@Temperature -22.0 - -22.0 °F	
Coefficient of Friction	0.200 - 0.320	0.200 - 0.320	Average value: 0.287 Grade Count:4
Coefficient of Friction, Static	0.170 - 0.280	0.170 - 0.280	Average value: 0.250 Grade Count:4

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 - 30.0 µm/m-°C	11.0 - 16.7 µin/in-°F	Average value: 22.5 µm/m-°C Grade Count:5
Thermal Conductivity	0.280 - 0.400 W/m-K	1.94 - 2.78 BTU-in/hr-ft ² -°F	Average value: 0.360 W/m-K Grade Count:3
Melting Point	249 - 275 °C	480 - 527 °F	Average value: 261 °C Grade Count:3
Maximum Service Temperature, Air	120 - 160 °C	248 - 320 °F	Average value: 140 °C Grade Count:9
Deflection Temperature at 0.46 MPa (66 psi)	230 - 256 °C	446 - 493 °F	Average value: 250 °C Grade Count:6
Deflection Temperature at 1.8 MPa (264 psi)	220 - 257 °C	428 - 495 °F	Average value: 245 °C Grade Count:15
Flammability, UL94	HB	HB	Grade Count:6

Electrical Properties	Metric	English	Comments
Surface Resistance	10.0 - 1.00e+8 ohm	10.0 - 1.00e+8 ohm	Average value: 1.00e+7 ohm Grade Count:13
Insulation Resistance	100 - 1.00e+8 ohm	100 - 1.00e+8 ohm	Average value: 1.11e+7 ohm Grade Count:9

Processing Properties	Metric	English	Comments
Processing Temperature	290 °C	554 °F	Average value: 290 °C Grade Count:11
Nozzle Temperature	280 - 300 °C	536 - 572 °F	Average value: 290 °C Grade Count:9
Melt Temperature	260 - 310 °C	500 - 590 °F	Average value: 298 °C Grade Count:14
Mold Temperature	66.0 - 121 °C	151 - 250 °F	Average value: 100 °C Grade Count:14
Drying Temperature	75.0 - 107 °C	167 - 225 °F	Average value: 90.1 °C Grade Count:12

Processing Properties

Metric

English

Comments

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