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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/cm³		lb/ft³	D1895
Specific Gravity	1.85				D792
Mold Shrinkage*	0.0027	m/m	0.0027	in/in	D6289
Post Shrinkage 72hr 120ºC	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	ºF	D794
Deflection Temperature 1.82MPa	270	°C	519	ºF	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	/ºC	3.0E-05	/ºF	E831
Thermal Conductivity 100ºC	0.93	W/m/ºC	0.54	Btu/hr/ft/ºF	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.

*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.