

# MATERIALS ENGINEERING

## Technical Datasheet

### **PLENCO 08218F**

#### Polyester BMC

#### compression molded

Plenco 08218F is an 18% glass-filled polyester bulk molding compound characterized as an electrical grade, but has many outstanding properties that make it suitable for a broad range of applications because of its excellent electrical resistance and mechanical strength. Customers have found this material useful for commercial/industrial heavy duty electrical parts, enclosures for power distribution equipment, fuse holders, circuit breaker cases, electric motor housings and components. It is available in Grey color and can be supplied in bulk or extruded form. It is UL recognized under file E40654.

PROPERTY	metric	english	ASTM Test Method
Form	bmc		
Apparent Density	g/cm <sup>3</sup>	lb/ft <sup>3</sup>	D1895
Specific Gravity	1.91		D792
Mold Shrinkage*	0.0020 m/m	0.0020 in/in	D6289
Post Shrinkage 72hr 120°C	0.01 %		D6289
Izod Impact Notched	500.3 J/m	9.37 ft·lb/in	D256
Charpy Impact Notched	516.1 J/m	9.67 ft·lb/in	D256
Drop Ball Impact	J/m	ft·lb/in	Plenco
Tensile Strength	53 MPa	7,683 psi	D638
Tensile Modulus	16,536 MPa	2,398,000 psi	D638
Tensile Elongation	0.7 %		D638
Flexural Strength	136.7 MPa	19,830 psi	D790
Flexural Modulus	14,267 MPa	2,069,000 psi	D790
Compressive Strength	150 MPa	21,720 psi	D695
Heat Resistance	218 °C	424 °F	D794
Deflection Temperature 1.82MPa	270 °C	518 °F	D648
Water Absorption	0.11 %		D570
Rockwell Hardness	61 E scale		D785
Dielectric Strength short time	12.6 kV/mm	319 V/mil	D149
Dissipation Factor, 1MHz	0.011		D150
Permittivity, 1MHz	4.4		D150
Volume Resistivity	2.5E+15 ohm·cm	1.0E+15 ohm·in	D257
ASTM Arc Resistance	190 sec		D495
Comparative Tracking Index	600 V		D3638
UL Flammability	V-0,5V-A @1.5mm		UL 94
Oxygen Index	%		D2863
Coefficient of Thermal Expansion	5.3E-05 /°C	3.0E-05 /°F	E831
Thermal Conductivity 100°C	0.93 W/m/°C	0.54 Btu/hr/ft/°F	E1461

Limited Shelf-Life. Actual shelf-life obtained is dependent on storage conditions, molding process, and mold design. Store in cool dry place.

*The Typical Values listed are results obtained from the testing of standard specimens using the stated test procedures, with said specimens molded under controlled laboratory conditions from representative samplings of the product. Although Plastics Engineering Company at all times reserves the right to make changes in the materials, suppliers and processing, the values listed as typical are those to be expected at the time of our manufacture. The final determination of the accuracy or completeness of any information, the suitability of the product for the use contemplated, the manner of its use, and the matter of any infringement of patents in use, are all the sole responsibility of the user. PLASTICS ENGINEERING COMPANY MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THIS PRODUCT, INCLUDING NO WARRANTY OF THE MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Plastics Engineering Company reserves at all times the right to discontinue the production of any or all of its products. This is an uncontrolled copy and not subject to updates.*

\*Mold Shrinkage obtained under controlled laboratory conditions with relatively simple mold geometry and should be used for comparison purposes only and not for actual tool design.