

## Overview of materials for Polyphthalamide (PPA), High Impact

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), High Impact

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphthalamide, High Impact". 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-High-Impact.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Polyphthalamide-PPA-High-Impact.php)

Physical Properties	Metric	English	Comments
Density	1.13 - 1.15 g/cc	0.0408 - 0.0415 lb/in <sup>3</sup>	Average value: 1.15 g/cc Grade Count:5
Moisture Absorption at Equilibrium	0.700 - 2.20 %	0.700 - 2.20 %	Average value: 1.20 % Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	55.0 - 76.0 MPa	7980 - 11000 psi	Average value: 64.3 MPa Grade Count:3
	31.0 - 31.0 MPa @Temperature 100 - 100 °C	4500 - 4500 psi @Temperature 212 - 212 °F	Average value: 31.0 MPa Grade Count:1
Tensile Strength, Yield	58.0 - 80.0 MPa	8410 - 11600 psi	Average value: 69.0 MPa Grade Count:3
	32.0 - 32.0 MPa @Temperature 100 - 100 °C	4640 - 4640 psi @Temperature 212 - 212 °F	Average value: 32.0 MPa Grade Count:1
Elongation at Break	10.0 - 30.0 %	10.0 - 30.0 %	Average value: 24.2 % Grade Count:5
	54.3 - 54.3 % @Temperature 100 - 100 °C	54.3 - 54.3 % @Temperature 212 - 212 °F	Average value: 54.3 % Grade Count:1
Elongation at Yield	6.00 %	6.00 %	Average value: 6.00 % Grade Count:4
	3.10 - 3.10 % @Temperature 100 - 100 °C	3.10 - 3.10 % @Temperature 212 - 212 °F	Average value: 3.10 % Grade Count:1
Modulus of Elasticity	2.30 - 2.75 GPa	334 - 399 ksi	Average value: 2.41 GPa Grade Count:5
	1.80 - 1.80 GPa	261 - 261 ksi	Average value: 1.80 GPa Grade

Mechanical Properties	@Temperature 100 - Metric 100 °C	@Temperature 212 - English 212 °F	Count:1 Comments
Flexural Yield Strength	66.0 - 128 MPa	9570 - 18600 psi	Average value: 108 MPa Grade Count:4
	42.0 - 42.0 MPa @Temperature 100 - 100 °C	6090 - 6090 psi @Temperature 212 - 212 °F	Average value: 42.0 MPa Grade Count:1
Flexural Modulus	1.90 - 2.60 GPa	276 - 377 ksi	Average value: 2.46 GPa Grade Count:4
	1.30 - 1.30 GPa @Temperature 100 - 100 °C	189 - 189 ksi @Temperature 212 - 212 °F	Average value: 1.30 GPa Grade Count:1
Izod Impact, Notched	9.60 - 9.60 J/cm	18.0 - 18.0 ft-lb/in	Average value: 9.60 J/cm Grade Count:4
Izod Impact, Notched (ISO)	18.0 - 18.0 kJ/m <sup>2</sup> @Temperature -30.0 - - 30.0 °C	8.57 - 8.57 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 22.0 °F	Average value: 18.0 kJ/m <sup>2</sup> Grade Count:1

Thermal Properties	Metric	English	Comments
Melting Point	310 - 315 °C	590 - 599 °F	Average value: 311 °C Grade Count:4
Deflection Temperature at 1.8 MPa (264 psi)	113 - 120 °C	235 - 248 °F	Average value: 117 °C Grade Count:3

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