

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

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

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.11 - 1.82 g/cc	0.0401 - 0.0658 lb/in ³	Average value: 1.38 g/cc Grade Count:811
	1.12 - 1.40 g/cc @Temperature 250 - 295 °C	0.0405 - 0.0506 lb/in ³ @Temperature 482 - 563 °F	Average value: 1.23 g/cc Grade Count:11
Filler Content	25.0 - 35.0 %	25.0 - 35.0 %	Average value: 29.8 % Grade Count:115
Water Absorption	0.200 - 6.90 %	0.200 - 6.90 %	Average value: 2.03 % Grade Count:437
	1.55 - 2.20 % @Temperature 70.0 - 70.0 °C	1.55 - 2.20 % @Temperature 158 - 158 °F	Average value: 1.95 % Grade Count:5
Moisture Absorption at Equilibrium	0.170 - 5.70 %	0.170 - 5.70 %	Average value: 1.78 % Grade Count:230
Water Absorption at Saturation	0.800 - 9.00 %	0.800 - 9.00 %	Average value: 5.41 % Grade Count:88
Additive Loading	25.0 - 33.0 %	25.0 - 33.0 %	Average value: 29.8 % Grade Count:8
Viscosity	20.0 - 500 cP @Temperature 270 - 300 °C	20.0 - 500 cP @Temperature 518 - 572 °F	Average value: 141 cP Grade Count:8
	20.0 - 500 cP @Shear Rate 10.0 - 1000 1/s	20.0 - 500 cP @Shear Rate 10.0 - 1000 1/s	Average value: 141 cP Grade Count:8
Viscosity Test	127 - 210 cm ³ /g	127 - 210 cm ³ /g	Average value: 147 cm ³ /g Grade Count:23
Maximum Moisture Content	0.0900 - 0.100	0.0900 - 0.100	Average value: 0.0929 Grade Count:7
	0.000400 - 0.0550	0.000400 - 0.0550 in/in	Average value: 0.00459 cm/cm Grade

Linear Mold Shrinkage Physical Properties	cm/cm Metric	English	Count:661 Comments
Linear Mold Shrinkage, Transverse	0.000500 - 0.0190 cm/cm	0.000500 - 0.0190 in/in	Average value: 0.00923 cm/cm Grade Count:257
Melt Flow	1.00 - 198 g/10 min	1.00 - 198 g/10 min	Average value: 31.9 g/10 min Grade Count:71
Spiral Flow	69.0 - 757 cm	27.2 - 298 in	Average value: 137 cm Grade Count:14

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	108 - 114	108 - 114	Average value: 111 Grade Count:18
Hardness, Rockwell M	58.0 - 104	58.0 - 104	Average value: 88.8 Grade Count:56
Hardness, Rockwell R	85.0 - 124	85.0 - 124	Average value: 116 Grade Count:178
Hardness, Shore D	77.0 - 90.0	77.0 - 90.0	Average value: 83.6 Grade Count:10
Ball Indentation Hardness	125 - 280 MPa	18100 - 40600 psi	Average value: 213 MPa Grade Count:40
Tensile Strength, Ultimate	30.0 - 215 MPa	4350 - 31200 psi	Average value: 149 MPa Grade Count:581
	35.0 - 235 MPa @Temperature -40.0 - 150 °C	5080 - 34100 psi @Temperature -40.0 - 302 °F	Average value: 88.6 MPa Grade Count:14
	90.0 - 105 MPa @Temperature 130 - 175 °C	13100 - 15200 psi @Temperature 266 - 347 °F	Average value: 88.6 MPa Grade Count:5
	90.0 - 105 MPa @Time 1.80e+7 - 7.20e+7 sec	13100 - 15200 psi @Time 5000 - 20000 hour	Average value: 88.6 MPa Grade Count:5
	25.0 - 215 MPa @Strain 1.00 - 10.0 %	3630 - 31200 psi @Strain 1.00 - 10.0 %	Average value: 88.6 MPa Grade Count:5
	25.0 - 215 MPa @Temperature -40.0 - 150 °C	3630 - 31200 psi @Temperature -40.0 - 302 °F	Average value: 88.6 MPa Grade Count:5
Tensile Strength, Yield	18.8 - 290 MPa	2730 - 42100 psi	Average value: 155 MPa Grade Count:251
	231 - 240 MPa @Temperature -40.0 - - 40.0 °C	33500 - 34800 psi @Temperature -40.0 - - 40.0 °F	Average value: 236 MPa Grade Count:2
Elongation at Break	1.00 - 200 %	1.00 - 200 %	Average value: 4.04 % Grade Count:717

Mechanical Properties	Metric 2.00 - 6.80 %	English 2.00 - 6.80 %	Comments
	@Temperature 4.44 - 150 °C	@Temperature 40.0 - 302 °F	Average value: 4.99 % Grade Count:12
Elongation at Yield	2.00 - 11.0 %	2.00 - 11.0 %	Average value: 4.12 % Grade Count:72
	3.50 - 6.00 %	3.50 - 6.00 %	
	@Temperature 60.0 - 150 °C	@Temperature 140 - 302 °F	Average value: 4.68 % Grade Count:6
Modulus of Elasticity	1.00 - 15.0 GPa	145 - 2180 ksi	Average value: 8.43 GPa Grade Count:471
	0.220 - 11.05 GPa	31.9 - 1603 ksi	
	@Temperature -100 - 250 °C	@Temperature -148 - 482 °F	Average value: 5.50 GPa Grade Count:19
Flexural Yield Strength	65.0 - 325 MPa	9430 - 47100 psi	Average value: 226 MPa Grade Count:595
	100 - 315 MPa	14500 - 45700 psi	
	@Temperature -40.0 - 121 °C	@Temperature -40.0 - 250 °F	Average value: 184 MPa Grade Count:9
Flexural Modulus	0.758 - 13.5 GPa	110 - 1960 ksi	Average value: 7.83 GPa Grade Count:663
	3.10 - 10.8 GPa	450 - 1570 ksi	
	@Temperature -40.0 - 121 °C	@Temperature -40.0 - 250 °F	Average value: 5.75 GPa Grade Count:11
Compressive Yield Strength	28.0 - 241 MPa	4060 - 35000 psi	Average value: 145 MPa Grade Count:18
Poissons Ratio	0.350 - 0.420	0.350 - 0.420	Average value: 0.389 Grade Count:17
Fatigue Strength	>= 47.7 MPa	>= 6920 psi	Average value: 59.1 MPa Grade Count:2
	@Temperature 80.0 - 120 °C	@Temperature 176 - 248 °F	
	>= 47.7 MPa	>= 6920 psi	Average value: 59.1 MPa Grade Count:2
	@Time 7200 - 817000 sec	@Time 2.00 - 227 hour	
Shear Modulus	1.46 - 3.90 GPa	212 - 566 ksi	Average value: 2.45 GPa Grade Count:13
	>= 0.209 GPa	>= 30.3 ksi	
	@Temperature -50.0 - 250 °C	@Temperature -58.0 - 482 °F	Average value: 1.09 GPa Grade Count:9
Shear Strength	50.0 - 90.0 MPa	7250 - 13100 psi	Average value: 76.8 MPa Grade Count:26

Mechanical Properties	Metric	English	Comments
	0.457 - 75.0 J/cm	0.922 - 141 ft-lb/in	Average value: 1.37 J/cm Grade Count:3
	0.500 - 3.84408 J/cm	0.937 - 7.20154 ft-lb/in	Average value: 1.34 J/cm Grade Count:3
	@Temperature -40.0 - 149 °C	@Temperature -40.0 - 300 °F	
	0.64068 - 2.24238 J/cm	1.2003 - 4.20090 ft-lb/in	Average value: 1.34 J/cm Grade Count:5
	@Temperature -40.0 - 72.8 °C	@Temperature -40.0 - 163 °F	
	0.64068 - 2.24238 J/cm	1.2003 - 4.20090 ft-lb/in	Average value: 1.34 J/cm Grade Count:5
	@Thickness 3.17 - 3.17 mm	@Thickness 0.125 - 0.125 in	
Izod Impact, Unnotched	1.07 J/cm - NB	2.00 ft-lb/in - NB	Average value: 8.19 J/cm Grade Count:68
Izod Impact, Notched (ISO)	2.50 - 95.0 kJ/m ²	1.19 - 45.2 ft-lb/in ²	Average value: 13.0 kJ/m ² Grade Count:240
	5.00 - 19.0 kJ/m ²	2.38 - 9.04 ft-lb/in ²	Average value: 10.2 kJ/m ² Grade Count:111
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	
Izod Impact, Unnotched (ISO)	7.00 - 90.0 kJ/m ²	3.33 - 42.8 ft-lb/in ²	Average value: 60.9 kJ/m ² Grade Count:31

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