

Overview of materials for Nylon 66, Nucleated

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Nucleated

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	Average value: 1.14 g/cc Grade Count:16
Water Absorption	1.20 - 1.50 %	1.20 - 1.50 %	Average value: 1.28 % Grade Count:11
Moisture Absorption at Equilibrium	2.00 - 2.40 %	2.00 - 2.40 %	Average value: 2.32 % Grade Count:5
Water Absorption at Saturation	8.50 %	8.50 %	Average value: 8.50 % Grade Count:3
Linear Mold Shrinkage	0.0100 - 0.0200 cm/cm	0.0100 - 0.0200 in/in	Average value: 0.0143 cm/cm Grade Count:14
Linear Mold Shrinkage, Transverse	0.0160 cm/cm	0.0160 in/in	Average value: 0.0160 cm/cm Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	105 - 109	105 - 109	Average value: 106 Grade Count:3
Tensile Strength, Ultimate	50.0 - 90.0 MPa	7250 - 13100 psi	Average value: 73.5 MPa Grade Count:7
Tensile Strength, Yield	60.0 - 95.0 MPa	8700 - 13800 psi	Average value: 81.6 MPa Grade Count:13
Elongation at Break	7.00 - 60.0 %	7.00 - 60.0 %	Average value: 27.7 % Grade Count:15
Elongation at Yield	3.80 - 40.0 %	3.80 - 40.0 %	Average value: 12.6 % Grade Count:7
Modulus of Elasticity	2.50 - 3.80 GPa	363 - 551 ksi	Average value: 3.12 GPa Grade Count:5
Flexural Yield Strength	35.0 - 138 MPa	5080 - 20000 psi	Average value: 110 MPa Grade Count:15
	29.9922 - 29.9922 MPa @Temperature 90.0 - 90.0 °C	4350.01 - 4350.01 psi @Temperature 194 - 194 °F	Average value: 30.0 MPa Grade Count:1
Flexural Modulus	1.30 - 3.25 GPa	189 - 471 ksi	Average value: 2.75 GPa Grade Count:16

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	0.400 - 0.587 J/cm	0.749 - 1.10 ft-lb/in	Average value: 0.503 J/cm Grade Count:9
Izod Impact, Notched (ISO)	3.99 - 15.0 kJ/m ²	1.90 - 7.14 ft-lb/in ²	Average value: 8.00 kJ/m ² Grade Count:7
	3.00 - 5.00 kJ/m ² @Temperature -40.0 - - 20.0 °C	1.43 - 2.38 ft-lb/in ² @Temperature -40.0 - - 4.00 °F	Average value: 4.25 kJ/m ² Grade Count:6
Charpy Impact Unnotched	27.0 J/cm ² - NB	128 ft-lb/in ² - NB	Average value: 27.0 J/cm ² Grade Count:7
	10.0 - 999.9 J/cm ² @Temperature -30.0 - - 30.0 °C	47.6 - 4759 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 10.0 J/cm ² Grade Count:5
Charpy Impact, Notched	0.500 - 1.50 J/cm ²	2.38 - 7.14 ft-lb/in ²	Average value: 0.867 J/cm ² Grade Count:6
	0.300 - 0.500 J/cm ² @Temperature -30.0 - - 30.0 °C	1.43 - 2.38 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 0.447 J/cm ² Grade Count:6

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 - 80.0 µm/m-°C	5.56 - 44.4 µin/in-°F	Average value: 57.5 µm/m-°C Grade Count:7
CTE, linear, Transverse to Flow	10.0 - 80.0 µm/m-°C	5.56 - 44.4 µin/in-°F	Average value: 33.3 µm/m-°C Grade Count:3
Melting Point	254 - 260 °C	489 - 500 °F	Average value: 257 °C Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	210 - 237 °C	410 - 459 °F	Average value: 230 °C Grade Count:9
Deflection Temperature at 1.8 MPa (264 psi)	72.2 - 90.6 °C	162 - 195 °F	Average value: 83.6 °C Grade Count:14
UL RTI, Electrical	65.0 - 130 °C	149 - 266 °F	Average value: 122 °C Grade Count:3
UL RTI, Mechanical with Impact	65.0 - 75.0 °C	149 - 167 °F	Average value: 73.8 °C Grade Count:3
UL RTI, Mechanical without Impact	65.0 - 85.0 °C	149 - 185 °F	Average value: 81.3 °C Grade Count:3
Flammability, UL94	HB - V-2	HB - V-2	Grade Count:7
Oxygen Index	26.0 %	26.0 %	Average value: 26.0 % Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+10 - 1.00e+18 ohm-cm	1.00e+10 - 1.00e+18 ohm-cm	Average value: 1.68e+17 ohm-cm Grade Count:6

Dielectric Strength Electrical Properties	16.0 - 26.0 kV/mm Metric	406 - 660 kV/in English	Average value: 19.8 kV/mm Grade Count:5 Comments
Comparative Tracking Index	600 V	600 V	Average value: 600 V Grade Count:6

Processing Properties	Metric	English	Comments
Nozzle Temperature	263 - 300 °C	505 - 572 °F	Average value: 281 °C Grade Count:5
Melt Temperature	241 - 304 °C	465 - 580 °F	Average value: 276 °C Grade Count:8
Mold Temperature	26.7 - 95.0 °C	80.0 - 203 °F	Average value: 76.1 °C Grade Count:6
Drying Temperature	70.0 - 85.0 °C	158 - 185 °F	Average value: 75.0 °C Grade Count:6
Injection Pressure	4.96 - 138 MPa	720 - 20000 psi	Average value: 43.2 MPa Grade Count:3

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