

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

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

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.74 - 2.06 g/cc	0.0629 - 0.0744 lb/in ³	Average value: 1.83 g/cc Grade Count:8
Water Absorption	0.0350 - 0.0480 %	0.0350 - 0.0480 %	Average value: 0.0431 % Grade Count:8
Linear Mold Shrinkage	0.00173 - 0.00420 cm/cm	0.00173 - 0.00420 in/in	Average value: 0.00261 cm/cm Grade Count:8

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	58.0 - 61.0	58.0 - 61.0	Average value: 59.2 Grade Count:5
Tensile Strength, Ultimate	31.0 - 89.0 MPa	4500 - 12900 psi	Average value: 43.9 MPa Grade Count:8
Elongation at Break	0.236 - 0.580 %	0.236 - 0.580 %	Average value: 0.399 % Grade Count:8
Modulus of Elasticity	10.3 - 29.0 GPa	1490 - 4210 ksi	Average value: 15.2 GPa Grade Count:8
Flexural Yield Strength	55.0 - 163 MPa	7980 - 23600 psi	Average value: 76.3 MPa Grade Count:8
Flexural Modulus	10.0 - 26.0 GPa	1450 - 3770 ksi	Average value: 13.3 GPa Grade Count:8
Compressive Yield Strength	117 - 269 MPa	17000 - 39000 psi	Average value: 151 MPa Grade Count:8
Izod Impact, Notched	0.156 - 0.174 J/cm	0.292 - 0.326 ft-lb/in	Average value: 0.163 J/cm Grade Count:7
Charpy Impact, Notched	0.144 - 0.260 J/cm ²	0.685 - 1.24 ft-lb/in ²	Average value: 0.178 J/cm ² Grade Count:8

Thermal Properties	Metric	English	Comments
CTE, linear	32.0 - 38.0 $\mu\text{m}/\text{m}\cdot\text{C}$	17.8 - 21.1 $\mu\text{in}/\text{in}\cdot\text{F}$	Average value: 34.0 $\mu\text{m}/\text{m}\cdot\text{C}$ Grade Count:3
	@Temperature 40.0 - 130 $^{\circ}\text{C}$	@Temperature 104 - 266 $^{\circ}\text{F}$	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	1.22 - 1.94 W/m-K @Temperature 100 - 100 °C	5.1 - 13.5 BTU-in/hr-ft ² -°F @Temperature 212 - 212 °F	Average value: 1.58 W/m-K Grade Count:2
Maximum Service Temperature, Air	200 - 257 °C	392 - 495 °F	Average value: 220 °C Grade Count:7
Deflection Temperature at 1.8 MPa (264 psi)	180 - 222 °C	356 - 432 °F	Average value: 193 °C Grade Count:8

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