

MATERIALS ENGINEERING LABORATORY

 DATA REPORT

Plenco 08218

 Polyester BMC

Plenco 08218 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 bulk or extruded form and colors upon request. It is UL recognized under file E40654.

PROPERTY	metric	english	ASTM Test Method
Form	bmc		
Apparent Density	g/cm ³	lb/ft ³	D1895
Specific Gravity	1.85		D792
Mold Shrinkage*	0.0027 m/m	0.0027 in/in	D6289
Post Shrinkage 72hr 120°C	0.00 %		D6289
Izod Impact Notched	471.6 J/m	8.83 ft·lb/in	D256
Charpy Impact Notched	469.6 J/m	8.80 ft·lb/in	D256
Drop Ball Impact	J/m	ft·lb/in	Plenco
Tensile Strength	54 MPa	7,871 psi	D638
Tensile Modulus	13,888 MPa	2,014,000 psi	D638
Tensile Elongation	0.7 %		D638
Flexural Strength	137.1 MPa	19,891 psi	D790
Flexural Modulus	12,839 MPa	1,862,000 psi	D790
Compressive Strength	141 MPa	20,496 psi	D695
Heat Resistance	220 °C	428 °F	D794
Deflection Temperature 1.82MPa	270 °C	519 °F	D648
Water Absorption	0.10 %		D570
Rockwell Hardness	51 E scale		D785
Dielectric Strength short time	13.3 kV/mm	337 V/mil	D149
Dissipation Factor, 1MHz	0.020		D150
Permittivity, 1MHz	4.4		D150
Volume Resistivity	3.7E+16 ohm·cm	1.4E+16 ohm·in	D257
ASTM Arc Resistance	191 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

Specimens compression molded

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.