

Overview of materials for Polyphthalamide (PPA), 10% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 10% Glass Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphthalamide, 10% Glass Fiber Reinforced". 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-Polyphthalamide-PPA-10-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.26 - 1.65 g/cc	0.0455 - 0.0596 lb/in ³	Average value: 1.48 g/cc Grade Count:12
Filler Content	10.0 %	10.0 %	Average value: 10.0 % Grade Count:6
Water Absorption	0.120 - 0.300 %	0.120 - 0.300 %	Average value: 0.240 % Grade Count:6
Linear Mold Shrinkage	0.00100 - 0.0150 cm/cm	0.00100 - 0.0150 in/in	Average value: 0.00625 cm/cm Grade Count:9
Melt Flow	5.00 - 50.0 g/10 min	5.00 - 50.0 g/10 min	Average value: 22.7 g/10 min Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122 - 125	122 - 125	Average value: 124 Grade Count:5
Tensile Strength, Ultimate	89.6 - 125 MPa	13000 - 18100 psi	Average value: 100 MPa Grade Count:8
Tensile Strength, Yield	98.1 - 216 MPa	14200 - 31300 psi	Average value: 145 MPa Grade Count:4
Elongation at Break	1.00 - 3.00 %	1.00 - 3.00 %	Average value: 1.88 % Grade Count:10
Modulus of Elasticity	5.52 - 9.17 GPa	800 - 1330 ksi	Average value: 6.83 GPa Grade Count:7
Flexural Yield Strength	131 - 275 MPa	19000 - 39900 psi	Average value: 160 MPa Grade Count:12
Flexural Modulus	4.83 - 13.2 GPa	700 - 1920 ksi	Average value: 7.27 GPa Grade Count:12
Izod Impact, Notched	0.267 - 1.23 J/cm	0.500 - 2.30 ft-lb/in	Average value: 0.432 J/cm Grade Count:11
Izod Impact, Unnotched	2.14 - 3.20 J/cm	4.00 - 6.00 ft-lb/in	Average value: 2.76 J/cm Grade Count:6

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 - 20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	11.1 - 11.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:1
	@Temperature 160 - 249 $^{\circ}\text{C}$	@Temperature 320 - 480 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	65.0 - 65.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	36.1 - 36.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 65.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:1
	@Temperature 160 - 249 $^{\circ}\text{C}$	@Temperature 320 - 480 $^{\circ}\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	168 - 295 $^{\circ}\text{C}$	335 - 563 $^{\circ}\text{F}$	Average value: 245 $^{\circ}\text{C}$ Grade Count:12
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:8

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Average value: 1.00e+15 ohm-cm Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	296 - 338 $^{\circ}\text{C}$	565 - 640 $^{\circ}\text{F}$	Average value: 321 $^{\circ}\text{C}$ Grade Count:3
Melt Temperature	280 - 343 $^{\circ}\text{C}$	536 - 650 $^{\circ}\text{F}$	Average value: 316 $^{\circ}\text{C}$ Grade Count:5
Mold Temperature	65.6 - 163 $^{\circ}\text{C}$	150 - 325 $^{\circ}\text{F}$	Average value: 129 $^{\circ}\text{C}$ Grade Count:8
Drying Temperature	107 - 140 $^{\circ}\text{C}$	225 - 284 $^{\circ}\text{F}$	Average value: 114 $^{\circ}\text{C}$ Grade Count:5
Moisture Content	0.0500 - 0.100 %	0.0500 - 0.100 %	Average value: 0.0820 % Grade Count:5
Dew Point	-31.7 - -28.9 $^{\circ}\text{C}$	-25.0 - -20.0 $^{\circ}\text{F}$	Average value: -29.8 $^{\circ}\text{C}$ Grade Count:3
Injection Pressure	68.9 - 124 MPa	10000 - 18000 psi	Average value: 89.6 MPa Grade Count:6

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