

Technical Data Sheet



Schuladur PCR GF 45

Polybutylene Terephthalate + PET

LyondellBasell Industries

Engineering Plastics

Product Description

45% glass fibre reinforced PBT/PET compound based on mechanical recycled sourcing. Standard color is black, color matching for dark colors possible. Automotive structural applications are possible.

According to ISO 14021:2016 Schuladur PCR GF45 is a compound containing 15% of recycled material.

Recycled content according to DIN SPEC 91446:2021-12: R15

Data Quality Level according to DIN SPEC 91446:2021-12: DQL4

Data Quality Level according to VDA 284: DQL Automotive

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 45% Filler by Weight		
Recycled Content	• Post-Consumer (PCR), 15%		
Automotive Specifications	• GM GMW15702-019131 PBT+PET-GF45 Color: 96.8001 Black		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• (PBT+PET)-GF45		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.68 g/cm ³	1.68 g/cm ³	ISO 1183/A
Apparent (Bulk) Density	0.60 to 0.80 g/cm ³	0.60 to 0.80 g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR)			ISO 1133
260°C/2.16 kg	11 cm ³ /10min	11 cm ³ /10min	
260°C/5.0 kg	19 cm ³ /10min	19 cm ³ /10min	
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.25 %	0.25 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	2.25E+6 psi	15500 MPa	ISO 527-1/1A/1
Tensile Stress (Break)	23200 psi	160 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.7 %	1.7 %	ISO 527-2/1A/5
Flexural Modulus ¹	2.32E+6 psi	16000 MPa	ISO 178
Flexural Stress ¹	36300 psi	250 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	3.8 ft·lb/in ²	8.0 kJ/m ²	
73°F (23°C)	3.8 ft·lb/in ²	8.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	24 ft·lb/in ²	50 kJ/m ²	
73°F (23°C)	24 ft·lb/in ²	50 kJ/m ²	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 961/30)	43500 psi	300 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	437 °F	225 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	406 °F	208 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	392 °F	200 °C	ISO 306/B50
--	421 °F	216 °C	ISO 306/A50
Ball Pressure Test (392°F (200°C))	Pass	Pass	IEC 60695-10-2

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm)	0.98 in/min	25 mm/min	ISO 3795
0.0787 in (2.00 mm)	0.98 in/min	25 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.6 mm)	HB	HB	
0.13 in (3.2 mm)	HB	HB	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in (1.5 mm)	1290 °F	700 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in (1.5 mm), Passes	1520 °F	825 °C	
0.12 in (3.0 mm), Passes	1470 °F	800 °C	

Additional Information

- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

A Certificate of Analysis (CoA) is provided with every lot. DSC data is available on request. Content of not intentionally added other plastics is below 1%.

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	< 0.02 %	< 0.02 %
Processing (Melt) Temp	500 to 536 °F	260 to 280 °C
Mold Temperature	176 to 230 °F	80 to 110 °C

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Notes

¹ 0.079 in/min (2.0 mm/min)

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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