

Datasheet

Pocan DP1105 000000

PBT, non-reinforced, injection molding, improved flowability

ISO Shortname: ISO 20028-PBT,,GHMR,07-030

Property	Test Condition	Unit	Standard	guide value ¹
Rheological properties				
C Melt volume-flow rate	250 °C; 1.2 kg	cm ³ /(10 min)	ISO 1133-1	42
C Molding shrinkage, parallel	60x60x2; 250 °C / WZ 80° C; 600 bar	%	ISO 294-4	2.2
C Molding shrinkage, transverse	60x60x2; 250 °C / WZ 80° C; 600 bar	%	ISO 294-4	2.4
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.3
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2850
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	65
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 Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	135
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	110
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	80
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	70
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
Flexural modulus	2 mm/min	MPa	ISO 178-A	2750
Flexural strength	2 mm/min	MPa	ISO 178-A	90
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	6.5
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	80
Ball indentation hardness		N/mm ²	ISO 2039-1	145
Thermal properties				
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	223
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	160
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	1.0
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	HB
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB
C Oxygen index	Method A	%	ISO 4589-2	25.1

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Glow wire test (GWI)	2.0 mm	°C	IEC 60695-2-12	700
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	14
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	224
C Volume resistivity		Ohm·m	IEC 62631-3	1E14
C Surface resistivity		Ohm	IEC 62631-3	1E17
C Electric strength	1 mm	kV/mm	IEC 60243-1	30.2
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/m ³	ISO 1183	1310
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
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	-	250-260
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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