

Overview of materials for Nylon 6, 10% Glass Fiber Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 10% Glass Fiber Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 6, 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-6-10-Glass-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.07 - 1.67 g/cc	0.0385 - 0.0603 lb/in ³	Average value: 1.24 g/cc Grade Count:133
Filler Content	5.00 - 15.0 %	5.00 - 15.0 %	Average value: 11.2 % Grade Count:33
Water Absorption	0.0900 - 8.30 %	0.0900 - 8.30 %	Average value: 2.50 % Grade Count:59
	2.60 - 3.40 % @Temperature 70.0 - 70.0 °C	2.60 - 3.40 % @Temperature 158 - 158 °F	Average value: 3.00 % Grade Count:2
Moisture Absorption at Equilibrium	1.20 - 3.00 %	1.20 - 3.00 %	Average value: 2.13 % Grade Count:22
Water Absorption at Saturation	7.00 - 9.50 %	7.00 - 9.50 %	Average value: 8.30 % Grade Count:11
Viscosity	2.60 - 50.0 cP	2.60 - 50.0 cP	Average value: 18.4 cP Grade Count:3
Linear Mold Shrinkage	0.00100 - 0.0200 cm/cm	0.00100 - 0.0200 in/in	Average value: 0.00629 cm/cm Grade Count:115
	0.00500 - 0.00500 cm/cm @Temperature 80.0 - 80.0 °C	0.00500 - 0.00500 in/in @Temperature 176 - 176 °F	Average value: 0.00500 cm/cm Grade Count:1
Linear Mold Shrinkage, Transverse	0.00680 - 0.100 cm/cm	0.00680 - 0.100 in/in	Average value: 0.0157 cm/cm Grade Count:24
	0.00900 - 0.00900 cm/cm @Temperature 80.0 - 80.0 °C	0.00900 - 0.00900 in/in @Temperature 176 - 176 °F	Average value: 0.00900 cm/cm Grade Count:1
Melt Flow	2.00 - 93.8 g/10 min	2.00 - 93.8 g/10 min	Average value: 17.8 g/10 min Grade Count:15

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	100 - 122	100 - 122	Average value: 119 Grade Count:37
Hardness, Shore D	73.0 - 81.0	73.0 - 81.0	Average value: 77.3 Grade Count:4
Ball Indentation Hardness	95.0 - 155 MPa	13800 - 22500 psi	Average value: 127 MPa Grade Count:3
Tensile Strength, Ultimate	3.45 - 165 MPa	500 - 23900 psi	Average value: 95.5 MPa Grade Count:92
	20.0 - 170 MPa @Temperature -40.0 - 121 °C	2900 - 24700 psi @Temperature -40.0 - 250 °F	Average value: 70.7 MPa Grade Count:7
	27.5 - 52.5 MPa @Temperature 130 - 175 °C	3990 - 7610 psi @Temperature 266 - 347 °F	Average value: 70.7 MPa Grade Count:2
	27.5 - 52.5 MPa @Time 1.80e+7 - 7.20e+7 sec	3990 - 7610 psi @Time 5000 - 20000 hour	Average value: 70.7 MPa Grade Count:2
Tensile Strength, Yield	51.7 - 170 MPa	7500 - 24700 psi	Average value: 103 MPa Grade Count:50
Elongation at Break	2.00 - 30.0 %	2.00 - 30.0 %	Average value: 5.53 % Grade Count:107
	2.00 - 30.0 % @Temperature -40.0 - 121 °C	2.00 - 30.0 % @Temperature -40.0 - 250 °F	Average value: 9.69 % Grade Count:7
Elongation at Yield	1.60 - 15.0 %	1.60 - 15.0 %	Average value: 4.93 % Grade Count:21
Modulus of Elasticity	1.90 - 16.0 GPa	276 - 2320 ksi	Average value: 4.99 GPa Grade Count:57
	1.445 - 6.90 GPa @Temperature -40.0 - 120 °C	209.6 - 1000 ksi @Temperature -40.0 - 248 °F	Average value: 3.52 GPa Grade Count:6
Flexural Yield Strength	13.8 - 250 MPa	2000 - 36300 psi	Average value: 142 MPa Grade Count:122
	49.987 - 265 MPa @Temperature -40.0 - 121 °C	7250.0 - 38400 psi @Temperature -40.0 - 250 °F	Average value: 147 MPa Grade Count:5
Flexural Modulus	1.52 - 24.0 GPa	220 - 3480 ksi	Average value: 4.53 GPa Grade Count:124
	0.992845 - 5.19865 GPa	144.002 - 754.012 ksi @Temperature -40.0 -	Average value: 2.30 GPa Grade Count:3

Mechanical Properties	Metric @Temperature -40.0 - - 121 °C	English 250 °F	Comments
Compressive Yield Strength	100 - 117 MPa	14500 - 17000 psi	Average value: 111 MPa Grade Count:3
Izod Impact, Notched	0.427 - 1.95 J/cm	0.800 - 3.65 ft-lb/in	Average value: 0.720 J/cm Grade Count:79
	0.37373 - 0.400 J/cm @Temperature -40.0 - - 40.0 °C	0.70015 - 0.749 ft-lb/in @Temperature -40.0 - - 40.0 °F	Average value: 0.391 J/cm Grade Count:3
Izod Impact, Unnotched	0.481 - 5.34 J/cm	0.900 - 10.0 ft-lb/in	Average value: 4.30 J/cm Grade Count:14
Izod Impact, Notched (ISO)	3.80 - 12.0 kJ/m²	1.81 - 5.71 ft-lb/in²	Average value: 6.65 kJ/m² Grade Count:18
	5.00 - 8.00 kJ/m² @Temperature -30.0 - - 30.0 °C	2.38 - 3.81 ft-lb/in² @Temperature -22.0 - - 22.0 °F	Average value: 6.50 kJ/m² Grade Count:2
Izod Impact, Unnotched (ISO)	20.0 - 70.0 kJ/m²	9.52 - 33.3 ft-lb/in²	Average value: 44.8 kJ/m² Grade Count:8
	38.0 - 38.0 kJ/m² @Temperature -30.0 - - 30.0 °C	18.1 - 18.1 ft-lb/in² @Temperature -22.0 - - 22.0 °F	Average value: 38.0 kJ/m² Grade Count:1
Charpy Impact Unnotched	2.00 J/cm² - NB	9.52 ft-lb/in² - NB	Average value: 5.12 J/cm² Grade Count:32
	1.50 J/cm² - NB @Temperature -40.0 - - 20.0 °C	7.14 ft-lb/in² - NB @Temperature -40.0 - - 4.00 °F	Average value: 3.83 J/cm² Grade Count:19
Charpy Impact, Notched	0.100 - 2.20 J/cm²	0.476 - 10.5 ft-lb/in²	Average value: 0.924 J/cm² Grade Count:39
	0.100 - 20.0 J/cm² @Temperature -40.0 - - 20.0 °C	0.476 - 95.2 ft-lb/in² @Temperature -40.0 - - 4.00 °F	Average value: 2.00 J/cm² Grade Count:24

Thermal Properties	Metric	English	Comments
CTE, linear	28.0 - 97.0 µm/m-°C	15.6 - 53.9 µin/in-°F	Average value: 46.2 µm/m-°C Grade Count:35
CTE, linear, Transverse to Flow	12.0 - 93.0 µm/m-°C	6.67 - 51.7 µin/in-°F	Average value: 72.3 µm/m-°C Grade Count:7

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 - 1.00e+17 ohm-cm	1.00 - 1.00e+17 ohm-cm	Average value: 2.63e+15 ohm-cm Grade Count:46

Electrical Properties	Metric	English	Comments
Insulation Resistance	10000 - 1.00e+11 ohm	10000 - 1.00e+11 ohm	Average value: 3.33e+10 ohm Grade Count:3
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:4
Shielding Effectiveness	50.0 dB	50.0 dB	Average value: 50.0 dB Grade Count:3
Dielectric Constant	2.60 - 7.00	2.60 - 7.00	Average value: 3.90 Grade Count:12
Dielectric Strength	11.0 - 80.0 kV/mm	280 - 2030 kV/in	Average value: 23.9 kV/mm Grade Count:27
Dissipation Factor	0.0100 - 0.0700	0.0100 - 0.0700	Average value: 0.0292 Grade Count:11
Arc Resistance	112 - 160 sec	112 - 160 sec	Average value: 131 sec Grade Count:5
Comparative Tracking Index	225 - 600 V	225 - 600 V	Average value: 488 V Grade Count:16

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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