

Overview of materials for Nylon 6, Mineral Reinforced, Impact Grade

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Mineral Reinforced, Impact Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 6, Mineral Reinforced, Impact Grade". 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-6-Mineral-Reinforced-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.11 - 1.55 g/cc	0.0401 - 0.0560 lb/in ³	Average value: 1.35 g/cc Grade Count:11
Water Absorption	0.600 - 3.10 %	0.600 - 3.10 %	Average value: 1.50 % Grade Count:4
Moisture Absorption at Equilibrium	1.20 - 1.60 %	1.20 - 1.60 %	Average value: 1.47 % Grade Count:3
Linear Mold Shrinkage	0.00200 - 0.0120 cm/cm	0.00200 - 0.0120 in/in	Average value: 0.00833 cm/cm Grade Count:10

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	36.0 - 140 MPa	5220 - 20300 psi	Average value: 80.4 MPa Grade Count:7
Tensile Strength, Yield	55.0 - 76.0 MPa	7980 - 11000 psi	Average value: 69.5 MPa Grade Count:4
Elongation at Break	2.00 - 23.0 %	2.00 - 23.0 %	Average value: 14.2 % Grade Count:8
Modulus of Elasticity	2.60 - 10.0 GPa	377 - 1450 ksi	Average value: 5.70 GPa Grade Count:6
Flexural Yield Strength	59.0 - 205 MPa	8560 - 29700 psi	Average value: 112 MPa Grade Count:11
Flexural Modulus	1.80 - 9.00 GPa	261 - 1310 ksi	Average value: 4.94 GPa Grade Count:10
Izod Impact, Notched	0.694 - 1.49 J/cm	1.30 - 2.79 ft-lb/in	Average value: 1.08 J/cm Grade Count:3
Izod Impact, Unnotched	6.41 J/cm - NB	12.0 ft-lb/in - NB	Average value: 6.41 J/cm Grade Count:3
Charpy Impact Unnotched	2.00 - 5.40 J/cm ²	9.52 - 25.7 ft-lb/in ²	Average value: 3.60 J/cm ² Grade Count:5
	1.50 - 1.50 J/cm ² @Temperature -20.0 - - 20.0 °C	7.14 - 7.14 ft-lb/in ² @Temperature -4.00 - - 4.00 °F	Average value: 1.50 J/cm ² Grade Count:1

Mechanical Properties	Metric	English	Comments
	0.700 J/cm ²	33 ft-lb/in ²	Average value: 0.600 J/cm ² Grade Count:3
	0.390 - 0.500 J/cm ²	1.86 - 2.38 ft-lb/in ²	Average value: 0.430 J/cm ² Grade Count:3
	@Temperature -30.0 - -20.0 °C	@Temperature -22.0 - -4.00 °F	

Thermal Properties	Metric	English	Comments
Melting Point	205 - 225 °C	401 - 437 °F	Average value: 218 °C Grade Count:6
Deflection Temperature at 0.46 MPa (66 psi)	166 - 191 °C	331 - 376 °F	Average value: 176 °C Grade Count:4
Deflection Temperature at 1.8 MPa (264 psi)	56.0 - 200 °C	133 - 392 °F	Average value: 108 °C Grade Count:10
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:5

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 - 1.00e+17 ohm-cm	1.00e+15 - 1.00e+17 ohm-cm	Average value: 2.57e+16 ohm-cm Grade Count:4

Processing Properties	Metric	English	Comments
Processing Temperature	221 - 275 °C	430 - 527 °F	Average value: 260 °C Grade Count:5
Nozzle Temperature	235 - 280 °C	455 - 536 °F	Average value: 263 °C Grade Count:3
Melt Temperature	200 - 300 °C	392 - 572 °F	Average value: 259 °C Grade Count:7
Mold Temperature	50.0 - 110 °C	122 - 230 °F	Average value: 78.0 °C Grade Count:8
Drying Temperature	75.0 - 130 °C	167 - 266 °F	Average value: 95.8 °C Grade Count:8
Injection Pressure	60.0 - 120 MPa	8700 - 17400 psi	Average value: 86.5 MPa Grade Count:4

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