

Datasheet

Pocan ECOBFN4231 000000

PBT, 25% glass fibers, injection molding, halogen free flame retardant

ISO Shortname: ISO 20028-PBT,GF25 REC,GFHMR,09-100; ISO 1043-4 FR(30+40)

Property	Test Condition	Unit	Standard	guide value ¹
Rheological properties				
C Melt volume-flow rate	260 °C; 5 kg	cm ³ /(10 min)	ISO 1133-1	40
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.5
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	10000
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
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	40
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	35
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	36
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	33
Flexural modulus	2 mm/min	MPa	ISO 178-A	9800
Flexural strength	2 mm/min	MPa	ISO 178-A	165
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	210
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	224
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
C Oxygen index	Method A	%	ISO 4589-2	43.7
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	214
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	850
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	775

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Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	825
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	850
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	206
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.8
C Relative permittivity	1 MHz	-	IEC 60250	3.7
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	40
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	140
C Volume resistivity		Ohm·m	IEC 62631-3	2.3E14
C Surface resistivity		Ohm	IEC 62631-3	2.0E16
C Electric strength	1 mm	kV/mm	IEC 60243-1	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	575
Comparative tracking index CTI	Solution A	PLC	UL 746A	0
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	0.5
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	0.1
C Density		kg/m ³	ISO 1183	1520
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
Residual moisture content		%	Acc. to Karl Fischer	0.00-0.02
Melt temperature (T _{min} - T _{max})		°C	-	250-270
admissible residence time at T _{max}		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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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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