

Overview of materials for Nylon 66, 30% Mineral Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Mineral Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, 30% Mineral Filled". Specific grades with primary filler content between 25% and 34% 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-66-30-Mineral-Filled.php

Physical Properties	Metric	English	Comments
Density	1.23 - 1.62 g/cc	0.0444 - 0.0585 lb/in ³	Average value: 1.39 g/cc Grade Count:45
	1.40 - 1.40 g/cc @Temperature 280 - 280 °C	0.0506 - 0.0506 lb/in ³ @Temperature 536 - 536 °F	Average value: 1.40 g/cc Grade Count:1
Filler Content	25.0 - 32.0 %	25.0 - 32.0 %	Average value: 29.5 % Grade Count:6
Water Absorption	0.400 - 5.50 %	0.400 - 5.50 %	Average value: 1.61 % Grade Count:20
Moisture Absorption at Equilibrium	0.170 - 2.30 %	0.170 - 2.30 %	Average value: 1.32 % Grade Count:11
Water Absorption at Saturation	5.50 - 8.00 %	5.50 - 8.00 %	Average value: 6.00 % Grade Count:4
Linear Mold Shrinkage	0.00100 - 0.0200 cm/cm	0.00100 - 0.0200 in/in	Average value: 0.00995 cm/cm Grade Count:40
Linear Mold Shrinkage, Transverse	0.00600 - 0.0200 cm/cm	0.00600 - 0.0200 in/in	Average value: 0.0125 cm/cm Grade Count:10
Melt Flow	1.00 - 9.50 g/10 min	1.00 - 9.50 g/10 min	Average value: 4.30 g/10 min Grade Count:5

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90.0	90.0	Average value: 90.0 Grade Count:3
Hardness, Rockwell R	115 - 125	115 - 125	Average value: 120 Grade Count:14
Tensile Strength, Ultimate	45.0 - 165 MPa	6530 - 24000 psi	Average value: 81.1 MPa Grade Count:32
Tensile Strength, Yield	73.5 - 186 MPa	10700 - 27000 psi	Average value: 106 MPa Grade Count:15
Elongation at Break	1.00 - 40.0 %	1.00 - 40.0 %	Average value: 6.76 % Grade Count:37

Elongation at Yield Mechanical Properties	2.30 - 16.0 % Metric	2.30 - 16.0 % English	Average value: 5.35 % Grade Count:5 Comments
Modulus of Elasticity	1.90 - 9.31 GPa	276 - 1350 ksi	Average value: 5.50 GPa Grade Count:21
Flexural Yield Strength	80.0 - 255 MPa	11600 - 37000 psi	Average value: 141 MPa Grade Count:28
Flexural Modulus	1.80 - 9.65 GPa	261 - 1400 ksi	Average value: 5.10 GPa Grade Count:34
Izod Impact, Notched	0.196 - 1.10 J/cm	0.367 - 2.06 ft-lb/in	Average value: 0.552 J/cm Grade Count:22
	0.520 - 0.520 J/cm @Temperature -40.0 - - 40.0 °C	0.974 - 0.974 ft-lb/in @Temperature -40.0 - - 40.0 °F	Average value: 0.520 J/cm Grade Count:1
Izod Impact, Unnotched	2.67 - 14.9 J/cm	5.00 - 28.0 ft-lb/in	Average value: 9.02 J/cm Grade Count:4
Izod Impact, Notched (ISO)	2.00 - 13.0 kJ/m ²	0.952 - 6.19 ft-lb/in ²	Average value: 6.07 kJ/m ² Grade Count:11
	1.90 - 14.0 kJ/m ² @Temperature -40.0 - - 30.0 °C	0.904 - 6.66 ft-lb/in ² @Temperature -40.0 - - 22.0 °F	Average value: 5.84 kJ/m ² Grade Count:3
Izod Impact, Unnotched (ISO)	52.0 - 85.0 kJ/m ² @Temperature -40.0 - - 30.0 °C	24.7 - 40.4 ft-lb/in ² @Temperature -40.0 - - 22.0 °F	Average value: 74.0 kJ/m ² Grade Count:2
Charpy Impact Unnotched	1.80 J/cm ² - NB	8.57 ft-lb/in ² - NB	Average value: 6.85 J/cm ² Grade Count:16
	1.10 - 8.00 J/cm ² @Temperature -40.0 - - 20.0 °C	5.24 - 38.1 ft-lb/in ² @Temperature -40.0 - - 4.00 °F	Average value: 3.34 J/cm ² Grade Count:9
Charpy Impact, Notched	0.200 - 1.20 J/cm ²	0.952 - 5.71 ft-lb/in ²	Average value: 0.520 J/cm ² Grade Count:16
	0.150 - 1.00 J/cm ² @Temperature -40.0 - - 20.0 °C	0.714 - 4.76 ft-lb/in ² @Temperature -40.0 - - 4.00 °F	Average value: 0.439 J/cm ² Grade Count:9

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 - 400 µm/m-°C	11.0 - 222 µin/in-°F	Average value: 73.1 µm/m-°C Grade Count:13
Melting Point	254 - 265 °C	490 - 509 °F	Average value: 259 °C Grade Count:30
Maximum Service Temperature, Air	80.0 - 220 °C	176 - 428 °F	Average value: 136 °C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	145 - 261 °C	293 - 502 °F	Average value: 227 °C Grade Count:26

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	60.0 - 256 °C	140 - 493 °F	Average value: 155 °C Grade Count:40
Vicat Softening Point	200 - 265 °C	392 - 509 °F	Average value: 238 °C Grade Count:15
Flammability, UL94	HB - 5VA	HB - 5VA	Grade Count:32
Oxygen Index	24.0 - 32.0 %	24.0 - 32.0 %	Average value: 27.0 % Grade Count:6
Glow Wire Test	649 - 960 °C	1200 - 1760 °F	Average value: 762 °C Grade Count:10

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+11 - 1.00e+17 ohm-cm	1.00e+11 - 1.00e+17 ohm-cm	Average value: 9.59e+15 ohm-cm Grade Count:19
Surface Resistance	1.00e+10 - 1.00e+15 ohm	1.00e+10 - 1.00e+15 ohm	Average value: 1.06e+14 ohm Grade Count:11
Dielectric Constant	3.40 - 10.0	3.40 - 10.0	Average value: 4.83 Grade Count:9
Dielectric Strength	15.0 - 85.0 kV/mm	380 - 2160 kV/in	Average value: 34.7 kV/mm Grade Count:21
Dissipation Factor	0.0100 - 0.150	0.0100 - 0.150	Average value: 0.0367 Grade Count:4
Comparative Tracking Index	300 - 600 V	300 - 600 V	Average value: 494 V Grade Count:13

Processing Properties	Metric	English	Comments
Nozzle Temperature	250 - 295 °C	482 - 563 °F	Average value: 279 °C Grade Count:5
Melt Temperature	241 - 310 °C	465 - 590 °F	Average value: 281 °C Grade Count:23
Mold Temperature	50.0 - 120 °C	122 - 248 °F	Average value: 85.7 °C Grade Count:22
Drying Temperature	75.0 - 100 °C	167 - 212 °F	Average value: 85.4 °C Grade Count:21
Moisture Content	0.0500 - 1.90 %	0.0500 - 1.90 %	Average value: 0.319 % Grade Count:11
Injection Pressure	34.5 - 138 MPa	5000 - 20000 psi	Average value: 95.2 MPa Grade Count:7

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