

POCAN® KU 1-7301 000000

Polybutylene Terephthalate

LANXESS Corporation

Message:

PBT, non-reinforced, injection molding, food contact

General Information			
UL YellowCard	E245249-100129045		
Features	Compliance of Food Exposure		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.31	g/cm ³	ISO 1183
Apparent Density	0.80	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	60.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Vertical flow direction: 260°C, 2.00mm ¹	1.8	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.30	%	ISO 2577
Flow direction: 260°C, 2.00mm ³	1.8	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.30	%	ISO 2577
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Viscosity Number (Reduced Viscosity)	105.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	120	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2700	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	60.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	9.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 10	%	ISO 527-2/50
Tensile Creep Modulus			ISO 899-1
1 hr	2400	MPa	ISO 899-1
1000 hr	1400	MPa	ISO 899-1
Flexural Modulus ⁵ (23°C)	2650	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% strain, 23°C	80.0	MPa	ISO 178/A
23°C ⁶	90.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	6.0	%	ISO 178/A
Electrolytical Corrosion (23°C)	A 1		IEC 60426

ISO Shortname	PBT, GR, 09-030		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	150	kJ/m ²	ISO 179/1eU
23°C	180	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	90	kJ/m ²	ISO 180/1U
23°C	130	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy (23°C, Energy to Peak Force)	110	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	140	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	°C	ISO 75-2/A
Vicat Softening Temperature	180	°C	ISO 306/B120
Ball Pressure Test (190°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	1.1E-4	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)	30	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.40		IEC 60250
23°C, 1 MHz	3.20		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	1.5E-3		IEC 60250
23°C, 1 MHz	0.019		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)	750	°C	IEC 60695-2-12
Oxygen Index ⁹	24	%	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.	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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