

POCAN® BF 4235 000000

Polybutylene Terephthalate

LANXESS Asia/Pacific

Message:

PBT, 30 % glass fibers, injection molding, flame retardant

General Information			
UL YellowCard	E245249-101061124	E245249-522386	
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Flame retardancy		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT GF FR(17)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.66	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	24.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction: 250°C, 2.00mm ¹	1.1	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.10	%	ISO 294-4
Flow direction: 250°C, 2.00mm ³	0.40	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Viscosity Number (Reduced Viscosity)	93.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	210	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	10900	MPa	ASTM D638
23°C	11000	MPa	ISO 527-2/1
Tensile Strength			
Fracture, 23°C	133	MPa	ASTM D638
Fracture, 23°C	135	MPa	ISO 527-2/5
Tensile Elongation			
Fracture, 23°C	1.8	%	ASTM D638
Fracture, 23°C	2.1	%	ISO 527-2/5
Tensile Creep Modulus			ISO 899-1
1 hr	11000	MPa	ISO 899-1

1000 hr	10000	MPa	ISO 899-1
Flexural Modulus			
23°C	8550	MPa	ASTM D790
23°C ⁵	10500	MPa	ISO 178/A
Flexural Strength			
23°C	209	MPa	ASTM D790
23°C ⁶	210	MPa	ISO 178
Flexural Strain at Flexural Strength (23°C) ⁷	2.6	%	
Halving Interval			IEC 60216
-- ⁸	9.2	°C	IEC 60216
-- ⁹	12.4	°C	IEC 60216
-- ¹⁰	11.7	°C	IEC 60216
Temperature index ¹¹			IEC 60216
Electric Strength	145		IEC 60216
Tensile Impact Strength	135		IEC 60216
Tensile Strength	140		IEC 60216
Electrolytical Corrosion	A 1		IEC 60426
ISO Shortname	PBT, GFHMR, 07-110, GF30; 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	50	kJ/m ²	ISO 179/1eU
23°C	50	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	45	kJ/m ²	ISO 180/1U
23°C	45	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	220	°C	ISO 75-2/B
1.8 MPa, not annealed	205	°C	ISO 75-2/A
Vicat Softening Temperature	210	°C	ISO 306/B120
Ball Pressure Test (215°C)	Pass		IEC 60695-10-2
Melting Temperature ¹²	225	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	2.0E-5	cm/cm/°C	ISO 11359-2

Lateral: 23 to 55°C	9.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.22	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (23°C, 1.00 mm)	29	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	4.00		IEC 60250
23°C, 1 MHz	3.90		IEC 60250
Comparative Tracking Index (CTI)	PLC 2		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
1.50 mm	V-0		UL 94
3.00 mm	V-0		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.800 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
0.750 mm	725	°C	IEC 60695-2-13
1.50 mm	725	°C	IEC 60695-2-13
3.00 mm	725	°C	IEC 60695-2-13
Oxygen Index ¹³	32	%	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			
1.	60x60x2; WZ 80°C; 600 Bar		
2.	60x60x2		
3.	60x60x2; WZ 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.	Tensile Impact Strength		
9.	Electric Strength		
10.	Tensile Strength		

11.	20000 h
12.	10°C/min
13.	Procedure A

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

