

Overview of materials for Nylon 66, 30% Carbon Fiber Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Carbon Fiber Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 66, 30% Carbon Fiber Filled". Specific grades with carbon fiber 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-Carbon-Fiber-Filled.php

Physical Properties	Metric	English	Comments
Density	1.20 - 1.57 g/cc	0.0434 - 0.0567 lb/in³	Average value: 1.29 g/cc Grade Count:32
Filler Content	25.0 - 30.0 %	25.0 - 30.0 %	Average value: 29.2 % Grade Count:13
Water Absorption	0.400 - 2.40 %	0.400 - 2.40 %	Average value: 0.763 % Grade Count:12
Moisture Absorption at Equilibrium	1.70 - 2.30 %	1.70 - 2.30 %	Average value: 1.94 % Grade Count:5
Water Absorption at Saturation	4.50 - 7.00 %	4.50 - 7.00 %	Average value: 5.67 % Grade Count:3
Linear Mold Shrinkage	0.000200 - 0.0150 cm/cm	0.000200 - 0.0150 in/in	Average value: 0.00252 cm/cm Grade Count:28
Linear Mold Shrinkage, Transverse	0.00480 - 0.0120 cm/cm	0.00480 - 0.0120 in/in	Average value: 0.00765 cm/cm Grade Count:11

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	97.0 - 120	97.0 - 120	Average value: 116 Grade Count:7
Tensile Strength, Ultimate	137 - 300 MPa	19900 - 43500 psi	Average value: 217 MPa Grade Count:30
	65.0 - 260 MPa @Temperature -40.0 - 150 °C	9430 - 37700 psi @Temperature -40.0 - 302 °F	Average value: 130 MPa Grade Count:4
Elongation at Break	1.00 - 4.00 %	1.00 - 4.00 %	Average value: 2.23 % Grade Count:30
	2.30 - 5.00 % @Temperature 60.0 - 150 °C	2.30 - 5.00 % @Temperature 140 - 302 °F	Average value: 3.58 % Grade Count:3
Modulus of Elasticity	16.0 - 33.1 GPa	2320 - 4800 ksi	Average value: 21.6 GPa Grade Count:25

Mechanical Properties	4.90 - 21.5 GPa Metric	711 - 3120 ksi English	Comments Average value: 11.4 GPa Grade
	@Temperature 60.0 - 150 °C	@Temperature 140 - 302 °F	Count:3
Flexural Yield Strength	215 - 420 MPa	31200 - 60900 psi	Average value: 320 MPa Grade Count:24
	140 - 337 MPa	20300 - 48900 psi	
	@Temperature -40.0 - 80.0 °C	@Temperature -40.0 - 176 °F	Average value: 252 MPa Grade Count:1
Flexural Modulus	0.0000193 - 29.0 GPa	0.00280 - 4200 ksi	Average value: 16.1 GPa Grade Count:25
	7.20 - 19.0 GPa	1040 - 2760 ksi	
	@Temperature -40.0 - 80.0 °C	@Temperature -40.0 - 176 °F	Average value: 13.4 GPa Grade Count:1
Compressive Yield Strength	152 - 172 MPa	22000 - 25000 psi	Average value: 164 MPa Grade Count:4
Izod Impact, Notched	0.534 - 2.40 J/cm	1.00 - 4.50 ft-lb/in	Average value: 1.31 J/cm Grade Count:18
	0.720 - 0.800 J/cm	1.35 - 1.50 ft-lb/in	
	@Temperature -40.0 - - 40.0 °C	@Temperature -40.0 - - 40.0 °F	Average value: 0.760 J/cm Grade Count:1
Izod Impact, Unnotched	6.41 - 10.7 J/cm	12.0 - 20.0 ft-lb/in	Average value: 8.45 J/cm Grade Count:13
Izod Impact, Notched (ISO)	6.50 - 10.0 kJ/m²	3.09 - 4.76 ft-lb/in²	Average value: 8.09 kJ/m² Grade Count:4
	6.00 - 7.00 kJ/m²	2.86 - 3.33 ft-lb/in²	
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	Average value: 6.50 kJ/m² Grade Count:1
Charpy Impact Unnotched	2.30 - 9.00 J/cm²	10.9 - 42.8 ft-lb/in²	Average value: 5.30 J/cm² Grade Count:10
	2.10 - 8.50 J/cm²	9.99 - 40.5 ft-lb/in²	
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	Average value: 4.82 J/cm² Grade Count:4
Charpy Impact, Notched	0.500 - 1.80 J/cm²	2.38 - 8.57 ft-lb/in²	Average value: 0.945 J/cm² Grade Count:10
	0.500 - 1.00 J/cm²	2.38 - 4.76 ft-lb/in²	
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	Average value: 0.800 J/cm² Grade Count:3
Dart Drop, Total Energy	6.19 - 12.2 J	4.57 - 9.00 ft-lb	
	@Temperature -20.0 - - 20.0 °C	@Temperature -4.00 - - 4.00 °F	Average value: 9.19 J Grade Count:1

Mechanical Properties	Metric	English	Comments
	6.19 - 12.2 J @Thickness 3.18 - 3.18 mm	4.57 - 9.00 ft-lb @Thickness 0.125 - 0.125 in	Average value: 9.19 J Grade Count: 1

Thermal Properties	Metric	English	Comments
CTE, linear	6.00 - 25.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	3.33 - 13.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 16.4 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count: 8
Melting Point	221 - 263 $^{\circ}\text{C}$	430 - 505 $^{\circ}\text{F}$	Average value: 256 $^{\circ}\text{C}$ Grade Count: 11
Maximum Service Temperature, Air	105 - 130 $^{\circ}\text{C}$	221 - 266 $^{\circ}\text{F}$	Average value: 124 $^{\circ}\text{C}$ Grade Count: 5
Deflection Temperature at 0.46 MPa (66 psi)	240 - 260 $^{\circ}\text{C}$	464 - 500 $^{\circ}\text{F}$	Average value: 257 $^{\circ}\text{C}$ Grade Count: 14
Deflection Temperature at 1.8 MPa (264 psi)	230 - 260 $^{\circ}\text{C}$	446 - 500 $^{\circ}\text{F}$	Average value: 251 $^{\circ}\text{C}$ Grade Count: 26
Vicat Softening Point	230 - 255 $^{\circ}\text{C}$	446 - 491 $^{\circ}\text{F}$	Average value: 246 $^{\circ}\text{C}$ Grade Count: 7
Flammability, UL94	HB - V-0	HB - V-0	Grade Count: 15

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0100 - 200000 ohm-cm	0.0100 - 200000 ohm-cm	Average value: 13200 ohm-cm Grade Count: 17
Surface Resistance	10.0 ohm - 1e+05	10.0 ohm - 1e+05	Average value: 5190 ohm Grade Count: 9

Processing Properties	Metric	English	Comments
Processing Temperature	270 - 300 $^{\circ}\text{C}$	518 - 572 $^{\circ}\text{F}$	Average value: 284 $^{\circ}\text{C}$ Grade Count: 5
Melt Temperature	260 - 320 $^{\circ}\text{C}$	500 - 608 $^{\circ}\text{F}$	Average value: 286 $^{\circ}\text{C}$ Grade Count: 18
Mold Temperature	60.0 - 140 $^{\circ}\text{C}$	140 - 284 $^{\circ}\text{F}$	Average value: 88.2 $^{\circ}\text{C}$ Grade Count: 23
Drying Temperature	75.0 - 107 $^{\circ}\text{C}$	167 - 225 $^{\circ}\text{F}$	Average value: 85.1 $^{\circ}\text{C}$ Grade Count: 16
Moisture Content	0.150 - 0.200 %	0.150 - 0.200 %	Average value: 0.188 % Grade Count: 10
Dew Point	-28.9 - -17.8 $^{\circ}\text{C}$	-20.0 - 0.000 $^{\circ}\text{F}$	Average value: -19.6 $^{\circ}\text{C}$ Grade Count: 6
Injection Pressure	30.0 - 124 MPa	4350 - 18000 psi	Average value: 93.1 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