

Overview of materials for Nylon 6, Stainless Steel Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Stainless Steel Filled

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.20 - 4.00 g/cc	0.0434 - 0.145 lb/in ³	Average value: 1.75 g/cc Grade Count:7
Filler Content	7.00 - 15.0 %	7.00 - 15.0 %	Average value: 10.7 % Grade Count:3
Water Absorption	1.00 - 1.40 %	1.00 - 1.40 %	Average value: 1.16 % Grade Count:5
Linear Mold Shrinkage	0.00200 - 0.0150 cm/cm	0.00200 - 0.0150 in/in	Average value: 0.00693 cm/cm Grade Count:7

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	Average value: 117 Grade Count:3
Tensile Strength, Ultimate	25.0 - 82.7 MPa	3630 - 12000 psi	Average value: 60.5 MPa Grade Count:4
Tensile Strength, Yield	131 - 138 MPa	19000 - 20000 psi	Average value: 136 MPa Grade Count:3
Elongation at Break	0.500 - 10.0 %	0.500 - 10.0 %	Average value: 5.86 % Grade Count:7
Modulus of Elasticity	2.76 - 7.50 GPa	400 - 1090 ksi	Average value: 4.12 GPa Grade Count:4
Flexural Yield Strength	82.7 - 193 MPa	12000 - 28000 psi	Average value: 151 MPa Grade Count:6
Flexural Modulus	2.41 - 7.58 GPa	350 - 1100 ksi	Average value: 5.37 GPa Grade Count:7
Izod Impact, Notched	0.534 - 0.854 J/cm	1.00 - 1.60 ft-lb/in	Average value: 0.667 J/cm Grade Count:6
Izod Impact, Unnotched	8.01 - 9.61 J/cm	15.0 - 18.0 ft-lb/in	Average value: 8.54 J/cm Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	54.0 μm/m-°C	30.0 μin/in-°F	Average value: 54.0 μm/m-°C Grade Count:3

Thermal Properties	Metric	English	Comments
Stress at 1.8 MPa (264 psi)	92.1 - 210 °C	168 - 410 °F	Average value: 159 °C Grade Count:5
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 - 100 ohm-cm	1.00 - 100 ohm-cm	Average value: 21.3 ohm-cm Grade Count:6
Surface Resistance	10.0 - 1.00e+6 ohm	10.0 - 1.00e+6 ohm	Average value: 335000 ohm Grade Count:6
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:6
Shielding Effectiveness	50.0 dB	50.0 dB	Average value: 50.0 dB Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	221 - 271 °C	430 - 520 °F	Average value: 246 °C Grade Count:3
Mold Temperature	54.4 - 93.3 °C	130 - 200 °F	Average value: 73.5 °C Grade Count:4
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:3

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