

Overview of materials for Nylon 6, 30% Mineral Filled

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Mineral Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Nylon 6, 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-6-30-Mineral-Filled.php

Physical Properties	Metric	English	Comments
Density	1.20 - 1.62 g/cc	0.0434 - 0.0585 lb/in ³	Average value: 1.38 g/cc Grade Count:81
Water Absorption	0.200 - 8.00 %	0.200 - 8.00 %	Average value: 3.91 % Grade Count:52
Moisture Absorption at Equilibrium	0.170 - 3.00 %	0.170 - 3.00 %	Average value: 1.88 % Grade Count:37
Water Absorption at Saturation	6.00 - 7.50 %	6.00 - 7.50 %	Average value: 6.55 % Grade Count:6
Maximum Moisture Content	0.100	0.100	Average value: 0.100 Grade Count:4
Linear Mold Shrinkage	0.00150 - 0.0190 cm/cm	0.00150 - 0.0190 in/in	Average value: 0.00822 cm/cm Grade Count:64
Linear Mold Shrinkage, Transverse	0.00400 - 0.0189 cm/cm	0.00400 - 0.0189 in/in	Average value: 0.00895 cm/cm Grade Count:28
Melt Flow	3.00 - 81.6 g/10 min	3.00 - 81.6 g/10 min	Average value: 43.7 g/10 min Grade Count:21

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	82.0 - 93.0	82.0 - 93.0	Average value: 87.0 Grade Count:5
Hardness, Rockwell R	98.0 - 121	98.0 - 121	Average value: 115 Grade Count:9
Hardness, Shore D	73.0 - 85.0	73.0 - 85.0	Average value: 80.5 Grade Count:4
Ball Indentation Hardness	70.0 - 205 MPa	10200 - 29700 psi	Average value: 151 MPa Grade Count:10
Tensile Strength, Ultimate	30.0 - 128 MPa	4350 - 18500 psi	Average value: 68.4 MPa Grade Count:58
	20.0 - 107 MPa @Temperature -40.0 - 150 °C	2900 - 15500 psi @Temperature -40.0 - 302 °F	Average value: 40.3 MPa Grade Count:6

Tensile Strength, Yield Mechanical Properties	30.0 - 103 MPa Metric	4350 - 14900 psi English	Average value: 72.4 MPa Grade Count:24
Elongation at Break	1.00 - 70.0 %	1.00 - 70.0 %	Average value: 14.1 % Grade Count:66
	3.80 - 35.0 %	3.80 - 35.0 %	
	@Temperature 60.0 - 150 °C	@Temperature 140 - 302 °F	Average value: 16.2 % Grade Count:2
Elongation at Yield	2.50 - 40.0 %	2.50 - 40.0 %	Average value: 9.84 % Grade Count:9
Modulus of Elasticity	1.64 - 9.00 GPa	238 - 1310 ksi	Average value: 4.66 GPa Grade Count:52
	0.443 - 5.622 GPa	64.3 - 815.4 ksi	
	@Temperature -20.0 - 150 °C	@Temperature -4.00 - 302 °F	Average value: 2.18 GPa Grade Count:3
Flexural Yield Strength	50.0 - 190 MPa	7250 - 27500 psi	Average value: 114 MPa Grade Count:44
	53.0 - 168 MPa	7690 - 24400 psi	
	@Temperature -40.0 - 80.0 °C	@Temperature -40.0 - 176 °F	Average value: 114 MPa Grade Count:1
Flexural Modulus	0.600 - 7.70 GPa	87.0 - 1120 ksi	Average value: 4.41 GPa Grade Count:50
	0.800 - 8.00 GPa	116 - 1160 ksi	
	@Temperature -40.0 - 120 °C	@Temperature -40.0 - 248 °F	Average value: 2.65 GPa Grade Count:4
Izod Impact, Notched	0.250 - 2.60 J/cm	0.468 - 4.87 ft-lb/in	Average value: 0.673 J/cm Grade Count:24
	0.200 - 0.680 J/cm	0.375 - 1.27 ft-lb/in	
	@Temperature -40.0 - - 20.0 °C	@Temperature -40.0 - - 4.00 °F	Average value: 0.416 J/cm Grade Count:3
Izod Impact, Notched (ISO)	2.60 - 15.0 kJ/m²	1.24 - 7.14 ft-lb/in²	Average value: 7.65 kJ/m² Grade Count:18
	4.00 - 8.00 kJ/m²	1.90 - 3.81 ft-lb/in²	
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	Average value: 5.67 kJ/m² Grade Count:3
Izod Impact, Unnotched (ISO)	35.0 - 35.0 kJ/m²	16.7 - 16.7 ft-lb/in²	Average value: 35.0 kJ/m² Grade Count:1
	@Temperature -30.0 - - 30.0 °C	@Temperature -22.0 - - 22.0 °F	
Charpy Impact Unnotched	1.30 J/cm² - NB	6.19 ft-lb/in² - NB	Average value: 7.57 J/cm² Grade Count:51
	1.30 J/cm² - NB	6.19 ft-lb/in² - NB	
	@Temperature -40.0 -	@Temperature -40.0 -	Average value: 5.41 J/cm² Grade Count:27

Mechanical Properties	30.0 °C Metric	86.0 °F English	Comments
Charpy Impact, Notched	0.200 - 1.80 J/cm ²	0.952 - 8.57 ft-lb/in ²	Average value: 0.701 J/cm ² Grade Count:44
	0.100 - 1.00 J/cm ² @Temperature -30.0 - 30.0 °C	0.476 - 4.76 ft-lb/in ² @Temperature -22.0 - 86.0 °F	Average value: 0.430 J/cm ² Grade Count:22
Tensile Creep Modulus, 1000 hours	740 - 800 MPa	107000 - 116000 psi	Average value: 785 MPa Grade Count:4

Thermal Properties	Metric	English	Comments
CTE, linear	30.0 - 103 µm/m-°C	16.7 - 57.0 µin/in-°F	Average value: 58.5 µm/m-°C Grade Count:30
CTE, linear, Transverse to Flow	40.0 - 102 µm/m-°C	22.2 - 56.7 µin/in-°F	Average value: 61.4 µm/m-°C Grade Count:16
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² -°F	Average value: 0.310 W/m-K Grade Count:6
Melting Point	210 - 225 °C	410 - 437 °F	Average value: 220 °C Grade Count:61
Maximum Service Temperature, Air	65.0 - 180 °C	149 - 356 °F	Average value: 129 °C Grade Count:18
Deflection Temperature at 0.46 MPa (66 psi)	185 - 240 °C	365 - 464 °F	Average value: 201 °C Grade Count:37
Deflection Temperature at 1.8 MPa (264 psi)	65.0 - 250 °C	149 - 482 °F	Average value: 122 °C Grade Count:64
Deflection Temperature at 8.0 MPa	50.0 °C	122 °F	Average value: 50.0 °C Grade Count:3
Vicat Softening Point	191 - 255 °C	376 - 491 °F	Average value: 207 °C Grade Count:22
Decomposition Temperature	300 °C	572 °F	Average value: 300 °C Grade Count:4
UL RTI, Electrical	65.0 - 140 °C	149 - 284 °F	Average value: 108 °C Grade Count:11
UL RTI, Mechanical with Impact	65.0 - 120 °C	149 - 248 °F	Average value: 90.7 °C Grade Count:11
UL RTI, Mechanical without Impact	65.0 - 140 °C	149 - 284 °F	Average value: 108 °C Grade Count:11
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:59

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+9 - 1.00e+16 ohm-cm	1.00e+9 - 1.00e+16 ohm-cm	Average value: 7.42e+14 ohm-cm Grade Count:41
Surface Resistance	1.00e+10 - 1.00e+16 ohm	1.00e+10 - 1.00e+16 ohm	Average value: 1.45e+15 ohm Grade Count:23
Dielectric Constant	3.00 - 15.0	3.00 - 15.0	Average value: 5.03 Grade Count:18

Electrical Properties	Metric	English	Comments
Dielectric Strength	11.3 - 100 kV/mm	300 - 2540 kV/in	Average value: 29.3 kV/mm Grade Count:24
Dissipation Factor	0.00500 - 0.350	0.00500 - 0.350	Average value: 0.0868 Grade Count:17
Arc Resistance	120 - 185 sec	120 - 185 sec	Average value: 155 sec Grade Count:3
Comparative Tracking Index	250 - 600 V	250 - 600 V	Average value: 475 V Grade Count:43

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