

POCAN® BFN 4231 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, 25 % glass fibers, injection molding, halogen free flame retardant

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight		
Features	Halogen-free		
	Flame retardancy		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT GF FR(30+40)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.52	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	40.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction: 260°C, 2.00mm ¹	1.2	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.10	%	ISO 294-4
Flow direction: 260°C, 2.00mm ³	0.50	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	10500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	100	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.2	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	10000	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	165	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	2.4	%	
ISO Shortname	PBT, GFHMR, 09-110, GF25; ISO 1043-PBT GF FR(30+40)		ISO 7792
Residual Moisture Content	0.020	%	Karl Fisher
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	35	kJ/m ²	ISO 179/1eU
23°C	40	kJ/m ²	ISO 179/1eU
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	33	kJ/m ²	ISO 180/1U
23°C	36	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			

0.45 MPa, not annealed	224	°C	ISO 75-2/B
1.8 MPa, not annealed	210	°C	ISO 75-2/A
Vicat Softening Temperature	206	°C	ISO 306/B50
Ball Pressure Test (214°C)	Pass		IEC 60695-10-2
Melting Temperature ⁸	220	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	3.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	9.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	2.3E+16	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	35	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.400 mm	V-0		UL 94
0.750 mm	V-0		UL 94
	V-0		
1.50 mm	5VA		UL 94
3.00 mm	V-0		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.400 mm	960	°C	IEC 60695-2-12
0.750 mm	960	°C	IEC 60695-2-12
1.50 mm	960	°C	IEC 60695-2-12
3.00 mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.400 mm	850	°C	IEC 60695-2-13
0.750 mm	775	°C	IEC 60695-2-13
1.50 mm	825	°C	IEC 60695-2-13
3.00 mm	850	°C	IEC 60695-2-13
Oxygen Index ⁹	44	%	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 - 270	°C	
Mold Temperature	70.0 - 90.0	°C	
NOTE			
1.	60x60x2; MT 80°C; 600 Bar		
2.	60x60x2		
3.	60x60x2; MT 80°C; 600 Bar		

4.	60x60x2
5.	2.0 mm/min
6.	2.0 mm/min
7.	Pull Rate: 2 mm/min; 50% RH
8.	10°C/min
9.	Procedure A

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