

POCAN® DP 1105 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, non-reinforced, injection molding, extrusion, improved flowability

General Information			
Features	Good liquidity		
Agency Ratings	EC 1907/2006 (REACH)		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.31	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (250°C/1.2 kg)	42.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Vertical flow direction: 250°C, 2.00mm ¹	2.4	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.10	%	ISO 2577
Flow direction: 250°C, 2.00mm ³	2.2	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.30	%	ISO 2577
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	145	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2850	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	65.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	9.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	10	%	ISO 527-2/50
Flexural Modulus ⁵ (23°C)	2750	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% strain, 23°C	80.0	MPa	ISO 178/A
23°C ⁶	90.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	6.5	%	ISO 178/A
ISO Shortname	PBT, GHMR, 07-030		ISO 7792
Residual Moisture Content	0.0 - 0.020	%	Karl Fisher

Impact	Nominal Value	Unit	Test Method
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Charpy Notched Impact Strength			ISO 179/1eA
-30°C	< 10	kJ/m ²	ISO 179/1eA
23°C	< 10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	110	kJ/m ²	ISO 179/1eU
23°C	140	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	< 10	kJ/m ²	ISO 180/1A
23°C	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	70	kJ/m ²	ISO 180/1U
23°C	80	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	160	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	°C	ISO 75-2/A
Vicat Softening Temperature	185	°C	ISO 306/B120
Melting Temperature ⁸	223	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	1.0E-4	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.0E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+17	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16	ohms · cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	30	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.40		IEC 60250
23°C, 1 MHz	3.20		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	1.4E-3		IEC 60250
23°C, 1 MHz	0.022		IEC 60250
Comparative Tracking Index (Solution A)	350	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	HB		UL 94
1.60 mm	HB		UL 94
Glow Wire Flammability Index (2.00 mm)	700	°C	IEC 60695-2-12
Oxygen Index ⁹	25	%	ISO 4589-2
Injection	Nominal Value	Unit	Test Method
Drying Temperature - Circulation Dryer	120	°C	
Drying Time - Circulation Dryer	4.0 - 8.0	hr	
Processing (Melt) Temp	250 - 260	°C	

Mold Temperature	80.0 - 100	°C
NOTE		
1.	60x60x2mm, 80°C MT, 600 bar	
2.	60x60x2mm	
3.	60x60x2mm, 80°C MT, 600 bar	
4.	60x60x2mm	
5.	2.0 mm/min	
6.	2.0 mm/min	
7.	2 mm/min	
8.	10°C/min	
9.	Procedure A	

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