

Overview of materials for Nylon 612, Glass Fiber Filler

Category : Polymer , Thermoplastic , Nylon , Nylon 612 , Nylon 612, Glass Fiber Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 612, Glass Fiber Filler". 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-612-Glass-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.12 - 1.70 g/cc	0.0405 - 0.0614 lb/in ³	Average value: 1.35 g/cc Grade Count:146
	1.12 - 1.12 g/cc @Temperature >=250 °C	0.0405 - 0.0405 lb/in ³ @Temperature >=482 °F	Average value: 1.12 g/cc Grade Count:1
Filler Content	5.00 - 60.0 %	5.00 - 60.0 %	Average value: 26.8 % Grade Count:95
Water Absorption	0.0170 - 2.00 %	0.0170 - 2.00 %	Average value: 0.402 % Grade Count:94
Moisture Absorption at Equilibrium	0.100 - 1.00 %	0.100 - 1.00 %	Average value: 0.711 % Grade Count:19
Water Absorption at Saturation	0.300 - 2.60 %	0.300 - 2.60 %	Average value: 1.91 % Grade Count:9
Additive Loading	13.0 - 30.0 %	13.0 - 30.0 %	Average value: 22.6 % Grade Count:5
Viscosity Test	83.0 - 145 cm ³ /g	83.0 - 145 cm ³ /g	Average value: 109 cm ³ /g Grade Count:3
Linear Mold Shrinkage	0.00100 - 0.0300 cm/cm	0.00100 - 0.0300 in/in	Average value: 0.00469 cm/cm Grade Count:144
Linear Mold Shrinkage, Transverse	0.00700 - 0.0170 cm/cm	0.00700 - 0.0170 in/in	Average value: 0.0106 cm/cm Grade Count:22

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114 - 122	114 - 122	Average value: 119 Grade Count:42
Ball Indentation Hardness	145 - 220 MPa	21000 - 31900 psi	Average value: 180 MPa Grade Count:6
Tensile Strength, Ultimate	44.8 - 200 MPa	6500 - 29000 psi	Average value: 131 MPa Grade Count:141
	60.0 - 140 MPa @Temperature 60.0 -	8700 - 20300 psi @Temperature 140 -	Average value: 95.6 MPa Grade Count:2

Mechanical Properties	150 °C Metric	302 °F English	Comments
Tensile Strength, Yield	34.0 - 190 MPa	4930 - 27600 psi	Average value: 122 MPa Grade Count:16
Elongation at Break	1.00 - 23.0 %	1.00 - 23.0 %	Average value: 3.80 % Grade Count:141
	4.30 - 6.80 % @Temperature 60.0 - 150 °C	4.30 - 6.80 % @Temperature 140 - 302 °F	Average value: 5.49 % Grade Count:2
Elongation at Yield	3.00 - 12.0 %	3.00 - 12.0 %	Average value: 5.47 % Grade Count:8
Modulus of Elasticity	2.65 - 17.9 GPa	384 - 2600 ksi	Average value: 8.32 GPa Grade Count:124
	1.919 - 15.66 GPa @Temperature -50.0 - 200 °C	278.3 - 2271 ksi @Temperature -58.0 - 392 °F	Average value: 6.61 GPa Grade Count:5
Flexural Yield Strength	72.4 - 303 MPa	10500 - 44000 psi	Average value: 193 MPa Grade Count:120
Flexural Modulus	2.76 - 17.9 GPa	400 - 2600 ksi	Average value: 7.33 GPa Grade Count:131
Compressive Yield Strength	89.6 - 179 MPa	13000 - 26000 psi	Average value: 132 MPa Grade Count:27
Shear Modulus	1.65 - 4.22 GPa	239 - 611 ksi	Average value: 2.51 GPa Grade Count:3
	>= 0.284 GPa @Temperature -50.0 - 200 °C	>= 41.2 ksi @Temperature -58.0 - 392 °F	Average value: 1.48 GPa Grade Count:3
Izod Impact, Notched	0.214 - 1.87 J/cm	0.401 - 3.50 ft-lb/in	Average value: 0.968 J/cm Grade Count:124
Izod Impact, Unnotched	1.33 - 13.3 J/cm	2.50 - 25.0 ft-lb/in	Average value: 7.27 J/cm Grade Count:97
Izod Impact, Notched (ISO)	3.70 - 17.0 kJ/m²	1.76 - 8.09 ft-lb/in²	Average value: 11.3 kJ/m² Grade Count:11
	10.0 - 15.0 kJ/m² @Temperature -40.0 - - 30.0 °C	4.76 - 7.14 ft-lb/in² @Temperature -40.0 - - 22.0 °F	Average value: 11.1 kJ/m² Grade Count:7
Izod Impact, Unnotched (ISO)	16.0 - 78.3 kJ/m²	7.61 - 37.3 ft-lb/in²	Average value: 52.6 kJ/m² Grade Count:7
	45.0 - 60.0 kJ/m² @Temperature -30.0 - - 30.0 °C	21.4 - 28.6 ft-lb/in² @Temperature -22.0 - - 22.0 °F	Average value: 52.5 kJ/m² Grade Count:3
Charpy Impact Unnotched	4.60 - 10.4 J/cm²	21.9 - 49.5 ft-lb/in²	Average value: 8.57 J/cm² Grade Count:21

Mechanical Properties	Metric	English	Comments
	2.00 - 11.0 J/cm ²	5.52 - 52.4 ft-lb/in ²	Average value: 7.73 J/cm ² Grade Count:19
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
Charpy Impact, Notched	0.400 - 2.00 J/cm ²	1.90 - 9.52 ft-lb/in ²	Average value: 1.42 J/cm ² Grade Count:24
	0.300 - 1.70 J/cm ²	1.43 - 8.09 ft-lb/in ²	Average value: 1.07 J/cm ² Grade Count:22
	@Temperature -40.0 - 30.0 °C	@Temperature -40.0 - 86.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 - 500 µm/m-°C	5.56 - 278 µin/in-°F	Average value: 70.1 µm/m-°C Grade Count:46
	14.0 - 500 µm/m-°C	7.78 - 278 µin/in-°F	Average value: 154 µm/m-°C Grade Count:6
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Transverse to Flow	46.8 - 113 µm/m-°C	26.0 - 62.8 µin/in-°F	Average value: 86.1 µm/m-°C Grade Count:20
	139 - 158 µm/m-°C	77.2 - 87.8 µin/in-°F	Average value: 155 µm/m-°C Grade Count:5
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
Specific Heat Capacity	2.13 J/g-°C	0.509 BTU/lb-°F	Average value: 2.13 J/g-°C Grade Count:3
Thermal Conductivity	0.259 - 0.576 W/m-K	1.80 - 4.00 BTU-in/hr-ft ² -°F	Average value: 0.398 W/m-K Grade Count:26
Melting Point	212 - 224 °C	414 - 435 °F	Average value: 216 °C Grade Count:29
Maximum Service Temperature, Air	90.0 - 180 °C	194 - 356 °F	Average value: 139 °C Grade Count:8
Deflection Temperature at 0.46 MPa (66 psi)	169 - 225 °C	336 - 437 °F	Average value: 212 °C Grade Count:87
Deflection Temperature at 1.8 MPa (264 psi)	60.0 - 218 °C	140 - 425 °F	Average value: 199 °C Grade Count:130

Electrical Properties	Metric	English	Comments
Electrical Resistivity	10.0 - 1.00e+16 ohm-cm	10.0 - 1.00e+16 ohm-cm	Average value: 2.73e+14 ohm-cm Grade Count:75
Surface Resistance	100 - 1.00e+15 ohm	100 - 1.00e+15 ohm	Average value: 1.11e+14 ohm Grade Count:9
Dielectric Constant	3.10 - 4.40	3.10 - 4.40	Average value: 3.81 Grade Count:29
Dielectric Strength	18.7 - 38.0 kV/mm	475 - 965 kV/in	Average value: 25.5 kV/mm Grade Count:33

Electrical Properties	Metric	English	Comments
Dissipation Factor	0.0110 - 0.160	0.0110 - 0.160	Average value: 0.0269 Grade Count:28
Arc Resistance	110 - 120 sec	110 - 120 sec	Average value: 117 sec Grade Count:12
Comparative Tracking Index	550 - 600 V	550 - 600 V	Average value: 596 V Grade Count:14

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