

Technical Data Sheet



Polyfort FPP 40 GFC SHI

Polypropylene Homopolymer
LyondellBasell Industries
Engineering Plastics

Product Description

40% glass fiber reinforced high impact PP-Homopolymer, chemically coupled

General

Material Status	• Commercial: Active
Availability	• Europe
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PP-H 40GFC HI

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.22 g/cm ³	1.22 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR)			ISO 1133
230°C/2.16 kg	2.0 cm ³ /10min	2.0 cm ³ /10min	
230°C/5.0 kg	7.0 cm ³ /10min	7.0 cm ³ /10min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.12E+6 psi	7700 MPa	ISO 527-1/1A/1
Tensile Stress (Break)	11600 psi	80.0 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	5.5 %	5.5 %	ISO 527-2/1A/5
Flexural Modulus ¹	957000 psi	6600 MPa	ISO 178
Flexural Stress ¹			ISO 178
4.5% Strain	17400 psi	120 MPa	
5.5% Strain ²	16200 psi	112 MPa	
3.5% Strain	17400 psi	120 MPa	
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)	8.6 ft·lb/in ²	18 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	26 ft·lb/in ²	55 kJ/m ²	
73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	17400 psi	120 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	309 °F	154 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	297 °F	147 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	248 °F	120 °C	ISO 306/B50
--	325 °F	163 °C	ISO 306/A50
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	1.0E+15 ohms	1.0E+15 ohms	IEC 60093
Volume Resistivity	1.0E+13 ohms·m	1.0E+13 ohms·m	IEC 62631-3-1

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	ISO 3795
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	

Additional Information

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

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Injection Rate	Moderate-Fast	Moderate-Fast

Injection Notes

Polypropylene is not hygroscopic and generally does not require drying. As a good practice and to avoid residual humidity from transport or storage conditions, we recommend drying the material.

Ensure good mold venting

Injection molding parameters also influence emission properties, which are often required for automotive interior applications. Generally speaking, the emission, odor and fogging behavior of finished parts is improved by lowering the melt temperature, reducing residence time and avoiding high shear stress.

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Notes

¹ 0.079 in/min (2.0 mm/min)

² at break

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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