

POCAN® DP 2004 000000

Polybutylene Terephthalate

LANXESS GmbH

Message:

PBT, non-reinforced, injection molding, halogen free flame retardant

General Information			
UL YellowCard	E245249-474030		
Additive	Flame retardancy		
Features	Halogen-free		
	Flame retardancy		
Agency Ratings	EC 1907/2006 (REACH)		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT FR (30+40)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.32	g/cm³	ISO 1183
Apparent Density	0.80	g/cm³	ISO 60
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	55.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 2577
Vertical flow direction: 250°C, 2.00mm ¹	2.3	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.10	%	ISO 2577
Flow direction: 250°C, 2.00mm ³	2.3	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.20	%	ISO 2577
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	120	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2300	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	55.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	8.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	10	%	ISO 527-2/50
Flexural Modulus ⁵ (23°C)	2100	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% strain, 23°C	60.0	MPa	ISO 178/A
23°C ⁶	75.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	6.5	%	ISO 178/A
ISO Shortname	PBT, GFHMR, 09-020		ISO 7792
Admissible Residence Time at Tmax		min	
Residual Moisture Content	0.0 - 0.020	%	Karl Fisher

Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	75	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	65	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	160	°C	ISO 75-2/B
1.8 MPa, not annealed	75.0	°C	ISO 75-2/A
Vicat Softening Temperature	185	°C	ISO 306/B120
Ball Pressure Test (202°C)	Pass		IEC 60695-10-2
Melting Temperature ⁸	224	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	1.2E-4	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.2E-4	cm/cm/°C	ISO 11359-2
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
Comparative Tracking Index (CTI)	PLC 0		UL 746
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-2		UL 94
1.50 mm	V-2		UL 94
3.00 mm	V-2		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.400 mm	960	°C	IEC 60695-2-12
0.750 mm	960	°C	IEC 60695-2-12
1.50 mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	800	°C	IEC 60695-2-13
1.50 mm	800	°C	IEC 60695-2-13
3.00 mm	800	°C	IEC 60695-2-13
Oxygen Index ⁹	28	%	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	240 - 260	°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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Recommended distributors for this material

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

