

# Beetle® PBTC130F

Polybutylene Terephthalate + PET  
Teknor Apex Company (Chem Polymer)

Message:

PBTC130F is a 30% glass fibre reinforced PBT+PET injection moulding grade. The formulation provides enhanced crystallisation dynamics for a good balance of thermal resistance, mechanical performance, surface finish and processing characteristics.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Highlight		
	Thermal stability, good		
	Good demoulding performance		
	Excellent appearance		
Forms	Particle		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT+PET-GF30		
Physical	Nominal Value	Unit	Test Method
Density	1.56	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>1</sup>	0.40 - 1.0	%	Internal method
Water Absorption (Equilibrium, 23°C, 50% RH)	0.060	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10500	MPa	ISO 527-2
Tensile Stress (Yield)	160	MPa	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Flexural Modulus	9500	MPa	ISO 178
Flexural Stress	210	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	9.0	kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength	45	kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact	7.0	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	> 210	°C	ISO 75-2/B
1.8 MPa, not annealed	208	°C	ISO 75-2/Ae
1.8 MPa, not annealed	200	°C	ISO 75-2/Af
Vicat Softening Temperature	201	°C	ISO 306
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms · cm	IEC 60093

Dielectric Strength (3.00 mm)	16	kV/mm	IEC 60243-1
Relative Permittivity	3.30		IEC 60250
Comparative Tracking Index	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, Teknor Apex test result)	HB		UL 94
Oxygen Index	20	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	
Rear Temperature	240 - 270	°C	
Middle Temperature	245 - 270	°C	
Front Temperature	250 - 275	°C	
Processing (Melt) Temp	260 - 275	°C	
Mold Temperature	80.0 - 110	°C	
Injection Rate	Fast		
Screw Speed	50 - 200	rpm	
Injection instructions			
Back Pressure: LowInjection Pressure: HighPolyester grades are very sensitive to moisture content during processing. Suitable pre-drying is essential. Excess moisture causes rapid hydrolytic degradation of the melt and severe impairment of mechanical properties. Low melt viscosity & brittle product are often the key indicators. Vacuum or dehumidified air driers must be used.			
NOTE			

Mould shrinkage is significantly influenced by many factors including wall thickness, gating, moulding shape and processing conditions. The range values given are 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).

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