

POCAN® KU 2-7241 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, 25 % glass fibres, injection moulding, flame retardant, improved impact strength

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight		
Features	Impact resistance, good		
	Flame retardancy		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT GF FR(17)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.60	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	5.00	cm ³ /10min	ISO 1133
Molding Shrinkage			
Vertical flow direction: 260°C, 3.00mm ¹	1.0	%	ISO 2577
Vertical flow direction: 150°C, 48 hours, 3.00mm ²	0.26	%	ISO 294-4
Flow direction: 260°C, 3.00mm ³	0.26	%	ISO 2577
Flow direction: 150°C, 48 hours, 3.00mm ⁴	0.070	%	ISO 2577
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	9000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	120	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.1	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	7800	MPa	ISO 178/A
Flexural Stress ⁶			
3.5% strain	190	MPa	ISO 178/A
23°C	195	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.6	%	
Gottfert Melt Viscosity (260°C)	220165 1/s		Internal method
ISO Shortname	PBT, GFHMPR, 11-090, GF25; ISO 1043-PBT GF FR (17)		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 (23°C)	70	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 (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	190	°C	ISO 75-2/A
8.0 MPa, not annealed	110	°C	ISO 75-2/C
Vicat Softening Temperature	200	°C	ISO 306/B50
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	9.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	30	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.80		IEC 60250
23°C, 1 MHz	3.70		IEC 60250
Comparative Tracking Index (Solution A)	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-0		UL 94
1.60 mm	V-0		UL 94
Oxygen Index ⁹	32	%	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.	150x150x3; MT 80°C; 600 Bar		
2.	150x105x3		
3.	150x150x3; MT 80°C; 600 Bar		
4.	150x150x3		
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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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

