



Product Data

GRADE: PB

GENERAL DESCRIPTION

PB is a glass reinforced polyester moulding compound, which is moulded by the application of heat and pressure to form parts with good mechanical and electrical insulation properties.

SPECIAL CHARACTERISTICS

PB has a very low mould shrinkage and exhibits a smooth, low profile surface with excellent appearance and gloss. The material is fast curing and gives favourable cycle times, even on thick section mouldings.

PB is a flame retardant grade BMC with an oxygen index of 44% and has Underwriters Laboratory approval (UL94-VO rating at 1.5mm thickness). It has also gained NFF16-101 approval to class I0 F1.

TYPICAL PROPERTIES

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>UNITS</u>	<u>VALUE</u>
<u>Physical Properties</u>			
Density	BS2782 Method 620A	g/cm ³	1.80
Mould shrinkage	BS2782 Method 640A ISO 2577-75	%	0.01
Water absorption	BS2782 Method 430A ISO 62-80	mg	19
<u>Thermal Properties</u>			
After shrinkage (48 hr at 100°C)	BS2782 Method 640A ISO 2577	%	Zero
Temperature of deflection under load (1.8 Mpa)	BS2782 Method 121A ISO 75	°C	>200
Deflection under load at 100°C	BS2782 Method 121A ISO 75	mm	1.0
<u>Flame Retardant Properties</u>			
Oxygen index	BS2782 Method 141 ISO 4589	%	44
Underwriters' Laboratories approval	UL94 @ 1.5mm	Rating	V0
Flammability temperature index	BS6853 Appendix A	°C	>300
Smoke emission, 3 metre cube, Ao	BS6853 Method B.5.1	m ² /g	0.028
Toxic fume emission	LUL 6220 05 601	-	Compliant
NF F 16-101	NFF 16-101	Class	I0 F1
<u>Mechanical Properties</u>			
Charpy impact strength (notched)	BS2782 Method 359 ISO 179-82	kJ/m ²	22
Flexural strength	BS2782 Method 335A ISO 178-75	MPa	80
Flexural modulus	BS2782 Method 335A ISO 178-75	GPa	10
Tensile strength	BS2782 Method 320E	Mpa	25
<u>Electrical Properties</u>			
Electric strength at 90°C	BS2782 Method 220 ISO 243	MV/m	9.0
Arc resistance	ASTM D495-73	s	193
Insulation resistance	BS2782 Method 204C ISO 167	log ₁₀ ohms	11.2
Tracking resistance	BS5901	V	>600
Loss tangent at 1MHz	BS2782 Method 207A	---	0.010

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Before use consult the appropriate IDI Composites , Health and Safety Data.

The values quoted in the properties table have been obtained by standard test methods, using compression moulded specimens.

They provide useful comparisons between types but do not necessarily indicate the performance of commercial parts, which may differ due to a number of factors, including colour, component design, mould design, and method of manufacture and moulding.

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