

Overview of materials for Nylon 6, 20% Mineral Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 20% Mineral Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 6, 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-6-20-Mineral-Filled.php

Physical Properties	Metric	English	Comments
Density	1.05 - 1.66 g/cc	0.0379 - 0.0600 lb/in ³	Average value: 1.28 g/cc Grade Count:27
Filler Content	20.0 - 23.0 %	20.0 - 23.0 %	Average value: 21.0 % Grade Count:3
Water Absorption	0.200 - 7.20 %	0.200 - 7.20 %	Average value: 1.21 % Grade Count:14
Moisture Absorption at Equilibrium	1.20 - 2.50 %	1.20 - 2.50 %	Average value: 1.83 % Grade Count:7
Linear Mold Shrinkage	0.00100 - 0.0150 cm/cm	0.00100 - 0.0150 in/in	Average value: 0.00884 cm/cm Grade Count:25
Linear Mold Shrinkage, Transverse	0.00750 - 0.0100 cm/cm	0.00750 - 0.0100 in/in	Average value: 0.00860 cm/cm Grade Count:4
Melt Flow	3.00 - 20.0 g/10 min	3.00 - 20.0 g/10 min	Average value: 8.50 g/10 min Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90.0 - 93.0	90.0 - 93.0	Average value: 91.5 Grade Count:4
Hardness, Rockwell R	110 - 121	110 - 121	Average value: 118 Grade Count:5
Tensile Strength, Ultimate	38.0 - 105 MPa	5510 - 15200 psi	Average value: 70.9 MPa Grade Count:17
	24.0 - 65.0 MPa @Temperature -40.0 - 80.0 °C	3480 - 9430 psi @Temperature -40.0 - 176 °F	Average value: 44.5 MPa Grade Count:1
Tensile Strength, Yield	47.0 - 85.0 MPa	6810 - 12300 psi	Average value: 66.8 MPa Grade Count:11
Elongation at Break	1.50 - 50.0 %	1.50 - 50.0 %	Average value: 7.87 % Grade Count:22
Modulus of Elasticity	1.80 - 6.40 GPa	261 - 928 ksi	Average value: 5.16 GPa Grade Count:14

Mechanical Properties	Metric ¹ 45 MPa	English ² 1000 psi	Comments
	38.0 - 110 MPa @Temperature -40.0 - 80.0 °C	5510 - 16000 psi @Temperature -40.0 - 176 °F	Average value: 107 MPa Grade Count:22 Average value: 75.5 MPa Grade Count:1
Flexural Modulus	2.26 - 7.40 GPa @Temperature -40.0 - 80.0 °C	328 - 1070 ksi @Temperature -40.0 - 176 °F	Average value: 4.50 GPa Grade Count:21 Average value: 4.55 GPa Grade Count:1
Izod Impact, Notched	0.340 - 1.90 J/cm @Temperature -40.0 - 40.0 °C	0.637 - 3.56 ft-lb/in @Temperature -40.0 - 40.0 °F	Average value: 0.600 J/cm Grade Count:14 Average value: 0.375 J/cm Grade Count:1
Izod Impact, Notched (ISO)	3.00 - 5.00 kJ/m ² @Temperature -40.0 - 20.0 °C	1.43 - 2.38 ft-lb/in ² @Temperature -40.0 - 4.00 °F	Average value: 4.22 kJ/m ² Grade Count:9 Average value: 3.00 kJ/m ² Grade Count:4
Izod Impact, Unnotched (ISO)	15.0 - 45.0 kJ/m ²	7.14 - 21.4 ft-lb/in ²	Average value: 27.0 kJ/m ² Grade Count:5
Charpy Impact Unnotched	3.00 J/cm ² - NB @Temperature -30.0 - 20.0 °C	14.3 ft-lb/in ² - NB @Temperature -22.0 - 4.00 °F	Average value: 3.46 J/cm ² Grade Count:7 Average value: 2.00 J/cm ² Grade Count:4
Charpy Impact, Notched	0.200 - 2.00 J/cm ² @Temperature -30.0 - 20.0 °C	0.952 - 9.52 ft-lb/in ² @Temperature -22.0 - 4.00 °F	Average value: 0.650 J/cm ² Grade Count:7 Average value: 0.200 J/cm ² Grade Count:4

Thermal Properties	Metric	English	Comments
CTE, linear	42.0 - 100 µm/m-°C	23.3 - 55.6 µin/in-°F	Average value: 59.5 µm/m-°C Grade Count:9
CTE, linear, Transverse to Flow	70.0 - 94.0 µm/m-°C	38.9 - 52.2 µin/in-°F	Average value: 78.0 µm/m-°C Grade Count:3
Melting Point	215 - 223 °C	419 - 433 °F	Average value: 219 °C Grade Count:8
Deflection Temperature at 0.46 MPa			

(56 psi) Thermal Properties	177 - 230 °C Metric	350 - 446 °F English	Average value: 204 °C Grade Count:17 Comments
Deflection Temperature at 1.8 MPa (264 psi)	70.0 - 200 °C	158 - 392 °F	Average value: 129 °C Grade Count:20
Vicat Softening Point	200 - 207 °C	392 - 405 °F	Average value: 203 °C Grade Count:6
UL RTI, Electrical	60.0 - 65.0 °C	140 - 149 °F	Average value: 62.5 °C Grade Count:8
UL RTI, Mechanical with Impact	60.0 - 65.0 °C	140 - 149 °F	Average value: 62.5 °C Grade Count:8
UL RTI, Mechanical without Impact	60.0 - 65.0 °C	140 - 149 °F	Average value: 62.5 °C Grade Count:8
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:26
Glow Wire Test	650 - 960 °C	1200 - 1760 °F	Average value: 871 °C Grade Count:8

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+8 - 1.00e+15 ohm-cm	1.00e+8 - 1.00e+15 ohm-cm	Average value: 7.50e+14 ohm-cm Grade Count:11
Surface Resistance	1.00e+10 - 1.00e+15 ohm	1.00e+10 - 1.00e+15 ohm	Average value: 3.35e+14 ohm Grade Count:6
Dielectric Constant	3.30 - 6.00	3.30 - 6.00	Average value: 4.26 Grade Count:7
Dielectric Strength	17.0 - 100 kV/mm	432 - 2540 kV/in	Average value: 33.0 kV/mm Grade Count:8
Arc Resistance	15.0 - 185 sec	15.0 - 185 sec	Average value: 103 sec Grade Count:3
Comparative Tracking Index	350 - 600 V	350 - 600 V	Average value: 493 V Grade Count:7

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 271 °C	428 - 520 °F	Average value: 240 °C Grade Count:3
Nozzle Temperature	250 - 275 °C	482 - 527 °F	Average value: 264 °C Grade Count:4
Melt Temperature	230 - 290 °C	446 - 554 °F	Average value: 257 °C Grade Count:19
Mold Temperature	40.0 - 100 °C	104 - 212 °F	Average value: 72.4 °C Grade Count:22
Drying Temperature	70.0 - 120 °C	158 - 248 °F	Average value: 83.7 °C Grade Count:18
Moisture Content	0.150 - 0.200 %	0.150 - 0.200 %	Average value: 0.192 % Grade Count:12
Injection Pressure	40.0 - 120 MPa	5800 - 17400 psi	Average value: 85.4 MPa Grade Count:6

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China