

## Overview of materials for Nylon 11 + Carbon Fiber

Category : Polymer , Thermoplastic , Nylon , Nylon 11 , Nylon 11 + Carbon Fiber

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 11 + Carbon Fiber". 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-11-Carbon-Fiber.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Nylon-11-Carbon-Fiber.php)

Physical Properties	Metric	English	Comments
Density	1.10 - 1.28 g/cc	0.0397 - 0.0462 lb/in <sup>3</sup>	Average value: 1.19 g/cc Grade Count:7
Filler Content	25.0 - 40.0 %	25.0 - 40.0 %	Average value: 30.0 % Grade Count:3
Water Absorption	0.150 %	0.150 %	Average value: 0.150 % Grade Count:3
Additive Loading	15.0 - 25.0 %	15.0 - 25.0 %	Average value: 21.3 % Grade Count:4
Linear Mold Shrinkage	0.000500 - 0.00300 cm/cm	0.000500 - 0.00300 in/in	Average value: 0.00150 cm/cm Grade Count:7

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	121 - 207 MPa	17500 - 30000 psi	Average value: 158 MPa Grade Count:7
Elongation at Break	1.00 - 5.50 %	1.00 - 5.50 %	Average value: 3.18 % Grade Count:7
Modulus of Elasticity	7.24 - 22.8 GPa	1050 - 3300 ksi	Average value: 13.4 GPa Grade Count:7
Flexural Yield Strength	186 - 276 MPa	27000 - 40000 psi	Average value: 225 MPa Grade Count:7
Flexural Modulus	6.55 - 17.2 GPa	950 - 2500 ksi	Average value: 11.1 GPa Grade Count:7
Izod Impact, Notched	0.961 - 2.14 J/cm	1.80 - 4.00 ft-lb/in	Average value: 1.40 J/cm Grade Count:7
Izod Impact, Unnotched	5.34 - 10.7 J/cm	10.0 - 20.0 ft-lb/in	Average value: 8.12 J/cm Grade Count:7

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	193 - 235 °C	380 - 455 °F	Average value: 216 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	188 - 232 °C	370 - 450 °F	Average value: 210 °C Grade Count:4

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.100 - 10.0 ohm-cm	0.100 - 10.0 ohm-cm	Average value: 5.39 ohm-cm Grade Count:4
Processing Properties	Metric	English	Comments
Processing Temperature	216 - 282 °C	420 - 540 °F	Average value: 249 °C Grade Count:3
Melt Temperature	224 - 288 °C	435 - 550 °F	Average value: 256 °C Grade Count:4
Mold Temperature	37.8 - 65.6 °C	100 - 150 °F	Average value: 51.7 °C Grade Count:7
Drying Temperature	79.4 °C	175 °F	Average value: 79.4 °C Grade Count:4
Moisture Content	0.200 %	0.200 %	Average value: 0.200 % Grade Count:4
Dew Point	-17.8 °C	0.000 °F	Average value: -17.8 °C Grade Count:4
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:7

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