

Datasheet

Pocan B1600 000000

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

ISO Shortname: ISO 20028-PBT,,G,11-030

Property	Test Condition	Unit	Standard	guide value ¹
Rheological properties				
Göttfert melt viscosity	165 1/s; 260 °C	Pa·s	Lanxess-Methode	570
C Melt volume-flow rate	250 °C; 2.16 kg	cm ³ /(10 min)	ISO 1133-1	14
Molding shrinkage, parallel	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 294-4	1.8
Molding shrinkage, transverse	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 294-4	1.8
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	2600
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	55
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.0
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
C Tensile creep modulus	1 h	MPa	ISO 899-1	2200
C Tensile creep modulus	1000 h	MPa	ISO 899-1	1300
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	200
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	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	160
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	2650
Flexural strength	2 mm/min	MPa	ISO 178-A	85
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
Ball indentation hardness		N/mm ²	ISO 2039-1	120
C Puncture maximum force	-30 °C	N	ISO 6603-2	4275
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
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

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Property	Test Condition	Unit	Standard	guide value ¹
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 (GWI)	2.0 mm	°C	IEC 60695-2-12	750
Burning behavior US-FMVSS302			ISO 3795	passed
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 Electric strength	1 mm	kV/mm	IEC 60243-1	30
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	425 (375) 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	140
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

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.

Health and Safety

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Envalior products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your Envalior representative or contact the Product Safety and Regulatory Affairs Department. For materials that are not Envalior products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

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Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.