

POCAN® B 1600 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

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

General Information	
Features	Food Contact Acceptable
Processing Method	Extrusion
	Injection Molding
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)
	Isochronous Stress vs. Strain (ISO 11403-1)
	Isothermal Stress vs. Strain (ISO 11403-1)
	Secant Modulus vs. Strain (ISO 11403-1)
	Shear Modulus vs. Temperature (ISO 11403-1)
	Specific Volume vs Temperature (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.30	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow : 260°C, 3.00 mm ¹	1.8	%	
Across Flow : 150°C, 1 hr, 3.00 mm ²	0.50	%	
Flow : 260°C, 3.00 mm ³	1.8	%	
Flow : 150°C, 1 hr, 3.00 mm ⁴	0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Viscosity Number (Reduced Viscosity)	140.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	120	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2600	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	55.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	4.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Tensile Creep Modulus			ISO 899-1

1 hr	2200	MPa	
1000 hr	1300	MPa	
Flexural Modulus ⁵ (23°C)	2650	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% Strain, 23°C	75.0	MPa	
23°C ⁶	85.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	6.0	%	ISO 178/A
Burning Behavior ⁸	passed		ISO 3795
Electrolytical Corrosion (23°C)	A 1		IEC 60426
Gottfert Melt Viscosity ⁹ (260°C)	570	Pa · s	Internal Method
ISO Shortname	PBT, G, 11-030		ISO 7792
Residual Moisture Content	0.0 to 0.020	%	Karl Fisher
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	< 10	kJ/m ²	
23°C	< 10	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	200	kJ/m ²	
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-40°C	< 10	kJ/m ²	
-30°C	< 10	kJ/m ²	
23°C	< 10	kJ/m ²	
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	160	kJ/m ²	
23°C	No Break		
Multi-Axial Instrumented Impact Peak Force (-30°C)	4280	N	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	160	°C	ISO 75-2/B
1.8 MPa, Unannealed	60.0	°C	ISO 75-2/A
8.0 MPa, Unannealed	45.0	°C	ISO 75-2/C
Vicat Softening Temperature	180	°C	ISO 306/B50
Ball Pressure Test (190°C)	Pass		IEC 60695-10-2
Melting Temperature ¹⁰	225	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : 23 to 55°C	1.2E-4	cm/cm/°C	
Transverse : 23 to 55°C	1.3E-4	cm/cm/°C	
Thermal Conductivity (23°C)	0.25	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Electric Strength (23°C, 1.00 mm)	30	kV/mm	IEC 60243-1

Relative Permittivity		IEC 60250	
23°C, 100 Hz	3.40		
23°C, 1 MHz	3.20		
Comparative Tracking Index		IEC 60112	
Solution A	600	V	
	375		
Solution B	425	V	
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	HB		
1.60 mm	HB		
Glow Wire Flammability Index (2.00 mm)	750	°C	IEC 60695-2-12
Oxygen Index ¹¹	24	%	ISO 4589-2
Injection	Nominal Value	Unit	Test Method
Drying Temperature - Circulation Dryer	120	°C	
Drying Time - Circulation Dryer	4.0 to 8.0	hr	
NOTE			
1.	150x105x3mm, 80°C MT, 600 bar		
2.	150x105x3mm		
3.	150x105x3mm, 80°C MT, 600 bar		
4.	150x105x3mm		
5.	2.0 mm/min		
6.	2.0 mm/min		
7.	2 mm/min		
8.	US-FMVSS302		
9.	165 1/s		
10.	10°C/min		
11.	Procedure A		

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