

Plenco 4599 Phenolic, Granular, Injection Molded

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

Material Notes:

PLENCO 04599 is a mineral filled, phenolic molding compound offering excellent heat resistance and dimensional stability, typically required for automotive ashtray applications. 04599 is formulated to provide improved cosmetic characteristics and mechanical strength properties. 04599 is available in black. Information supplied by Plenco.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Plenco-4599-Phenolic-Granular-Injection-Molded.php

Physical Properties	Metric	English	Comments
Bulk Density	0.630 g/cc	0.0228 lb/in ³	ASTM D1895
Density	1.50 g/cc	0.0542 lb/in ³	ASTM D792
Water Absorption	0.275 %	0.275 %	ASTM D570
Linear Mold Shrinkage	0.0082 cm/cm	0.0082 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	108	108	ASTM D785
Tensile Strength, Ultimate	56.0 MPa	8120 psi	ASTM D638
Elongation at Break	0.72 %	0.72 %	ASTM D638
Tensile Modulus	9.60 GPa	1390 ksi	ASTM D638
Flexural Strength	90.0 MPa	13100 psi	ASTM D790
Flexural Modulus	8.50 GPa	1230 ksi	ASTM D790
Compressive Strength	183 MPa	26500 psi	ASTM D695
Poissons Ratio	0.35	0.35	ASTM D638
Shear Modulus	3.56 GPa	516 ksi	Calculated
Izod Impact, Notched	0.162 J/cm	0.303 ft-lb/in	ASTM D256
Charpy Impact, Notched	0.177 J/cm ²	0.842 ft-lb/in ²	ASTM D256
Impact	93	93	J/m Drop Ball Impact; PLENCO

Thermal Properties	Metric	English	Comments
CTE, linear	52.0 μm/m-°C	28.9 μin/in-°F	TMA; ASTM E831
	@Temperature 40.0 -	@Temperature 104 -	

Thermal Properties	130 °C Metric	266 °F English	Comments
Thermal Conductivity	0.490 W/m-K @Temperature 100 °C	3.40 BTU-in/hr-ft ² -°F @Temperature 212 °F	ASTM E1461
Maximum Service Temperature, Air	202 °C	396 °F	Heat Resistance; ASTM D570D
Deflection Temperature at 1.8 MPa (264 psi)	169 °C	336 °F	ASTM D648
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	
Oxygen Index	29.2 %	29.2 %	ASTM D2863
Shrinkage	0.286 %	0.286 %	72 hr, 120°C; ASTM D1299

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.20e+11 ohm-cm	3.20e+11 ohm-cm	ASTM D247
Dielectric Constant	6.1	6.1	ASTM D150
Dielectric Strength	6.90 kV/mm	175 kV/in	Step by Step; ASTM D149
	9.60 kV/mm	244 kV/in	Short Time; ASTM D149
Dissipation Factor	0.082	0.082	ASTM D150
Arc Resistance	159 sec	159 sec	ASTM D495
Comparative Tracking Index	175 V	175 V	ASTM D3638

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