

TechnoDur PBT4 GF 20 Natural (9990)

Polybutylene Terephthalate

TechnoCompound GmbH

Message:

TechnoDur: Braves extremely low Temperatures

Our new TechnoDur PBT compound is a thermoplastic which combines great hardness, stiffness and strength. TechnoDur is easily processed due to its perfect flow behaviour. The favourable sliding and wear characteristics as well as extremely high tenacity in temperatures below freezing are further advantages.

Typical Applications

TechnoDur compounds may be applied in the following areas:

Electrical engineering: Lamp holders, micro switches, spools, brush-holder bridges, switches, cam divices, telephone housings...

Automobile construction: Junction boxes, petrol filters, fuel tank caps, heating, folds, headlights, car body panels, spark plug connectors...

Household appliances: Hair care appliances, components for toasters, fondue makers, coffeemakers...

Other: pump components, gears guide applications: slide bearings and components...

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Features	Rigidity, high		
	High strength		
	Workability, good		
	Good liquidity		
	Low temperature resistance		
	Good wear resistance		
	High hardness		
Uses	Pump parts		
	Electrical/Electronic Applications		
	Electrical housing		
	Electrical appliances		
	Home appliance components		
	Switch		
	Application in Automobile Field		
Appearance	Bearing		
	Natural color		
Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			ISO 2577
Transverse flow	1.1	%	ISO 2577
Flow	0.30	%	ISO 2577
Water Absorption			ISO 62

23°C, 24 hr	0.20	%	ISO 62
Saturated, 23°C	0.40	%	ISO 62
Viscosity Number (Reduced Viscosity)	118.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness ²	190	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7400	MPa	ISO 527-2/1
Tensile Stress (Break)	130	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	%	ISO 527-2/5
Flexural Modulus ³	6500	MPa	ISO 178
Flexural Stress ⁴			ISO 178
--	190	MPa	ISO 178
3.5% strain	165	MPa	ISO 178
Flexural Strain at Flexural Strength ⁵	4.5	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	ISO 179/1eA
23°C	8.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m ²	ISO 179/1eU
23°C	50	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	220	°C	ISO 75-2/B
1.8 MPa, not annealed	205	°C	ISO 75-2/A
8.0 MPa, not annealed	95.0	°C	ISO 75-2/C
Vicat Softening Temperature	215	°C	ISO 306/B50
Melting Temperature ⁶	223	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 80°C	3.5E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	9.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength (1.00 mm)	28	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.80		IEC 60250
1 MHz	3.60		IEC 60250
Comparative Tracking Index (Solution A)	350	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.8 mm)	HB		Internal method
Glow Wire Flammability Index (2.0 mm)	650	°C	IEC 60695-2-12

NOTE	
1.	260°C / WZ 80°C, 600 bar
2.	358 N
3.	2.0 mm/min
4.	2.0 mm/min
5.	2.0 mm/min
6.	10°C/min

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