

Overview of materials for Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphthalamide, 30% Glass Fiber Reinforced". Specific grades with glass content between 25% and 34% 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-Polyphthalamide-PPA-30-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.34 - 1.75 g/cc	0.0484 - 0.0632 lb/in³	Average value: 1.51 g/cc Grade Count:91
Filler Content	20.0 - 33.0 %	20.0 - 33.0 %	Average value: 31.0 % Grade Count:61
Water Absorption	0.0200 - 5.00 %	0.0200 - 5.00 %	Average value: 0.377 % Grade Count:43
	1.25 - 1.35 % @Temperature 70.0 - 70.0 °C	1.25 - 1.35 % @Temperature 158 - 158 °F	Average value: 1.30 % Grade Count:4
Moisture Absorption at Equilibrium	0.100 - 1.70 %	0.100 - 1.70 %	Average value: 0.900 % Grade Count:5
Additive Loading	30.0 %	30.0 %	Average value: 30.0 % Grade Count:3
Linear Mold Shrinkage	0.000 - 0.0100 cm/cm	0.000 - 0.0100 in/in	Average value: 0.00385 cm/cm Grade Count:79
Linear Mold Shrinkage, Transverse	0.00200 - 0.0130 cm/cm	0.00200 - 0.0130 in/in	Average value: 0.00812 cm/cm Grade Count:47

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121 - 125	121 - 125	Average value: 125 Grade Count:15
Ball Indentation Hardness	270 - 290 MPa	39200 - 42100 psi	Average value: 283 MPa Grade Count:3
Tensile Strength, Ultimate	68.9 - 233 MPa	10000 - 33800 psi	Average value: 176 MPa Grade Count:81
	60.0 - 150 MPa @Temperature 60.0 - 230 °C	8700 - 21800 psi @Temperature 140 - 446 °F	Average value: 100 MPa Grade Count:8
	100 - 107.5 MPa	14500 - 15590 psi	Average value: 100 MPa Grade

Mechanical Properties	Metric @Temperature 130 - 180 °C	English @Temperature 266 - 339 °F	Count:4 Comments
	100 - 107.5 MPa @Time 1.80e+7 - 7.20e+7 sec	14500 - 15590 psi @Time 5000 - 20000 hour	Average value: 100 MPa Grade Count:4
Tensile Strength, Yield	145 - 225 MPa	21000 - 32600 psi	Average value: 186 MPa Grade Count:10
	63.4 - 119 MPa @Temperature 100 - 175 °C	9200 - 17300 psi @Temperature 212 - 347 °F	Average value: 87.2 MPa Grade Count:3
Elongation at Break	1.00 - 4.00 %	1.00 - 4.00 %	Average value: 2.14 % Grade Count:86
	1.50 - 9.00 % @Temperature 60.0 - 230 °C	1.50 - 9.00 % @Temperature 140 - 446 °F	Average value: 5.11 % Grade Count:11
Modulus of Elasticity	7.58 - 18.6 GPa	1100 - 2700 ksi	Average value: 12.1 GPa Grade Count:79
	4.30 - 11.5 GPa @Temperature 60.0 - 175 °C	624 - 1670 ksi @Temperature 140 - 347 °F	Average value: 6.88 GPa Grade Count:10
Flexural Yield Strength	103 - 326 MPa	15000 - 47300 psi	Average value: 254 MPa Grade Count:78
	80.0 - 227 MPa @Temperature 100 - 175 °C	11600 - 32900 psi @Temperature 212 - 347 °F	Average value: 129 MPa Grade Count:8
Flexural Modulus	7.58 - 14.1 GPa	1100 - 2050 ksi	Average value: 11.0 GPa Grade Count:78
	3.60 - 9.80 GPa @Temperature 100 - 175 °C	522 - 1420 ksi @Temperature 212 - 347 °F	Average value: 5.87 GPa Grade Count:8
Compressive Yield Strength	145 - 276 MPa	21000 - 40000 psi	Average value: 185 MPa Grade Count:14
Poissons Ratio	0.370 - 0.410	0.370 - 0.410	Average value: 0.406 Grade Count:10
Shear Modulus	4.15 - 5.18 GPa	602 - 751 ksi	Average value: 4.58 GPa Grade Count:3
Shear Strength	62.1 - 101 MPa	9010 - 14600 psi	Average value: 85.4 MPa Grade Count:17
Izod Impact, Notched	0.370 - 1.33 J/cm	0.693 - 2.50 ft-lb/in	Average value: 0.793 J/cm Grade Count:56
Izod Impact, Unnotched	1.60 - 14.0 J/cm	3.00 - 26.2 ft-lb/in	Average value: 6.57 J/cm Grade Count:38

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	1.00 - 54.6 kJ/m ²	5.00 - 16.0 ft-lb/in ²	Average value: 10.7 kJ/m ² Grade Count:24
	7.00 - 10.0 kJ/m ²	3.33 - 4.76 ft-lb/in ²	Average value: 8.00 kJ/m ² Grade Count:3
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Izod Impact, Unnotched (ISO)	40.0 - 68.0 kJ/m ²	19.0 - 32.4 ft-lb/in ²	Average value: 50.7 kJ/m ² Grade Count:13
	37.0 - 37.0 kJ/m ²	17.6 - 17.6 ft-lb/in ²	Average value: 37.0 kJ/m ² Grade Count:1
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Charpy Impact Unnotched	3.00 - 9.70 J/cm ²	14.3 - 46.2 ft-lb/in ²	Average value: 5.65 J/cm ² Grade Count:29
	3.50 - 5.00 J/cm ²	16.7 - 23.8 ft-lb/in ²	Average value: 4.05 J/cm ² Grade Count:6
	@Temperature -40.0 - - 30.0 °C	@Temperature -40.0 - - 22.0 °F	
Charpy Impact, Notched	0.600 - 1.40 J/cm ²	2.86 - 6.66 ft-lb/in ²	Average value: 0.929 J/cm ² Grade Count:32
	0.700 - 2.10 J/cm ²	3.33 - 9.99 ft-lb/in ²	Average value: 0.972 J/cm ² Grade Count:7
	@Temperature -40.0 - - 30.0 °C	@Temperature -40.0 - - 22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 - 72.0 µm/m-°C	9.44 - 40.0 µin/in-°F	Average value: 23.9 µm/m-°C Grade Count:24
	7.00 - 100 µm/m-°C	3.89 - 55.6 µin/in-°F	Average value: 20.4 µm/m-°C Grade Count:19
	@Temperature 55.0 - 250 °C	@Temperature 131 - 482 °F	
CTE, linear, Transverse to Flow	45.0 - 80.0 µm/m-°C	25.0 - 44.4 µin/in-°F	Average value: 62.8 µm/m-°C Grade Count:18

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1000 - 1.00e+17 ohm-cm	1000 - 1.00e+17 ohm-cm	Average value: 5.41e+15 ohm-cm Grade Count:48
Surface Resistance	1.00e+6 - 2.00e+16 ohm	1.00e+6 - 2.00e+16 ohm	Average value: 2.84e+15 ohm Grade Count:12
Dielectric Constant	3.30 - 5.50	3.30 - 5.50	Average value: 4.08 Grade Count:26
Dielectric Strength	18.0 - 36.0 kV/mm	457 - 914 kV/in	Average value: 22.7 kV/mm Grade Count:29
Dissipation Factor	0.00400 - 0.0220	0.00400 - 0.0220	Average value: 0.0117 Grade Count:26

Electrical Properties	Metric ^{100 sec}	English ^{10 sec}	Comments ^{100 sec}
Comparative Tracking Index	175 - 600 V	175 - 600 V	Average value: 567 V Grade Count:32
Hot Wire Ignition, HWI	60.0 - 150 sec	60.0 - 150 sec	Average value: 120 sec Grade Count:4
High Amp Arc Ignition, HAI	74.0 - 120 arcs	74.0 - 120 arcs	Average value: 109 arcs Grade Count:4
High Voltage Arc-Tracking Rate, HVTR	0.000 - 18.0 mm/min	0.000 - 0.709 in/min	Average value: 14.8 mm/min Grade Count:11

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