

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	cm ³ /(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/m ²	ISO 179-1eU	35
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	30
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	30
Izod impact strength	-30 °C	kJ/m ²	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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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/m ³	ISO 1183	1470
Bulk density		kg/m ³	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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Disclaimer

Disclaimer for trial products

This is a trial product at the developmental stage. No definitive statements can therefore be made as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the trial product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damage, of whatever nature, arising out of such use. Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as non-binding approximate data only, and not as guide values or binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions and the coloring. The marketing and continued supply of this material are not assured and may be discontinued at any time. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the coloring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

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