

Plenco 4414 Phenolic, Granular, Transfer Molded

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Phenolic , Phenolic, Novolac, Mineral/Flock Filled

Material Notes:

PLENCO 04414 is a flock and mineral filled phenolic molding compound. It is formulated for use in electrical applications that require improved heat resistance, mechanical strength, and dimensional stability. UL recognized under component file E40654. 04414 is available in black. Information supplied by Plenco.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Plenco-4414-Phenolic-Granular-Transfer-Molded.php

Physical Properties	Metric	English	Comments
Bulk Density	0.630 g/cc	0.0228 lb/in ³	ASTM D1895
Density	1.54 g/cc	0.0556 lb/in ³	ASTM D792
Water Absorption	0.21 %	0.21 %	ASTM D570
Linear Mold Shrinkage	0.0034 cm/cm	0.0034 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	79	79	ASTM D785
Tensile Strength, Ultimate	52.0 MPa	7540 psi	ASTM D638
Elongation at Break	0.61 %	0.61 %	ASTM D638
Tensile Modulus	10.1 GPa	1460 ksi	ASTM D638
Flexural Strength	94.0 MPa	13600 psi	ASTM D790
Flexural Modulus	9.50 GPa	1380 ksi	ASTM D790
Compressive Strength	175 MPa	25400 psi	ASTM D695
Izod Impact, Notched	0.236 J/cm	0.442 ft-lb/in	ASTM D256
Charpy Impact, Notched	0.218 J/cm ²	1.04 ft-lb/in ²	ASTM D256
Impact	113	113	J/m Drop Ball Impact; PLENCO

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	203 °C	397 °F	Heat Resistance; ASTM D570D
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	ASTM D648
Flammability, UL94	V-1	V-1	

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
Oxygen Index	31 %	31 %	ASTM D2863
Shrinkage	0.145 %	0.145 %	72 hr, 120°C; ASTM D1299

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.10e+11 ohm-cm	4.10e+11 ohm-cm	ASTM D247
Dielectric Constant	5.3	5.3	ASTM D150
Dielectric Strength	11.9 kV/mm	302 kV/in	Short Time; ASTM D149
Dissipation Factor	0.051	0.051	ASTM D150
Arc Resistance	162 sec	162 sec	ASTM D495
Comparative Tracking Index	175 V	175 V	ASTM D3638

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