

Overview of materials for Phenolic, Novolac, Mineral/Fiber Filled

Category : Polymer , Thermoset , Phenolic , Phenolic, Novolac, Mineral/Fiber Filled

Material Notes:

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

| Physical Properties | Metric | English | Comments |
|-----------------------|------------------------|------------------------------------|---|
| Density | 1.46 - 1.58 g/cc | 0.0527 - 0.0571 lb/in ³ | Average value: 1.50 g/cc Grade Count:10 |
| Apparent Bulk Density | 0.500 - 0.680 g/cc | 0.0181 - 0.0246 lb/in ³ | Average value: 0.586 g/cc Grade Count:10 |
| Water Absorption | 0.300 - 0.400 % | 0.300 - 0.400 % | Average value: 0.360 % Grade Count:10 |
| Linear Mold Shrinkage | 0.00400 - 0.0110 cm/cm | 0.00400 - 0.0110 in/in | Average value: 0.00760 cm/cm Grade Count:10 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|--------------------|------------------------|---|
| Tensile Strength, Ultimate | 41.0 - 62.0 MPa | 5950 - 8990 psi | Average value: 53.6 MPa Grade Count:10 |
| Modulus of Elasticity | 9.00 - 11.0 GPa | 1310 - 1600 ksi | Average value: 10.1 GPa Grade Count:6 |
| Flexural Yield Strength | 72.0 - 86.0 MPa | 10400 - 12500 psi | Average value: 81.1 MPa Grade Count:10 |
| Flexural Modulus | 6.90 GPa | 1000 ksi | Average value: 6.90 GPa Grade Count:4 |
| Compressive Yield Strength | 166 - 235 MPa | 24100 - 34100 psi | Average value: 197 MPa Grade Count:10 |
| Izod Impact, Notched | 0.210 - 0.290 J/cm | 0.393 - 0.543 ft-lb/in | Average value: 0.250 J/cm Grade Count:4 |

| Thermal Properties | Metric | English | Comments |
|---|--------------|--------------|-------------------------------------|
| Maximum Service Temperature, Air | 150 - 160 °C | 302 - 320 °F | Average value: 157 °C Grade Count:6 |
| Deflection Temperature at 1.8 MPa (264 psi) | 177 - 191 °C | 351 - 376 °F | Average value: 186 °C Grade Count:6 |
| UL RTI, Electrical | 150 °C | 302 °F | Average value: 150 °C Grade Count:4 |
| UL RTI, Mechanical with Impact | 150 °C | 302 °F | Average value: 150 °C Grade Count:4 |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|-----------|-----------|-------------------------------------|
| UL 94, Mechanical without Impact | 150 °C | 300 °F | Average value: 150 °C Grade Count:4 |
| Flammability, UL94 | V-1 - V-0 | V-1 - V-0 | Grade Count:10 |

| Electrical Properties | Metric | English | Comments |
|----------------------------|----------------------------|----------------------------|--|
| Electrical Resistivity | 2.20e+10 - 1.00e+12 ohm-cm | 2.20e+10 - 1.00e+12 ohm-cm | Average value: 7.55e+11 ohm-cm Grade Count:8 |
| Dielectric Constant | 5.00 - 5.50 | 5.00 - 5.50 | Average value: 5.13 Grade Count:6 |
| Dielectric Strength | 10.8 - 14.7 kV/mm | 274 - 373 kV/in | Average value: 12.5 kV/mm Grade Count:10 |
| Dissipation Factor | 0.0400 - 0.0500 | 0.0400 - 0.0500 | Average value: 0.0483 Grade Count:6 |
| Comparative Tracking Index | 180 - 225 V | 180 - 225 V | Average value: 191 V Grade Count:10 |

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