

Plenco 4527 Phenolic, Granular, Injection Molded

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

Material Notes:

PLENCO 04527 is a heat resistant, mineral and flock filled phenolic molding compound, offering excellent mechanical strength, and resistance to cracking in a wet-dry environment. UL recognized under component file E40654. 04527 is available in black. Information supplied by Plenco.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Plenco-4527-Phenolic-Granular-Injection-Molded.php

Physical Properties	Metric	English	Comments
Bulk Density	0.620 g/cc	0.0224 lb/in ³	ASTM D1895
Density	1.58 g/cc	0.0571 lb/in ³	ASTM D792
Water Absorption	0.40 %	0.40 %	ASTM D570
Linear Mold Shrinkage	0.0053 cm/cm	0.0053 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	57	57	ASTM D785
Tensile Strength, Ultimate	53.0 MPa	7690 psi	ASTM D638
Elongation at Break	0.85 %	0.85 %	ASTM D638
Tensile Modulus	10.1 GPa	1460 ksi	ASTM D638
Flexural Strength	79.0 MPa	11500 psi	ASTM D790
Flexural Modulus	8.60 GPa	1250 ksi	ASTM D790
Compressive Strength	139 MPa	20200 psi	ASTM D695
Poissons Ratio	0.34	0.34	ASTM D638
Shear Modulus	3.77 GPa	547 ksi	Calculated
Izod Impact, Notched	0.190 J/cm	0.356 ft-lb/in	ASTM D256
Charpy Impact, Notched	0.205 J/cm ²	0.976 ft-lb/in ²	ASTM D256
Impact	144	144	J/m Drop Ball Impact; PLENCO

Thermal Properties	Metric	English	Comments
CTE, linear	34.0 µm/m-°C	18.9 µin/in-°F	TMA; ASTM E831
	@Temperature 40.0 -	@Temperature 104 -	

Thermal Properties	130 °C Metric	266 °F English	Comments
Thermal Conductivity	0.550 W/m-K @Temperature 100 °C	3.82 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)	204 °C	399 °F	ASTM D648
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	
Oxygen Index	31 %	31 %	ASTM D2863
Shrinkage	0.34 %	0.34 %	72 hr, 120°C; ASTM D1299

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.70e+12 ohm-cm	1.70e+12 ohm-cm	ASTM D247
Dielectric Constant	6.5	6.5	ASTM D150
Dielectric Strength	7.30 kV/mm	185 kV/in	Step by Step; ASTM D149
	9.40 kV/mm	239 kV/in	Short Time; ASTM D149
Dissipation Factor	0.162	0.162	ASTM D150
Arc Resistance	181 sec	181 sec	ASTM D495
Comparative Tracking Index	200 V	200 V	ASTM D3638

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