

POCAN® B 1505 000000

Polybutylene Terephthalate
LANXESS GmbH

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

PBT, non-reinforced, injection molding, extrusion

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet - ASTM (English) • Technical Datasheet - ISO (English)
UL Yellow Card ²	• E245249-100603183
Search for UL Yellow Card	• LANXESS GmbH • POCAN®
Availability	• Africa & Middle East • Europe
Processing Method	• Extrusion • Injection Molding
Multi-Point Data	• Creep Modulus vs. Time (ISO 11403-1) • Secant Modulus vs. Strain (ISO 11403-1) • Isochronous Stress vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature • Viscosity vs. Shear Rate (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1) • Specific Volume vs Temperature (ISO 11403-2)

Physical	Nominal Value Unit	Test Method
Density (23°C)	• 1.31 • 1.31 g/cm ³	ISO 1183
Apparent Density	0.80 g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	16.0 cm ³ /10min	ISO 1133
Molding Shrinkage		ISO 2577
Across Flow : 250°C, 2.00 mm ⁴	2.1 %	
Across Flow : 120°C, 4 hr, 2.00 mm ⁵	0.20 %	
Flow : 250°C, 2.00 mm ⁴	2.1 %	
Flow : 120°C, 4 hr, 2.00 mm ⁵	0.20 %	
Water Absorption		ISO 62
Saturation, 23°C	• 0.50 • 0.50 %	
Equilibrium, 23°C, 50% RH	• 0.20 • 0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
23°C	2470 MPa	ASTM D638
23°C	2700 MPa	ISO 527-2/1
Tensile Stress		
Yield, 23°C	60.0 MPa	ISO 527-2/50
Break, 23°C	33.8 MPa	ASTM D638
Tensile Strain		
Yield, 23°C	9.0 %	ISO 527-2/50
Break, 23°C	29 %	ASTM D638
Nominal Tensile Strain at Break (23°C)	> 15 %	ISO 527-2/50
Tensile Creep Modulus		ISO 899-1
1 hr	2200 MPa	
1000 hr	1300 MPa	
Flexural Modulus		
23°C	2090 MPa	ASTM D790
23°C ⁶	2650 MPa	ISO 178/A



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Mechanical	Nominal Value Unit	Test Method
Flexural Strength		
23°C	85.5 MPa	ASTM D790
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
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-30°C	< 10 kJ/m ²	
23°C	< 10 kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	180 kJ/m ²	
23°C	No Break	
Notched Izod Impact Strength		ISO 180/1A
-40°C	< 10 kJ/m ²	
-30°C	< 10 kJ/m ²	
23°C	< 10 kJ/m ²	
Unnotched Izod Impact Strength		ISO 180/1U
-30°C	150 kJ/m ²	
23°C	No Break	
Multi-Axial Instrumented Impact Energy		ISO 6603-2
-30°C	32.0 J	
23°C	22.0 J	
Multi-Axial Instrumented Impact Peak Force		ISO 6603-2
-30°C	5190 N	
23°C	3650 N	
Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness	120 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	150 °C	ISO 75-2/B
1.8 MPa, Unannealed	60.0 °C	ISO 75-2/A
8.0 MPa, Unannealed	45.0 °C	ISO 75-2/C
Ball Pressure Test (190°C)	Pass	IEC 60695-10-2
Melting Temperature ⁸	225 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow : 23 to 55°C	1.2E-4 cm/cm/°C	
Transverse : 23 to 55°C	1.2E-4 cm/cm/°C	
Thermal Conductivity (23°C)	0.25 W/m/K	ISO 8302
RTI Elec	140 °C	UL 746
RTI Imp	125 °C	UL 746
RTI Str	140 °C	UL 746
Halving Interval		IEC 60216
Electric Strength	12.6 °C	
Tensile Impact Strength	12.0 °C	
Tensile Strength	12.6 °C	
Temperature Index		IEC 60216
Electric Strength, 20000 hr	150 °C	
Tensile Impact Strength, 20000 hr	135 °C	
Tensile Strength, 20000 hr	150 °C	
Electrical	Nominal Value Unit	Test Method
Electric Strength (23°C, 1.00 mm)	30 kV/mm	IEC 60243-1



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Electrical	Nominal Value Unit	Test Method
Relative Permittivity		IEC 60250
23°C, 100 Hz	3.40	
23°C, 1 MHz	3.20	
Comparative Tracking Index (Solution A)	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.8 mm	HB	
1.6 mm	HB	
Glow Wire Flammability Index (2.0 mm)	750 °C	IEC 60695-2-12
Oxygen Index ⁹	24 %	ISO 4589-2
Burning Behavior ¹⁰	passed	ISO 3795
Additional Information	Nominal Value Unit	Test Method
Electrolytical Corrosion (23°C)	A 1	IEC 60426
ISO Shortname	PBT, GHMR, 11-030	ISO 7792
Injection	Nominal Value Unit	Test Method
Drying Temperature - Circulation Dryer	120 °C	
Drying Time - Circulation Dryer	• 4.0 to 8.0 • 4.0 to 8.0 hr	
Processing (Melt) Temp	250 to 260 °C	
Mold Temperature	80 to 100 °C	
Residual Moisture Content	• 0.0 to 0.020 • 0.0 to 0.020 %	Karl Fisher

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 60x60x2mm, 80°C MT, 600 bar

⁵ 60x60x2mm

⁶ 2.0 mm/min

⁷ 2 mm/min

⁸ 10°C/min

⁹ Procedure A

¹⁰ US-FMVSS302



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Where to Buy

Supplier

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, Germany

Telephone: +49-221-8885-0

Web: <http://www.lanxess.de/>

Distributor

ALBIS Plastic

ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.

Telephone: +49-40-78105-0

Web: <http://www.albis.com/>

Availability: Austria, Belgium, China, Denmark, Estonia, Finland, France, Germany, Hong Kong, Ireland, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Russian Federation, Spain, Sweden, Switzerland, Turkey, United Kingdom

