

POCAN® BF 4215 000000

Polybutylene Terephthalate

LANXESS Corporation

Message:

PBT, 12 % glass fibers, injection molding, flame retardant

General Information			
UL YellowCard	E245249-522387		
Filler / Reinforcement	Glass Fiber, 12% Filler by Weight		
Features	Flame Retardant		
Processing Method	Injection Molding		
Resin ID (ISO 1043)	PBT GF FR(17)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.53	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow : 250°C, 2.00 mm ¹	1.1	%	
Across Flow : 120°C, 2 hr, 2.00 mm ²	0.10	%	
Flow : 250°C, 2.00 mm ³	0.80	%	
Flow : 120°C, 2 hr, 2.00 mm ⁴	0.10	%	
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.10	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	180	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	6000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	100	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.5	%	ISO 527-2/5
Tensile Creep Modulus			ISO 899-1
1 hr	5500	MPa	
1000 hr	5000	MPa	
Flexural Modulus ⁵ (23°C)	5700	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	155	MPa	ISO 178
Flexural Strain at Flexural Strength (23°C) ⁷	3.2	%	
Halving Interval			IEC 60216
-- ⁸	9.2	°C	
-- ⁹	12.4	°C	

-- 10	11.7	°C	
Temperature Index ¹¹			IEC 60216
Electric Strength	145		
Tensile Impact Strength	135		
Tensile Strength	140		
Electrolytical Corrosion	A 1		IEC 60426
ISO Shortname	PBT, GFHMR, 09-060, GF12; ISO 1043-PBT GF FR (17)		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	25	kJ/m ²	
23°C	25	kJ/m ²	
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	20	kJ/m ²	
23°C	20	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	210	°C	ISO 75-2/B
1.8 MPa, Unannealed	185	°C	ISO 75-2/A
Vicat Softening Temperature	205	°C	ISO 306/B120
Ball Pressure Test (205°C)	Pass		IEC 60695-10-2
Melting Temperature ¹²	225	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : 23 to 55°C	4.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	1.0E-4	cm/cm/°C	
Thermal Conductivity (23°C)	0.20	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+13	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	29	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.60		

23°C, 1 MHz	3.40		
Dissipation Factor			IEC 60250
23°C, 100 Hz	4.0E-3		
23°C, 1 MHz	0.019		
Comparative Tracking Index (Solution A)	200	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.400 mm)	V-0		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.800 mm	960	°C	
1.50 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	700	°C	
1.50 mm	700	°C	
3.00 mm	700	°C	
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 to 8.0	hr	
Processing (Melt) Temp	240 to 260	°C	
Mold Temperature	80.0 to 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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