

Datasheet

Pocan BF4215 000000

PBT, 12% glass fibers, injection molding, flame retardant

ISO Shortname: ISO 20028-PBT,GF12,GFHMR,09-060; ISO 1043-4 FR(17)

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	21
C Molding shrinkage, parallel	60x60x2; 250 °C / WZ 80° C; 600 bar	%	ISO 294-4	0.8
C Molding shrinkage, transverse	60x60x2; 250 °C / WZ 80° C; 600 bar	%	ISO 294-4	1.1
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	6000
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	100
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.5
C Tensile creep modulus	1 h	MPa	ISO 899-1	5500
C Tensile creep modulus	1000 h	MPa	ISO 899-1	5000
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	25
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	25
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	<10
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	<10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	20
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	20
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	<10
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	<10
Izod notched impact strength	-40 °C	kJ/m ²	ISO 180-1A	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5700
Flexural strength	2 mm/min	MPa	ISO 178-A	155
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.2
Ball indentation hardness		N/mm ²	ISO 2039-1	180
Thermal properties				
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	225
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	185
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	210
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	205
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.4
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.0
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

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C Oxygen index	Method A	%	ISO 4589-2	32
Thermal conductivity	23 °C	W/(m·K)	ISO 8302	0.2
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	210
Temperature index (Tensile strength)	20000 h	°C	IEC 60216-1	140
Halving interval (Tensile strength)		°C	IEC 60216-1	11.7
Relative temperature index (Tensile strength)		°C	UL 746B	140
Temperature index (Tensile impact strength)	20000 h	°C	IEC 60216-1	135
Halving interval (Tensile impact strength)		°C	IEC 60216-1	9.2
Relative temperature index (Tensile impact strength)		°C	UL 746B	130
Temperature index (Electric strength)	20000 h	°C	IEC 60216-1	145
Halving interval (Electric strength)		°C	IEC 60216-1	12.4
Relative temperature index (Electric strength)		°C	UL 746B	130
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)	0.75 mm	°C	IEC 60695-2-13	700
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	700
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	700
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.6
C Relative permittivity	1 MHz	-	IEC 60250	3.4
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	40
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	190
C Volume resistivity		Ohm·m	IEC 62631-3	>1E11
C Surface resistivity		Ohm	IEC 62631-3	>1E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	29
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	200
Comparative tracking index CTI	Solution A	PLC	UL 746A	2
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	0.3
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	0.1
C Density		kg/m ³	ISO 1183	1530
Bulk density		kg/m ³	ISO 60	800
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	250
C Injection molding-Mold temperature		°C	ISO 294	80

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Property	Test Condition	Unit	Standard	guide value ¹
Processing recommendations				
Drying temperature circulating air dryer		°C	-	120
Drying time circulating air dryer		h	-	4-8
Residual moisture content		%	Acc. to Karl Fischer	0.00-0.02
Melt temperature (Tmin - Tmax)		°C	-	240-260
Mold temperature		°C	-	80-100

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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