

Technical Data Sheet

POLYFORT® PPH GBF 3020 RD H3

Polypropylene Homopolymer
Engineering Plastics

Product Description

Glass fibre reinforced PP-Homopolymer, chemically coupled with reduced Density and improved shrinkage. Long-term heat stabilized

General

Filler / Reinforcement	• Glass Fiber
Features	• Chemically Coupled • Heat Stabilized • Homopolymer
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PP-GF

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.00 g/cm ³	1.00 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	12 cm ³ /10min	12 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.2 %	1.2 %	
Flow	0.30 %	0.30 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	798000 psi	5500 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	12500 psi	86.0 MPa	ISO 527-2
Tensile Strain (Break)	3.0 %	3.0 %	ISO 527-2

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	3.3 ft·lb/in ²	7.0 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)	14 ft·lb/in ²	30 kJ/m ²	
73°F (23°C)	21 ft·lb/in ²	45 kJ/m ²	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	20300 psi	140 MPa	ISO 2039-1

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	302 °F	150 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	284 °F	140 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	302 °F	150 °C	ISO 306/A50
--	266 °F	130 °C	ISO 306/B50

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

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	

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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
Suggested Max Regrind	10 %	10 %
Hopper Temperature	158 to 176 °F	70 to 80 °C
Rear Temperature	> 446 °F	> 230 °C
Processing (Melt) Temp	446 to 518 °F	230 to 270 °C
Mold Temperature	104 to 158 °F	40 to 70 °C
Injection Pressure	< 16000 psi	< 110 MPa
Injection Rate	Moderate	Moderate
Back Pressure	< 725 psi	< 5.00 MPa

Injection Notes

1) Drying normally not necessary.

2) Reduced Density (RD) grades are sensitive for shear-stress. Therefore moderate injection- (< 1100 bar) and dosing rates are recommended. In addition for plasticizing a back pressure less than 50 bar is recommended.

Drying normally not necessary.

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.

Notes

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