

## Overview of materials for Nylon 66, 10% Mineral Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 10% Mineral Filled

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, 10% Mineral Filled". Specific grades with primary filler 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-Nylon-66-10-Mineral-Filled.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Nylon-66-10-Mineral-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.10 - 1.60 g/cc	0.0397 - 0.0578 lb/in <sup>3</sup>	Average value: 1.33 g/cc Grade Count:12
Water Absorption	0.600 - 2.30 %	0.600 - 2.30 %	Average value: 1.34 % Grade Count:6
Moisture Absorption at Equilibrium	0.600 - 0.700 %	0.600 - 0.700 %	Average value: 0.633 % Grade Count:3
Water Absorption at Saturation	0.500 - 8.00 %	0.500 - 8.00 %	Average value: 5.00 % Grade Count:6
Linear Mold Shrinkage	0.00200 - 0.0250 cm/cm	0.00200 - 0.0250 in/in	Average value: 0.0122 cm/cm Grade Count:10

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118 - 120	118 - 120	Average value: 119 Grade Count:4
Tensile Strength, Ultimate	48.0 - 90.0 MPa	6960 - 13100 psi	Average value: 72.6 MPa Grade Count:7
Tensile Strength, Yield	70.0 - 93.1 MPa	10200 - 13500 psi	Average value: 81.2 MPa Grade Count:4
Elongation at Break	1.00 - 14.0 %	1.00 - 14.0 %	Average value: 5.36 % Grade Count:9
Modulus of Elasticity	3.10 - 8.00 GPa	450 - 1160 ksi	Average value: 5.19 GPa Grade Count:8
Flexural Yield Strength	90.0 - 138 MPa	13100 - 20000 psi	Average value: 110 MPa Grade Count:8
Flexural Modulus	2.30 - 7.50 GPa	334 - 1090 ksi	Average value: 5.04 GPa Grade Count:7
Izod Impact, Notched	0.210 - 0.490 J/cm	0.393 - 0.919 ft-lb/in	Average value: 0.399 J/cm Grade Count:4
Izod Impact, Notched (ISO)	3.00 - 12.0 kJ/m <sup>2</sup>	1.43 - 5.71 ft-lb/in <sup>2</sup>	Average value: 6.00 kJ/m <sup>2</sup> Grade Count:4
	3.00 - 4.00 kJ/m <sup>2</sup>	1.43 - 1.90 ft-lb/in <sup>2</sup>	

Mechanical Properties	Metric	English	Comments
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	Average value: 3.56 kJ/m <sup>2</sup> Grade Count:3
Izod Impact, Unnotched (ISO)	22.0 - 27.0 kJ/m <sup>2</sup>	10.5 - 12.8 ft-lb/in <sup>2</sup>	Average value: 24.3 kJ/m <sup>2</sup> Grade Count:3
	22.0 - 27.0 kJ/m <sup>2</sup> @Temperature -30.0 - - 30.0 °C	10.5 - 12.8 ft-lb/in <sup>2</sup> @Temperature -22.0 - - 22.0 °F	Average value: 24.3 kJ/m <sup>2</sup> Grade Count:3
Charpy Impact Unnotched	2.00 J/cm <sup>2</sup> - NB	9.52 ft-lb/in <sup>2</sup> - NB	Average value: 2.63 J/cm <sup>2</sup> Grade Count:6
	2.50 J/cm <sup>2</sup> - NB @Temperature -40.0 - - 30.0 °C	11.9 ft-lb/in <sup>2</sup> - NB @Temperature -40.0 - - 22.0 °F	Average value: 2.83 J/cm <sup>2</sup> Grade Count:4
Charpy Impact, Notched	0.130 - 0.530 J/cm <sup>2</sup>	0.619 - 2.52 ft-lb/in <sup>2</sup>	Average value: 0.363 J/cm <sup>2</sup> Grade Count:6
	0.300 - 0.460 J/cm <sup>2</sup> @Temperature -40.0 - - 30.0 °C	1.43 - 2.19 ft-lb/in <sup>2</sup> @Temperature -40.0 - - 22.0 °F	Average value: 0.388 J/cm <sup>2</sup> Grade Count:5
Taber Abrasion, mg/1000 Cycles	20.0 - 49.0	20.0 - 49.0	Average value: 34.3 Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	30.6 - 60.0 µm/m-°C	17.0 - 33.3 µin/in-°F	Average value: 44.1 µm/m-°C Grade Count:5
CTE, linear, Transverse to Flow	45.0 - 68.0 µm/m-°C	25.0 - 37.8 µin/in-°F	Average value: 54.5 µm/m-°C Grade Count:4
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ft <sup>2</sup> -°F	Average value: 0.350 W/m-K Grade Count:3
Hot Ball Pressure Test	123 - 127 °C	253 - 261 °F	Average value: 125 °C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	200 - 252 °C	392 - 485 °F	Average value: 235 °C Grade Count:10
Deflection Temperature at 1.8 MPa (264 psi)	115 - 250 °C	239 - 482 °F	Average value: 181 °C Grade Count:9
Vicat Softening Point	234 - 323 °C	453 - 613 °F	Average value: 249 °C Grade Count:5
Flammability, UL94	HB - V-0	HB - V-0	Average value: 2.00 Grade Count:6
Oxygen Index	32.0 %	32.0 %	Average value: 32.0 % Grade Count:3
Glow Wire Test	960 °C	1760 °F	Average value: 960 °C Grade Count:3

Electrical Properties	Metric	English	Comments
	1.00e+8 - 1.00e+15	1.00e+8 - 1.00e+15	Average value: 8.57e+14 ohm-cm

Electrical Resistivity Electrical Properties	ohm-cm Metric	ohm-cm English	Grade Count:7 Comments
Surface Resistance	1.00e+8 - 1.00e+16 ohm	1.00e+8 - 1.00e+16 ohm	Average value: 7.50e+15 ohm Grade Count:4
Dielectric Constant	3.20 - 3.40	3.20 - 3.40	Average value: 3.30 Grade Count:3
Dielectric Strength	16.9 - 24.0 kV/mm	430 - 610 kV/in	Average value: 21.2 kV/mm Grade Count:4
Dissipation Factor	0.0104 - 0.0200	0.0104 - 0.0200	Average value: 0.0135 Grade Count:5
Comparative Tracking Index	425 - 600 V	425 - 600 V	Average value: 568 V Grade Count:6

Processing Properties	Metric	English	Comments
Melt Temperature	260 - 300 °C	500 - 572 °F	Average value: 275 °C Grade Count:6
Mold Temperature	60.0 - 107 °C	140 - 225 °F	Average value: 80.0 °C Grade Count:6
Drying Temperature	75.0 - 107 °C	167 - 225 °F	Average value: 85.8 °C Grade Count:6
Moisture Content	0.200 %	0.200 %	Average value: 0.200 % Grade Count:4

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