

Overview of materials for Phenolic, Novolac, Woodflour Filled

Category : Polymer , Thermoset , Phenolic , Phenolic, Novolac, Woodflour Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Phenolic, Novolac, Woodflour 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-Phenolic-Novolac-Woodflour-Filled.php

Physical Properties	Metric	English	Comments
Density	1.36 - 1.43 g/cc	0.0491 - 0.0517 lb/in ³	Average value: 1.40 g/cc Grade Count:31
Apparent Bulk Density	0.560 - 0.620 g/cc	0.0202 - 0.0224 lb/in ³	Average value: 0.593 g/cc Grade Count:6
Water Absorption	0.247 - 0.640 %	0.247 - 0.640 %	Average value: 0.387 % Grade Count:31
Linear Mold Shrinkage	0.00340 - 0.0109 cm/cm	0.00340 - 0.0109 in/in	Average value: 0.00668 cm/cm Grade Count:31

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	75.0 - 93.0	75.0 - 93.0	Average value: 86.8 Grade Count:25
Tensile Strength, Ultimate	45.0 - 64.0 MPa	6530 - 9280 psi	Average value: 54.5 MPa Grade Count:31
Elongation at Break	0.410 - 0.920 %	0.410 - 0.920 %	Average value: 0.738 % Grade Count:25
Modulus of Elasticity	7.60 - 9.40 GPa	1100 - 1360 ksi	Average value: 8.40 GPa Grade Count:25
Flexural Yield Strength	68.0 - 97.0 MPa	9860 - 14100 psi	Average value: 83.4 MPa Grade Count:31
Flexural Modulus	6.80 - 9.00 GPa	986 - 1310 ksi	Average value: 7.82 GPa Grade Count:31
Compressive Yield Strength	155 - 234 MPa	22500 - 33900 psi	Average value: 208 MPa Grade Count:31
Poissons Ratio	0.330 - 0.360	0.330 - 0.360	Average value: 0.352 Grade Count:11
Shear Modulus	2.79 - 3.22 GPa	405 - 467 ksi	Average value: 3.00 GPa Grade Count:11
Izod Impact, Notched	0.153 - 0.241 J/cm	0.287 - 0.451 ft-lb/in	Average value: 0.187 J/cm Grade Count:25
Charpy Impact, Notched			Average value: 0.196 J/cm ² Grade

Mechanical Properties	0.178 - 0.249 J/cm ² Metric	0.847 - 1.19 ft-lb/in ² English	Count:25 Comments
Thermal Properties	Metric	English	Comments
CTE, linear	43.0 - 99.0 µm/m-°C @Temperature 40.0 - 130 °C	23.9 - 55.0 µin/in-°F @Temperature 104 - 266 °F	Average value: 62.3 µm/m-°C Grade Count:22
Thermal Conductivity	0.340 - 0.440 W/m-K @Temperature 100 - 100 °C	2.36 - 3.05 BTU-in/hr-ft ² -°F @Temperature 212 - 212 °F	Average value: 0.384 W/m-K Grade Count:15
Maximum Service Temperature, Air	187 - 207 °C	369 - 405 °F	Average value: 198 °C Grade Count:25
Deflection Temperature at 1.8 MPa (264 psi)	142 - 186 °C	288 - 367 °F	Average value: 168 °C Grade Count:31
UL RTI, Electrical	150 °C	302 °F	Average value: 150 °C Grade Count:6
UL RTI, Mechanical with Impact	150 °C	302 °F	Average value: 150 °C Grade Count:6
UL RTI, Mechanical without Impact	150 °C	302 °F	Average value: 150 °C Grade Count:6
Flammability, UL94	HB - V-1	HB - V-1	Grade Count:29
Oxygen Index	24.5 - 29.1 %	24.5 - 29.1 %	Average value: 26.4 % Grade Count:23

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.60e+11 - 5.00e+13 ohm-cm	1.60e+11 - 5.00e+13 ohm-cm	Average value: 2.81e+12 ohm-cm Grade Count:30
Dielectric Constant	4.00 - 6.10	4.00 - 6.10	Average value: 5.09 Grade Count:30
Dielectric Strength	8.50 - 16.7 kV/mm	216 - 424 kV/in	Average value: 12.0 kV/mm Grade Count:30
Dissipation Factor	0.0300 - 0.100	0.0300 - 0.100	Average value: 0.0531 Grade Count:30
Arc Resistance	25.0 - 144 sec	25.0 - 144 sec	Average value: 119 sec Grade Count:24
Comparative Tracking Index	125 - 200 V	125 - 200 V	Average value: 160 V Grade Count:30

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