

Overview of materials for Nylon 66, MoS2 Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, MoS2 Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, MoS2 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-66-MoS2-Filled.php

Physical Properties	Metric	English	Comments
Density	1.08 - 1.45 g/cc	0.0390 - 0.0524 lb/in ³	Average value: 1.18 g/cc Grade Count:43
Water Absorption	0.300 - 8.50 %	0.300 - 8.50 %	Average value: 1.37 % Grade Count:18
Moisture Absorption at Equilibrium	2.60 - 2.80 %	2.60 - 2.80 %	Average value: 2.73 % Grade Count:3
Water Absorption at Saturation	7.00 - 8.50 %	7.00 - 8.50 %	Average value: 8.00 % Grade Count:5
Linear Mold Shrinkage	0.00300 - 0.0210 cm/cm	0.00300 - 0.0210 in/in	Average value: 0.0131 cm/cm Grade Count:39

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113 - 120	113 - 120	Average value: 117 Grade Count:16
Tensile Strength, Ultimate	48.3 - 145 MPa	7000 - 21000 psi	Average value: 84.8 MPa Grade Count:33
Tensile Strength, Yield	46.0 - 145 MPa	6670 - 21000 psi	Average value: 90.2 MPa Grade Count:18
Elongation at Break	3.50 - 70.0 %	3.50 - 70.0 %	Average value: 14.4 % Grade Count:33
Elongation at Yield	4.00 - 100 %	4.00 - 100 %	Average value: 38.3 % Grade Count:4
Modulus of Elasticity	2.41 - 4.14 GPa	350 - 600 ksi	Average value: 3.58 GPa Grade Count:17
Flexural Yield Strength	11.7 - 228 MPa	1700 - 33000 psi	Average value: 118 MPa Grade Count:39
Flexural Modulus	1.69 - 8.27 GPa	245 - 1200 ksi	Average value: 3.45 GPa Grade Count:43
Compressive Yield Strength	34.5 - 110 MPa	5000 - 16000 psi	Average value: 85.0 MPa Grade Count:3
Izod Impact, Notched	0.267 - 7.88 J/cm	0.500 - 14.8 ft-lb/in	Average value: 0.764 J/cm Grade Count:42

Izod Impact, Unnotched Mechanical Properties	4.32 - 18.7 J/cm Metric	8.09 - 35.0 ft-lb/in English	Average value: 10.6 J/cm Grade Count:11
Izod Impact, Notched (ISO)	5.00 - 5.00 kJ/m ² @Temperature -30.0 - - 30.0 °C	2.38 - 2.38 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 5.00 kJ/m ² Grade Count:1
Izod Impact, Unnotched (ISO)	NB - NB @Temperature -30.0 - - 30.0 °C	NB - NB @Temperature -22.0 - - 22.0 °F	Grade Count:1
Coefficient of Friction	0.200 - 0.270	0.200 - 0.270	Average value: 0.240 Grade Count:3
K (wear) Factor	70.0 - 302 x 10 ⁻⁸ mm ³ /N-M	34.7 - 150 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Average value: 184 x 10 ^{<sup>- 8</sup>} mm ³ /N-M Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	64.8 - 81.0 μm/m-°C	36.0 - 45.0 μin/in-°F	Average value: 71.6 μm/m-°C Grade Count:5
Thermal Conductivity	0.245 - 0.259 W/m-K	1.70 - 1.80 BTU-in/hr- ft ² -°F	Average value: 0.252 W/m-K Grade Count:4
Melting Point	249 - 275 °C	480 - 527 °F	Average value: 257 °C Grade Count:12
Maximum Service Temperature, Air	80.0 - 200 °C	176 - 392 °F	Average value: 128 °C Grade Count:4
Deflection Temperature at 0.46 MPa (66 psi)	195 - 254 °C	383 - 490 °F	Average value: 224 °C Grade Count:27
Deflection Temperature at 1.8 MPa (264 psi)	64.0 - 248 °C	147 - 478 °F	Average value: 99.6 °C Grade Count:41
Flammability, UL94	HB - V-2	HB - V-2	Grade Count:23

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 - 1.00e+16 ohm-cm	1.00e+13 - 1.00e+16 ohm-cm	Average value: 2.09e+15 ohm-cm Grade Count:16
Surface Resistance	1.00e+13 - 1.00e+14 ohm	1.00e+13 - 1.00e+14 ohm	Average value: 2.80e+13 ohm Grade Count:5
Dielectric Constant	3.60 - 3.80	3.60 - 3.80	Average value: 3.68 Grade Count:5
Dielectric Strength	13.8 - 120 kV/mm	350 - 3050 kV/in	Average value: 50.9 kV/mm Grade Count:6
Dissipation Factor	0.0150 - 0.0200	0.0150 - 0.0200	Average value: 0.0167 Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	270 - 293 °C	518 - 560 °F	Average value: 285 °C Grade Count:9

Melt Temperature Processing Properties	260 - 304 °C Metric	500 - 580 °F English	Average value: 281 °C Grade Count:21 Comments
Mold Temperature	40.0 - 110 °C	104 - 230 °F	Average value: 81.4 °C Grade Count:27
Drying Temperature	73.9 - 100 °C	165 - 212 °F	Average value: 80.6 °C Grade Count:16
Moisture Content	0.200 %	0.200 %	Average value: 0.200 % Grade Count:8
Dew Point	-17.8 °C	0.000 °F	Average value: -17.8 °C Grade Count:7
Injection Pressure	4.96 - 124 MPa	720 - 18000 psi	Average value: 66.1 MPa Grade Count:17

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