

Overview of materials for Phenolic, Resole, Mineral Filled

Category : Polymer , Thermoset , Phenolic , Phenolic, Resole, Mineral Filled

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.39 - 1.51 g/cc	0.0502 - 0.0546 lb/in ³	Average value: 1.44 g/cc Grade Count:3
Water Absorption	0.360 - 0.540 %	0.360 - 0.540 %	Average value: 0.477 % Grade Count:3
Linear Mold Shrinkage	0.00300 - 0.00640 cm/cm	0.00300 - 0.00640 in/in	Average value: 0.00490 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	76.0 - 83.0	76.0 - 83.0	Average value: 79.0 Grade Count:3
Tensile Strength, Ultimate	50.0 - 58.0 MPa	7250 - 8410 psi	Average value: 55.3 MPa Grade Count:3
Elongation at Break	0.660 - 0.910 %	0.660 - 0.910 %	Average value: 0.817 % Grade Count:3
Modulus of Elasticity	7.50 - 8.90 GPa	1090 - 1290 ksi	Average value: 8.30 GPa Grade Count:3
Flexural Yield Strength	85.0 - 96.0 MPa	12300 - 13900 psi	Average value: 88.7 MPa Grade Count:3
Flexural Modulus	7.10 - 8.40 GPa	1030 - 1220 ksi	Average value: 7.73 GPa Grade Count:3
Compressive Yield Strength	184 - 200 MPa	26700 - 29000 psi	Average value: 194 MPa Grade Count:3
Izod Impact, Notched	0.156 - 0.188 J/cm	0.292 - 0.352 ft-lb/in	Average value: 0.170 J/cm Grade Count:3
Charpy Impact, Notched	0.187 - 0.196 J/cm ²	0.890 - 0.933 ft-lb/in ²	Average value: 0.193 J/cm ² Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	53.0 - 53.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 40.0 - 130 $^\circ\text{C}$	29.4 - 29.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 104 - 266 $^\circ\text{F}$	Average value: 53.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Grade Count:1

Thermal Properties	Metric	English	Comments
Temperature, Air	155 - 205 °C	250 - 401 °F	Average value: 194 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	173 - 190 °C	343 - 374 °F	Average value: 180 °C Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	8.00e+12 - 4.20e+13 ohm-cm	8.00e+12 - 4.20e+13 ohm-cm	Average value: 2.47e+13 ohm-cm Grade Count:3
Dielectric Constant	5.10 - 5.80	5.10 - 5.80	Average value: 5.53 Grade Count:3
Dielectric Strength	7.50 - 13.6 kV/mm	191 - 345 kV/in	Average value: 10.7 kV/mm Grade Count:3
Dissipation Factor	0.0330 - 0.0530	0.0330 - 0.0530	Average value: 0.0427 Grade Count:3
Arc Resistance	86.0 - 141 sec	86.0 - 141 sec	Average value: 119 sec Grade Count:3
Comparative Tracking Index	175 V	175 V	Average value: 175 V Grade Count:3

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