

Overview of materials for Nylon 6, PTFE Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , PTFE Filled

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.12 - 1.49 g/cc	0.0405 - 0.0538 lb/in ³	Average value: 1.26 g/cc Grade Count:31
Filler Content	10.0 - 30.0 %	10.0 - 30.0 %	Average value: 17.8 % Grade Count:4
Water Absorption	0.600 - 5.70 %	0.600 - 5.70 %	Average value: 1.44 % Grade Count:23
Water Absorption at Saturation	5.00 - 7.00 %	5.00 - 7.00 %	Average value: 5.67 % Grade Count:3
Linear Mold Shrinkage	0.00400 - 0.0200 cm/cm	0.00400 - 0.0200 in/in	Average value: 0.0133 cm/cm Grade Count:29

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	90.0 - 120	90.0 - 120	Average value: 112 Grade Count:16
Ball Indentation Hardness	110 - 115 MPa	16000 - 16700 psi	Average value: 113 MPa Grade Count:3
Tensile Strength, Ultimate	45.0 - 150 MPa	6530 - 21800 psi	Average value: 70.5 MPa Grade Count:22
Tensile Strength, Yield	55.8 - 145 MPa	8100 - 21000 psi	Average value: 83.2 MPa Grade Count:10
Elongation at Break	2.00 - 25.0 %	2.00 - 25.0 %	Average value: 9.54 % Grade Count:27
Elongation at Yield	2.00 - 25.0 %	2.00 - 25.0 %	Average value: 10.3 % Grade Count:5
Modulus of Elasticity	2.00 - 7.10 GPa	290 - 1030 ksi	Average value: 2.96 GPa Grade Count:20
Flexural Yield Strength	65.0 - 268 MPa	9430 - 38900 psi	Average value: 99.2 MPa Grade Count:30
Flexural Modulus	1.70 - 8.27 GPa	247 - 1200 ksi	Average value: 2.96 GPa Grade Count:30
Izod Impact, Notched	0.481 - 0.801 J/cm	0.900 - 1.50 ft-lb/in	Average value: 0.596 J/cm Grade Count:24

Izod Impact, Unnotched Mechanical Properties	5.34 - 16.0 J/cm Metric	10.0 - 30.0 ft-lb/in English	Average value: 9.65 J/cm Grade Count:13
Izod Impact, Notched (ISO)	7.00 - 7.00 kJ/m ² @Temperature -30.0 - - 30.0 °C	3.33 - 3.33 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 7.00 kJ/m ² Grade Count:1
Izod Impact, Unnotched (ISO)	75.0 - 75.0 kJ/m ² @Temperature -30.0 - - 30.0 °C	35.7 - 35.7 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 75.0 kJ/m ² Grade Count:1
Charpy Impact Unnotched	8.00 J/cm ² - NB	38.1 ft-lb/in ² - NB	Average value: 9.40 J/cm ² Grade Count:6
	7.60 J/cm ² - NB @Temperature -40.0 - - 30.0 °C	36.2 ft-lb/in ² - NB @Temperature -40.0 - - 22.0 °F	Average value: 7.60 J/cm ² Grade Count:4
Charpy Impact, Notched	0.900 - 1.30 J/cm ²	4.28 - 6.19 ft-lb/in ²	Average value: 1.01 J/cm ² Grade Count:6
	0.700 - 0.700 J/cm ² @Temperature -30.0 - - 30.0 °C	3.33 - 3.33 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 0.700 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
CTE, linear	27.0 - 93.6 µm/m-°C	15.0 - 52.0 µin/in-°F	Average value: 70.3 µm/m-°C Grade Count:12
Melting Point	221 °C	430 °F	Average value: 221 °C Grade Count:3
Maximum Service Temperature, Air	80.0 - 135 °C	176 - 275 °F	Average value: 114 °C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	135 - 216 °C	275 - 420 °F	Average value: 177 °C Grade Count:16
Deflection Temperature at 1.8 MPa (264 psi)	57.2 - 216 °C	135 - 420 °F	Average value: 98.3 °C Grade Count:29
Flammability, UL94	HB	HB	Grade Count:19

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: 4.52e+14 ohm-cm Grade Count:17
Dielectric Strength	15.7 - 19.7 kV/mm	400 - 500 kV/in	Average value: 17.7 kV/mm Grade Count:12
Dissipation Factor	0.0190 - 0.0200	0.0190 - 0.0200	Average value: 0.0198 Grade Count:5
Comparative Tracking Index	500 V	500 V	Average value: 500 V Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	221 - 271 °C	430 - 520 °F	Average value: 252 °C Grade Count:9
Melt Temperature	243 - 300 °C	470 - 572 °F	Average value: 269 °C Grade Count:10
Mold Temperature	54.4 - 110 °C	130 - 230 °F	Average value: 76.3 °C Grade Count:16
Drying Temperature	75.0 - 105 °C	167 - 221 °F	Average value: 85.0 °C Grade Count:11
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	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:13

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