

POCAN® KL 1-7033 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, 30 % glass fibers, injection molding, improved impact strength

General Information	
UL YellowCard	E245249-474034
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight
Features	Impact resistance, good
Agency Ratings	EC 1907/2006 (REACH)
Forms	Particle
Processing Method	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)	1.46	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	13.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction: 260°C, 2.00mm ¹	0.90	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.20	%	ISO 294-4
Flow direction: 260°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	0.20	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	160	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	8000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	95.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	4.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	7600	MPa	ISO 178/A

Flexural Stress ⁶			
3.5% strain	155	MPa	ISO 178/A
23°C	160	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.8	%	
Electrolytical Corrosion	A 1		IEC 60426
ISO Shortname	PBT, GHMPR, 09-080, GF30		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	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	65	kJ/m ²	ISO 179/1eU
23°C	65	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	12	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	55	kJ/m ²	ISO 180/1U
23°C	55	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	195	°C	ISO 75-2/A
Vicat Softening Temperature	185	°C	ISO 306/B120
Ball Pressure Test (210°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	3.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.0E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.27	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+14	ohms · cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	28	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	4.60		IEC 60250
23°C, 1 MHz	3.90		IEC 60250
Dissipation Factor (23°C, 1 MHz)	0.026		IEC 60250
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method

Flame Rating			UL 94
0.800 mm	HB		UL 94
1.60 mm	HB		UL 94
Glow Wire Flammability Index (2.00 mm)	650	°C	IEC 60695-2-12
Oxygen Index ⁹	21	%	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	250 - 270	°C	
Mold Temperature	80.0 - 100	°C	

NOTE

1.	60x60x2; MT 80°C; 600 Bar
2.	60x60x2
3.	60x60x2; MT 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.	10°C/min
9.	Procedure A

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