

Overview of materials for Nylon 66, 20% Mineral Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 20% Mineral Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, 20% Mineral Filled". Specific grades with primary filler content between 15% and 24% 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-66-20-Mineral-Filled.php

Physical Properties	Metric	English	Comments
Density	1.20 - 1.32 g/cc	0.0434 - 0.0477 lb/in ³	Average value: 1.26 g/cc Grade Count:23
	1.09 - 1.09 g/cc @Temperature 295 - 295 °C	0.0394 - 0.0394 lb/in ³ @Temperature 563 - 563 °F	Average value: 1.09 g/cc Grade Count:1
Filler Content	18.0 - 20.0 %	18.0 - 20.0 %	Average value: 19.6 % Grade Count:5
Water Absorption	0.500 - 7.70 %	0.500 - 7.70 %	Average value: 2.13 % Grade Count:11
Moisture Absorption at Equilibrium	2.00 - 2.50 %	2.00 - 2.50 %	Average value: 2.17 % Grade Count:6
Linear Mold Shrinkage	0.00200 - 0.0250 cm/cm	0.00200 - 0.0250 in/in	Average value: 0.0118 cm/cm Grade Count:23
Linear Mold Shrinkage, Transverse	0.0137 - 0.0141 cm/cm	0.0137 - 0.0141 in/in	Average value: 0.0139 cm/cm Grade Count:3
Melt Flow	3.00 - 25.0 g/10 min	3.00 - 25.0 g/10 min	Average value: 10.3 g/10 min Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115 - 122	115 - 122	Average value: 119 Grade Count:6
Tensile Strength, Ultimate	50.0 - 93.0 MPa	7250 - 13500 psi	Average value: 70.0 MPa Grade Count:17
	40.0 - 100 MPa @Temperature -40.0 - 80.0 °C	5800 - 14500 psi @Temperature -40.0 - 176 °F	Average value: 71.0 MPa Grade Count:1
Tensile Strength, Yield	70.0 - 95.0 MPa	10200 - 13800 psi	Average value: 83.1 MPa Grade Count:6
Elongation at Break	1.00 - 50.0 %	1.00 - 50.0 %	Average value: 10.2 % Grade Count:19

Mechanical Properties	Metric	English	Comments
	1.48 - 6.60 GPa	217 - 957 ksi	Average value: 3.90 GPa Grade Count:11
	0.398 - 4.827 GPa	57.7 - 700.1 ksi	Average value: 2.29 GPa Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
Flexural Yield Strength	78.0 - 245 MPa	11300 - 35500 psi	Average value: 124 MPa Grade Count:18
	57.0 - 160 MPa	8270 - 23200 psi	Average value: 113 MPa Grade Count:1
	@Temperature -40.0 - 80.0 °C	@Temperature -40.0 - 176 °F	
Flexural Modulus	2.50 - 6.60 GPa	363 - 957 ksi	Average value: 4.06 GPa Grade Count:17
	1.60 - 6.40 GPa	232 - 928 ksi	Average value: 4.28 GPa Grade Count:1
	@Temperature -40.0 - 80.0 °C	@Temperature -40.0 - 176 °F	
Shear Modulus	>= 0.0650 GPa	>= 9.43 ksi	Average value: 0.591 GPa Grade Count:1
	@Temperature -50.0 - 250 °C	@Temperature -58.0 - 482 °F	
Izod Impact, Notched	0.200 - 1.55 J/cm	0.375 - 2.90 ft-lb/in	Average value: 0.539 J/cm Grade Count:13
	0.350 - 0.450 J/cm	0.656 - 0.843 ft-lb/in	Average value: 0.400 J/cm Grade Count:1
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	
Izod Impact, Notched (ISO)	6.00 - 11.0 kJ/m ²	2.86 - 5.23 ft-lb/in ²	Average value: 8.13 kJ/m ² Grade Count:3
	8.00 - 8.00 kJ/m ²	3.81 - 3.81 ft-lb/in ²	Average value: 8.00 kJ/m ² Grade Count:1
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Charpy Impact Unnotched	3.70 J/cm ² - NB	17.6 ft-lb/in ² - NB	Average value: 6.18 J/cm ² Grade Count:6
	1.00 - 4.30 J/cm ²	4.76 - 20.5 ft-lb/in ²	Average value: 2.65 J/cm ² Grade Count:2
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	
Charpy Impact, Notched	0.300 - 1.50 J/cm ²	1.43 - 7.14 ft-lb/in ²	Average value: 0.923 J/cm ² Grade Count:7
	0.100 - 1.20 J/cm ²	0.476 - 5.71 ft-lb/in ²	Average value: 0.500 J/cm ² Grade Count:5
	@Temperature -30.0 - - 20.0 °C	@Temperature -22.0 - - 4.00 °F	

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric 100 µm/m-°C	English 5.6 µin/in-°F	Comments
Melting Point	255 - 263 °C	491 - 505 °F	Average value: 259 °C Grade Count:11
Maximum Service Temperature, Air	80.0 - 220 °C	176 - 428 °F	Average value: 140 °C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	140 - 250 °C	284 - 482 °F	Average value: 218 °C Grade Count:17
Deflection Temperature at 1.8 MPa (264 psi)	75.0 - 230 °C	167 - 446 °F	Average value: 138 °C Grade Count:17
Vicat Softening Point	200 - 260 °C	392 - 500 °F	Average value: 233 °C Grade Count:5
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:16

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+10 - 1.00e+15 ohm-cm	1.00e+10 - 1.00e+15 ohm-cm	Average value: 4.40e+14 ohm-cm Grade Count:14
Surface Resistance	1.00e+10 - 1.00e+15 ohm	1.00e+10 - 1.00e+15 ohm	Average value: 1.70e+14 ohm Grade Count:6
Dielectric Constant	3.70 - 6.00	3.70 - 6.00	Average value: 4.38 Grade Count:4
Dielectric Strength	16.0 - 90.0 kV/mm	406 - 2290 kV/in	Average value: 40.0 kV/mm Grade Count:9
Comparative Tracking Index	450 - 600 V	450 - 600 V	Average value: 546 V Grade Count:6

Processing Properties	Metric	English	Comments
Processing Temperature	270 - 310 °C	518 - 590 °F	Average value: 293 °C Grade Count:3
Melt Temperature	250 - 310 °C	482 - 590 °F	Average value: 285 °C Grade Count:13
Mold Temperature	49.0 - 120 °C	120 - 248 °F	Average value: 86.3 °C Grade Count:15
Drying Temperature	71.0 - 110 °C	160 - 230 °F	Average value: 86.4 °C Grade Count:11
Moisture Content	0.150 - 0.200 %	0.150 - 0.200 %	Average value: 0.190 % Grade Count:5
Injection Pressure	30.0 - 124 MPa	4350 - 18000 psi	Average value: 87.0 MPa Grade Count:5

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