

Beetle® PBTS830F

Polybutylene Terephthalate

Teknor Apex Company (Chem Polymer)

Message:

PBTS830F is a flame retarded 30% glass fibre filled PBT moulding grade that achieves V0 classification and displays good mechanical performance. It contains a RoHS permissible Brominated FR system.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Flame retardancy 2		
Features	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.71	g/cm ³	ISO 1183
Molding Shrinkage ¹	0.80 - 1.4	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	130	MPa	ISO 527-2
Tensile Strain (Break)	2.0	%	ISO 527-2
Flexural Modulus	9000	MPa	ISO 178
Flexural Stress ²	160	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	6.5	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	> 200	°C	ISO 75-2/B
1.8 MPa, not annealed	190	°C	ISO 75-2/A
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+17	ohms · cm	IEC 60093
Dielectric Strength (3.00 mm)	15	kV/mm	IEC 60243-1
Comparative Tracking Index	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		Internal method
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Oxygen Index	38	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	
Rear Temperature	240 - 260	°C	
Middle Temperature	240 - 260	°C	

Front Temperature	240 - 260	°C
Processing (Melt) Temp	< 270	°C
Mold Temperature	70.0 - 90.0	°C
Injection Rate	Moderate	
Screw Speed	50 - 200	rpm

Injection instructions

Back pressure: Low Injection pressure: High PBT materials are hygroscopic and very sensitive to moisture content during processing. Unlike many other materials, excessive moisture may not give rise to the appearance of splash marks on the surface of mouldings, but hydrolytic degradation of the melt can lead to significant impairment of properties, characterised most noticeably by embrittlement of the mouldings and reduced melt viscosity. Adequate pre-drying is therefore essential. Drying should ideally be carried out in a vacuum oven or a dehumidified air drier. The recommended drying time for dehumidified air dryers is 4 hours at 120°C. Drying times may need to be extended if the material has become very wet.

NOTE

1. Mould shrinkage is significantly influenced by many factors including wall thickness, gating, component shape and moulding conditions. The range values stated were determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).
2. Break

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