LANXESS
Energizing Chemistry

Data sheet

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
Rheological properties				
Göttfert melt viscosity	165 1/s; 260 °C	Pa·s	Lanxess-Methode	570
C Melt volume-flow rate	260 °C; 2.16 kg	cm³/(10 min)	ISO 1133-1	14
Molding shrinkage, parallel	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 2577	1.8
Molding shrinkage, transverse	150x105x3; 260 °C / MT 80 °C; 600 bar	%	acc. ISO 2577	1.8
Post- shrinkage, parallel	150x105x3; 150 °C; 1 h	%	acc. ISO 2577	0.5
Post- shrinkage, transverse	150x105x3; 150 °C; 1 h	%	acc. ISO 2577	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/m²	ISO 179-1eU	N
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	200
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	< 10
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	< 10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	N
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	160
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	< 10
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	< 10
Izod notched impact strength	-40 °C	kJ/m²	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/mm²	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
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
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/m³	ISO 1183	1300
Bulk density	kg/m³	ISO 60	800
Material specific properties			
C Viscosity number	cm³/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

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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