

POCAN® BF 4409 000000

Polybutylene Terephthalate

LANXESS Corporation

Message:

PBT, 7 % glass fibers, injection molding, flame retardant

General Information			
UL YellowCard	E245249-474053		
Filler / Reinforcement	Glass fiber reinforced material, 7.0% filler by weight		
Additive	Flame retardancy		
Features	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.49	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
Vertical flow direction: 250°C, 2.00mm ¹	1.2	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.10	%	ISO 2577
Flow direction: 250°C, 2.00mm ³	1.3	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.20	%	ISO 2577
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	155	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	4700	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	80.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	4.4	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	4200	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% strain, 23°C	120	MPa	ISO 178/A
23°C ⁶	130	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.9	%	ISO 178/A
Electrolytical Corrosion (23°C)	A 1		IEC 60426
ISO Shortname	PBT, GFHMR, 11-050, GF7; ISO 1043-PBT GF FR (17)		ISO 7792
Residual Moisture Content	0.0 - 0.020	%	Karl Fisher
Impact	Nominal Value	Unit	Test Method

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	45	kJ/m ²	ISO 179/1eU
23°C	45	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-40°C	< 10	kJ/m ²	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	40	kJ/m ²	ISO 180/1U
23°C	40	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	205	°C	ISO 75-2/B
1.8 MPa, not annealed	150	°C	ISO 75-2/A
Vicat Softening Temperature	205	°C	ISO 306/B120
Ball Pressure Test (211°C)	Pass		IEC 60695-10-2
Melting Temperature ⁸	225	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	6.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.1E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+14	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	27	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.60		IEC 60250
23°C, 1 MHz	3.50		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	2.0E-3		IEC 60250
23°C, 1 MHz	0.019		IEC 60250
Comparative Tracking Index (Solution A)	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.400 mm)	V-0		UL 94
Glow Wire Flammability Index (0.400 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	725	°C	IEC 60695-2-13
1.60 mm	725	°C	IEC 60695-2-13
3.00 mm	725	°C	IEC 60695-2-13
Oxygen Index ⁹	31	%	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	240 - 260	°C	
Mold Temperature	80.0 - 100	°C	

NOTE

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|----|-----------------------------|
| 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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