Datasheet
Pocan BFN4221 000000

PBT, 20% glass fibers, injection molding, halogen free flame retardant

ISO Shortname: ISO 20028-PBT,GF20,GFHMR,09-080; ISO 1043-4 FR(30+40)

Property	Test Condition	Unit	Standard	guide value [1]
Rheological properties				
C Melt volume-flow rate	260 °C; 2.16 kg	cm³/(10 min)	ISO 1133-1	15
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.7
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.2
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	8500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	90
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.4
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	35
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	30
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	30
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	25
Flexural modulus	2 mm/min	MPa	ISO 178-A	8300
Flexural strength	2 mm/min	MPa	ISO 178-A	140
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	2.4
Thermal properties				
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	220
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	207
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	222
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.3
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.9
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-0
C Burning behavior UL 94	0.4 mm	Class	UL 94	V-0
C Burning behavior UL 94-5V	1.5 mm	Class	UL 94	5VA
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	210
Glow wire test (GWFI)	0.4 mm	°C	IEC 60695-2-12	960
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960
Glow wire test (GWIT)	0.4 mm	°C	IEC 60695-2-13	775
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	775
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	800

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	Property	Test Condition	Unit	Standard	guide value [1]
	Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	800
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	205
	Electrical properties (23 °C/50 % r. h.)				
C	Volume resistivity		Ohm·m	IEC 62631-3	1.0E+13
C	Electric strength	1 mm	kV/mm	IEC 60243-1	33
C	Comparative tracking index CTI	Solution A	Rating	IEC 60112	525
	Comparative tracking index CTI	Solution A	PLC	UL 746A	0
	Other properties (23 °C)				
C	Density		kg/m³	ISO 1183	1470
	Bulk density		kg/m³	ISO 60	800
	Processing conditions for test specimens				
C	Injection molding-Melt temperature		°C	ISO 294	260
C	Injection molding-Mold temperature		°C	ISO 294	80
	Processing recommendations				
	Drying temperature circulating air dryer		°C	-	120
	Drying time circulating air dryer		h	-	4-8
	Melt temperature (Tmin - Tmax)		°C	-	250-270
	admissible residence time at Tmax		min	-	<5
	Mold temperature		°C	-	70-90

Notes

1 Typical properties: these are not to be construed as specifications

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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