

POCAN® B 4239 000000

Polybutylene Terephthalate

LANXESS Corporation

Message:

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

General Information			
UL YellowCard	E245249-474009		
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Features	Flame Retardant		
Agency Ratings	EC 1907/2006 (REACH)		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.67	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	37.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow : 250°C, 2.00 mm ¹	0.90	%	
Across Flow : 120°C, 2 hr, 2.00 mm ²	0.10	%	
Flow : 250°C, 2.00 mm ³	0.30	%	
Flow : 120°C, 2 hr, 2.00 mm ⁴	0.10	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	186	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	10100	MPa	ASTM D638
23°C	11500	MPa	ISO 527-2/1
Tensile Strength			
Break, 23°C	119	MPa	ASTM D638
Break, 23°C	125	MPa	ISO 527-2/5
Tensile Elongation			
Break, 23°C	2.2	%	ASTM D638
Break, 23°C	2.1	%	ISO 527-2/5
Flexural Modulus			
23°C	8360	MPa	ASTM D790
23°C ⁵	10500	MPa	ISO 178/A
Flexural Strength			
23°C	199	MPa	ASTM D790
23°C ⁶	200	MPa	ISO 178

Flexural Strain at Flexural Strength (23°C) ⁷	2.6	%	
Halving Interval			IEC 60216
-- ⁸	8.4	°C	
-- ⁹	12.0	°C	
-- ¹⁰	9.3	°C	
Temperature Index ¹¹			IEC 60216
Electric Strength	145		
Tensile Impact Strength	130		
Tensile Strength	155		
Electrolytical Corrosion	A/B 1		IEC 60426
ISO Shortname	PBT, GFHMR, 09-110, GF30; ISO 1043-PBT GF FR (17)		ISO 7792
Residual Moisture Content	0.0 to 0.020	%	Karl Fisher
Films	Nominal Value	Unit	Test Method
Film Puncture Energy			ISO 6603-2
-- ¹²	2.10	J	
-- ¹³	2.30	J	
Film Puncture Force			ISO 6603-2
-- ¹⁴	649	N	
-- ¹⁵	669	N	
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	50	kJ/m ²	
23°C	50	kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-30°C	< 10	kJ/m ²	
23°C	< 10	kJ/m ²	
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	45	kJ/m ²	
23°C	45	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	220	°C	ISO 75-2/B
1.8 MPa, Unannealed	200	°C	ISO 75-2/A
Vicat Softening Temperature	205	°C	ISO 306/B120
Ball Pressure Test (213°C)	Pass		IEC 60695-10-2
Melting Temperature ¹⁶	225	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : 23 to 55°C	2.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	cm/cm/°C	

Thermal Conductivity (23°C)	0.24	W/m/K	ISO 8302
RTI Elec	125	°C	UL 746
RTI Imp	110	°C	UL 746
RTI Str	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Electric Strength (23°C, 1.00 mm)	35	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.90		
23°C, 1 MHz	3.80		
Comparative Tracking Index (Solution A)	275	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.380 mm	V-0		
0.800 mm	V-0		
Glow Wire Flammability Index (0.800 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	725	°C	
1.60 mm	725	°C	
3.00 mm	725	°C	
Oxygen Index ¹⁷	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.	-30°C		
13.	23°C		
14.	-30°C		
15.	23°C		
16.	10°C/min		

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