

Overview of materials for Nylon 12, 20% Glass Fiber Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, 20% Glass Fiber Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 12, 20% Glass Fiber Filled". Specific grades with glass content between 15% and 24% 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-12-20-Glass-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.11 - 1.65 g/cc	0.0401 - 0.0596 lb/in ³	Average value: 1.21 g/cc Grade Count:22
Filler Content	15.0 - 23.0 %	15.0 - 23.0 %	Average value: 19.5 % Grade Count:4
Water Absorption	0.100 - 1.50 %	0.100 - 1.50 %	Average value: 0.808 % Grade Count:13
Moisture Absorption at Equilibrium	0.500 - 0.800 %	0.500 - 0.800 %	Average value: 0.575 % Grade Count:8
Linear Mold Shrinkage	0.00100 - 0.0120 cm/cm	0.00100 - 0.0120 in/in	Average value: 0.00366 cm/cm Grade Count:16
Linear Mold Shrinkage, Transverse	0.00700 - 0.0120 cm/cm	0.00700 - 0.0120 in/in	Average value: 0.00888 cm/cm Grade Count:8
Melt Flow	3.20 - 12.9 g/10 min	3.20 - 12.9 g/10 min	Average value: 6.37 g/10 min Grade Count:7

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	74.0 - 75.0	74.0 - 75.0	Average value: 74.5 Grade Count:4
Ball Indentation Hardness	95.0 - 115 MPa	13800 - 16700 psi	Average value: 107 MPa Grade Count:3
Tensile Strength, Ultimate	38.0 - 110 MPa	5510 - 16000 psi	Average value: 88.2 MPa Grade Count:25
Elongation at Break	3.00 - 37.0 %	3.00 - 37.0 %	Average value: 7.74 % Grade Count:22
Elongation at Yield	2.70 - 5.00 %	2.70 - 5.00 %	Average value: 3.60 % Grade Count:5
Modulus of Elasticity	2.00 - 9.40 GPa	290 - 1360 ksi	Average value: 5.08 GPa Grade Count:23
Flexural Yield Strength	96.0 - 165 MPa	13900 - 23900 psi	Average value: 128 MPa Grade Count:10
Flexural Modulus			Average value: 4.59 GPa Grade

Mechanical Properties	Metric	English	Count:12 Comments
Izod Impact, Notched	0.908 - 1.60 J/cm	1.70 - 3.00 ft-lb/in	Average value: 1.23 J/cm Grade Count:8
Izod Impact, Unnotched	6.14 - 8.01 J/cm	11.5 - 15.0 ft-lb/in	Average value: 7.14 J/cm Grade Count:4
Charpy Impact Unnotched	3.50 - 16.0 J/cm ²	16.7 - 76.1 ft-lb/in ²	Average value: 7.12 J/cm ² Grade Count:17
	3.50 - 16.0 J/cm ² @Temperature -30.0 - 30.0 °C	16.7 - 76.1 ft-lb/in ² @Temperature -22.0 - 86.0 °F	Average value: 7.53 J/cm ² Grade Count:12
Charpy Impact, Notched	0.600 - 3.00 J/cm ²	2.86 - 14.3 ft-lb/in ²	Average value: 1.44 J/cm ² Grade Count:13
	0.600 - 2.00 J/cm ² @Temperature -30.0 - 30.0 °C	2.86 - 9.52 ft-lb/in ² @Temperature -22.0 - 86.0 °F	Average value: 0.996 J/cm ² Grade Count:13

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 - 130 µm/m-°C	11.1 - 72.2 µin/in-°F	Average value: 57.4 µm/m-°C Grade Count:11
CTE, linear, Transverse to Flow	80.0 - 150 µm/m-°C	44.4 - 83.3 µin/in-°F	Average value: 133 µm/m-°C Grade Count:6
Melting Point	174 - 185 °C	345 - 365 °F	Average value: 178 °C Grade Count:14
Maximum Service Temperature, Air	90.0 - 150 °C	194 - 302 °F	Average value: 123 °C Grade Count:10
Deflection Temperature at 0.46 MPa (66 psi)	150 - 180 °C	302 - 356 °F	Average value: 169 °C Grade Count:7
Deflection Temperature at 1.8 MPa (264 psi)	55.0 - 165 °C	131 - 329 °F	Average value: 145 °C Grade Count:11
Deflection Temperature at 8.0 MPa	80.0 - 110 °C	176 - 230 °F	Average value: 86.0 °C Grade Count:5
Vicat Softening Point	151 - 175 °C	304 - 347 °F	Average value: 165 °C Grade Count:5
Flammability, UL94	HB - V-2	HB - V-2	Grade Count:13

Electrical Properties	Metric	English	Comments
Electrical Resistivity	10000 - 1.00e+15 ohm-cm	10000 - 1.00e+15 ohm-cm	Average value: 2.14e+14 ohm-cm Grade Count:10
Surface Resistance	1000 - 1.00e+12 ohm	1000 - 1.00e+12 ohm	Average value: 4.65e+11 ohm Grade Count:11
Insulation Resistance	1.00e+9 - 1.00e+12 ohm	1.00e+9 - 1.00e+12 ohm	Average value: 2.78e+11 ohm Grade Count:4
	17.5 - 44.0 kV/mm	445 - 1120 kV/in	Average value: 31.6 kV/mm Grade

Dielectric Strength Electrical Properties	Metric	English	Count:8 Comments
Dissipation Factor	0.000335 - 0.0380	0.000335 - 0.0380	Average value: 0.0120 Grade Count:5
Comparative Tracking Index	100 - 600 V	100 - 600 V	Average value: 520 V Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	216 - 266 °C	420 - 510 °F	Average value: 244 °C Grade Count:8
Nozzle Temperature	250 - 260 °C	482 - 500 °F	Average value: 255 °C Grade Count:4
Melt Temperature	190 - 274 °C	374 - 525 °F	Average value: 237 °C Grade Count:6
Mold Temperature	40.0 - 110 °C	104 - 230 °F	Average value: 83.3 °C Grade Count:9
Drying Temperature	75.0 - 110 °C	167 - 230 °F	Average value: 90.8 °C Grade Count:6
Injection Pressure	40.0 - 103 MPa	5800 - 15000 psi	Average value: 77.9 MPa Grade Count:5

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