

POCAN® S 1506 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, non-reinforced, injection molding, extrusion, improved impact strength

General Information			
UL YellowCard	E245249-474057		
Features	Good Impact Resistance		
Processing Method	Extrusion		
	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.20	g/cm ³	ISO 1183
Apparent Density	0.70	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow : 260°C, 2.00 mm ¹	1.8	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.40	%	
Flow : 260°C, 2.00 mm ³	2.0	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.30	%	
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	70.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	1700	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	35.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	4.5	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Tensile Creep Modulus			ISO 899-1

1 hr	1400	MPa	
1000 hr	700	MPa	
Flexural Modulus ⁵ (23°C)	1600	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% Strain, 23°C	50.0	MPa	
23°C ⁶	55.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	6.0	%	ISO 178/A
Electrolytical Corrosion (23°C)	A 1		IEC 60426
ISO Shortname	PBT, GHPR, 11-020		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	25	kJ/m ²	
23°C	75	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-30°C	20	kJ/m ²	
23°C	70	kJ/m ²	
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C, Energy to Peak Force	90.0	J	
23°C, Energy to Peak Force	110	J	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	90.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	55.0	°C	ISO 75-2/A
Vicat Softening Temperature	116	°C	ISO 306/B120
Ball Pressure Test (180°C)	Pass		IEC 60695-10-2
Melting Temperature ⁸	225	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : 23 to 55°C	1.3E-4	cm/cm/°C	
Transverse : 23 to 55°C	1.3E-4	cm/cm/°C	
Thermal Conductivity (23°C)	0.22	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	28	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250

23°C, 100 Hz	3.20		
23°C, 1 MHz	3.10		
Dissipation Factor			IEC 60250
23°C, 100 Hz	3.0E-3		
23°C, 1 MHz	0.017		
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	HB		
1.60 mm	HB		
Glow Wire Flammability Index (2.00 mm)	650	°C	IEC 60695-2-12
Oxygen Index ⁹	22	%	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	250 to 270	°C	
Mold Temperature	80.0 to 100	°C	
NOTE			
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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