

POCAN® KU 1-7313 000000

Polybutylene Terephthalate + PET

LANXESS GmbH

Message:

PBT+PET, 15 % glass fibers, injection molding, improved surface finish, increased temperature peak load

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Features	Excellent appearance		
Agency Ratings	EC 1907/2006 (REACH)		
Processing Method	Injection molding		
Multi-Point Data	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.43	g/cm ³	ISO 1183
Apparent Density	0.70	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	18.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction: 270°C, 2.00mm ¹	1.0	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.20	%	ISO 294-4
Flow direction: 270°C, 2.00mm ³	0.50	%	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
Viscosity Number (Reduced Viscosity)	95.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	180	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	6100	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	110	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.2	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	6000	MPa	ISO 178/A
Flexural Stress ⁶			
3.5% strain	165	MPa	ISO 178/A
23°C	170	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.8	%	
Electrolytical Corrosion	A 1		IEC 60426
ISO Shortname	PBT+PET, GHMR, 09-060, GF15		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	30	kJ/m ²	ISO 179/1eU
23°C	30	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	25	kJ/m ²	ISO 180/1U
23°C	25	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	185	°C	ISO 75-2/A
Vicat Softening Temperature	205	°C	ISO 306/B50
Ball Pressure Test (210°C)	Pass		IEC 60695-10-2
Melting Temperature ⁸	225 - 250	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	5.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.1E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.25	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
Dielectric Strength (23°C, 1.00 mm)	24	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.60		IEC 60250
23°C, 1 MHz	3.50		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	2.0E-3		IEC 60250
23°C, 1 MHz	0.017		IEC 60250
Comparative Tracking Index (Solution A)	225	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)	750	°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 - 8.0	hr	
Processing (Melt) Temp	260 - 280	°C	
Mold Temperature	80.0 - 100	°C	

NOTE

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|----|-----------------------------|
| 1. | 60x60x2; MT 90°C; 600 Bar |
| 2. | 60x60x2 |
| 3. | 60x60x2; MT 90°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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