

Pocan B1305 000000

PBT, non-reinforced, injection molding

ISO/ ASTM

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

Property	Test Condition	Unit	Standard	guide value
Rheological properties				
C Melt volume-flow rate	250 °C; 2.16 kg	cm ³ /(10 min)	ISO 1133-1	47
C Molding shrinkage, parallel	60x60x2; 250 °C / WZ 80° C; 600 bar %		ISO 294-4	2.0
C Molding shrinkage, transverse	60x60x2; 250 °C / WZ 80° C; 600 bar %		ISO 294-4	2.0
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.3
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.3
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2800
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	60
C Yield strain	50 mm/min	%	ISO 527-1,-2	9.0
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	>10
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	180
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	125
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	90
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	80
Energy to peak force	23 °C	Nm	acc. ISO 6603-2	100
Ball indentation hardness		N/mm ²	ISO 2039-1	120
C Puncture maximum force	-30 °C	N	ISO 6603-2	2244
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	65
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	155
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	45
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	185
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10-4/K	ISO 11359-1,-2	1.1
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10-4/K	ISO 11359-1,-2	1.1
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
Temperature index (Tensile strength)	20000 h	°C	IEC 60216-1	150
Halving interval (Tensile strength)		°C	IEC 60216-1	12.6
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	12
Relative temperature index (Tensile impact strength)		°C	UL 746B	125
Temperature index (Electric strength)	20000 h	°C	IEC 60216-1	150
Halving interval (Electric strength)		°C	IEC 60216-1	12.6
Relative temperature index (Electric strength)		°C	UL 746B	140
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	750
Burning behavior US-FMVSS302			ISO 3795	passed

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 60093	>1E13
C Surface resistivity		Ohm	IEC 60093	>1E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	30
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600

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/m³	ISO 1183	1310
Bulk density		kg/m³	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

Processing recommendations

Drying temperature circulating air dryer		°C	-	120
Drying time circulating air dryer		h	-	4-8
Residual moisture content		%	Acc. to Karl Fischer	0-0.02
Melt temperature (Tmin - Tmax)		°C	-	250-260
Mold temperature		°C	-	80-100

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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Color and Visual Effects

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

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