

Overview of materials for Nylon 66, Mineral Filled, Impact Grade

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Mineral Filled, Impact Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, Mineral Filled, 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-66-Mineral-Filled-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.16 - 1.51 g/cc	0.0419 - 0.0546 lb/in ³	Average value: 1.38 g/cc Grade Count:16
Filler Content	20.0 - 40.0 %	20.0 - 40.0 %	Average value: 33.3 % Grade Count:3
Water Absorption	0.500 - 2.60 %	0.500 - 2.60 %	Average value: 1.03 % Grade Count:6
Moisture Absorption at Equilibrium	1.10 - 2.00 %	1.10 - 2.00 %	Average value: 1.70 % Grade Count:3
Linear Mold Shrinkage	0.00500 - 0.0220 cm/cm	0.00500 - 0.0220 in/in	Average value: 0.0111 cm/cm Grade Count:15
Linear Mold Shrinkage, Transverse	0.0137 - 0.0180 cm/cm	0.0137 - 0.0180 in/in	Average value: 0.0146 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	98.0 - 121	98.0 - 121	Average value: 116 Grade Count:8
Tensile Strength, Ultimate	49.6 - 110 MPa	7200 - 16000 psi	Average value: 71.1 MPa Grade Count:12
Tensile Strength, Yield	55.0 - 91.0 MPa	7980 - 13200 psi	Average value: 72.3 MPa Grade Count:4
Elongation at Break	3.00 - 21.0 %	3.00 - 21.0 %	Average value: 9.54 % Grade Count:13
Elongation at Yield	2.50 - 16.0 %	2.50 - 16.0 %	Average value: 7.13 % Grade Count:3
Modulus of Elasticity	2.45 - 11.0 GPa	355 - 1600 ksi	Average value: 5.41 GPa Grade Count:8
Flexural Yield Strength	82.7 - 245 MPa	12000 - 35500 psi	Average value: 126 MPa Grade Count:14
Flexural Modulus	2.76 - 9.00 GPa	400 - 1310 ksi	Average value: 5.00 GPa Grade Count:14
Izod Impact, Notched	0.374 - 1.07 J/cm	0.700 - 2.00 ft-lb/in	Average value: 0.807 J/cm Grade Count:10

Izod Impact, Unnotched Mechanical Properties	3.74 J/cm - NB Metric	7.00 ft-lb/in - NB English	Average value: 6.65 J/cm Grade Count:9
Izod Impact, Notched (ISO)	9.00 - 12.5 kJ/m ²	4.28 - 5.95 ft-lb/in ²	Average value: 10.5 kJ/m ² Grade Count:3
	8.00 - 8.00 kJ/m ² @Temperature -30.0 - - 30.0 °C	3.81 - 3.81 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 8.00 kJ/m ² Grade Count:1
Charpy Impact Unnotched	2.50 - 2.50 J/cm ² @Temperature -20.0 - - 20.0 °C	11.9 - 11.9 ft-lb/in ² @Temperature -4.00 - - 4.00 °F	Average value: 2.50 J/cm ² Grade Count:1
Charpy Impact, Notched	0.100 - 0.100 J/cm ² @Temperature -20.0 - - 20.0 °C	0.476 - 0.476 ft-lb/in ² @Temperature -4.00 - - 4.00 °F	Average value: 0.100 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
CTE, linear	7.20 - 113 µm/m-°C	4.00 - 62.8 µin/in-°F	Average value: 55.8 µm/m-°C Grade Count:4
Melting Point	249 - 275 °C	480 - 527 °F	Average value: 260 °C Grade Count:9
Deflection Temperature at 0.46 MPa (66 psi)	100 - 248 °C	212 - 478 °F	Average value: 211 °C Grade Count:12
Deflection Temperature at 1.8 MPa (264 psi)	73.9 - 220 °C	165 - 428 °F	Average value: 131 °C Grade Count:15
Vicat Softening Point	140 - 260 °C	284 - 500 °F	Average value: 213 °C Grade Count:3
Flammability, UL94	HB	HB	Grade Count:9

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 - 7.70e+15 ohm-cm	1.00e+13 - 7.70e+15 ohm-cm	Average value: 1.37e+15 ohm-cm Grade Count:8
Surface Resistance	1.00e+12 - 1.00e+13 ohm	1.00e+12 - 1.00e+13 ohm	Average value: 7.00e+12 ohm Grade Count:3
Dielectric Strength	15.0 - 90.0 kV/mm	380 - 2290 kV/in	Average value: 33.0 kV/mm Grade Count:5
Comparative Tracking Index	500 - 600 V	500 - 600 V	Average value: 550 V Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	270 - 300 °C	518 - 572 °F	Average value: 287 °C Grade Count:8
Melt Temperature	280 - 310 °C	536 - 590 °F	Average value: 299 °C Grade Count:3
Mold Temperature	65.6 - 120 °C	150 - 248 °F	Average value: 90.5 °C Grade Count:7

Processing Properties	Metric	English	Comments
Drying Temperature	105 - 105 °C	105 - 221 °F	Average value: 87.9 °C Grade Count: 4
Injection Pressure	70.0 - 124 MPa	10200 - 18000 psi	Average value: 109 MPa Grade Count: 4

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