

Datasheet

Pocan B1300 000000

PBT, non-reinforced, injection molding, extrusion, suitable for food-contact

ISO Shortname: ISO 20028-PBT,,G,09-030

Property	Test Condition	Unit	Standard	guide value ¹
Rheological properties				
C Melt volume-flow rate	250 °C; 2.16 kg	cm ³ /(10 min)	ISO 1133-1	45
Molding shrinkage, parallel	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 294-4	1.9
Molding shrinkage, transverse	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 294-4	1.9
Post- shrinkage, parallel	150x105x3; 150 °C; 1 h	%	acc. ISO 294-4	0.5
Post- shrinkage, transverse	150x105x3; 150 °C; 1 h	%	acc. ISO 294-4	0.5
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2700
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	55
C Yield strain	50 mm/min	%	ISO 527-1,-2	8.0
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	>20
C Tensile creep modulus	1 h	MPa	ISO 899-1	2400
C Tensile creep modulus	1000 h	MPa	ISO 899-1	1400
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	220
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	150
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	150
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	150
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	2700
Flexural strength	2 mm/min	MPa	ISO 178-A	90
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	6.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	75
Energy to peak force	23 °C	Nm	acc. ISO 6603-2	110
Ball indentation hardness		N/mm ²	ISO 2039-1	120
C Puncture energy	23 °C	J	ISO 6603-2	40
C Puncture energy	-30 °C	J	ISO 6603-2	15
C Puncture maximum force	-30 °C	N	ISO 6603-2	3860
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	60

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Property	Test Condition	Unit	Standard	guide value ¹
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	160
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	45
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.2
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.3
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB
C Oxygen index	Method A	%	ISO 4589-2	24
Thermal conductivity	23 °C	W/(m·K)	ISO 8302	0.25
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	190
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	750
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	180
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.4
C Relative permittivity	1 MHz	-	IEC 60250	3.2
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	15
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	190
C Volume resistivity		Ohm·m	IEC 62631-3	>1E13
C Surface resistivity		Ohm	IEC 62631-3	>1E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	28
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	300 (275) M
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	0.2
C Density		kg/m ³	ISO 1183	1300
Bulk density		kg/m ³	ISO 60	800
Material specific properties				
C Viscosity number		cm ³ /g	ISO 1628-5	105
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

Notes

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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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