

Technical Data Sheet

POLYFORT® PPH GF50 EP SF H3

Polypropylene Homopolymer
Engineering Plastics

Product Description

50% glass fibre reinforced PP homopolymer, long term heat stabilized, high flowability

General

Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight		
Features	• Chemically Coupled • Heat Stabilized	• High Flow • Homopolymer	• Low Emissions
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PP-H 50 GF		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.33 g/cm ³	1.33 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	15 cm ³ /10min	15 cm ³ /10min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.60E+6 psi	11000 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	18000 psi	124 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.4 %	2.4 %	ISO 527-2/1A/5
Flexural Modulus	1.77E+6 psi	12200 MPa	ISO 178
Flexural Stress ¹ (73°F (23°C))	27700 psi	191 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	5.2 ft·lb/in ²	11 kJ/m ²	
73°F (23°C)	4.8 ft·lb/in ²	10 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	31 ft·lb/in ²	66 kJ/m ²	
73°F (23°C)	28 ft·lb/in ²	58 kJ/m ²	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	22200 psi	153 MPa	ISO 2039-1

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	322 °F	161 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	309 °F	154 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	327 °F	164 °C	ISO 306/A50
--	293 °F	145 °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)	2.4 in/min	60 mm/min	ISO 3795
0.0787 in (2.00 mm)	2.4 in/min	60 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	20 %	20 %
Processing (Melt) Temp	446 to 518 °F	230 to 270 °C
Mold Temperature	104 to 158 °F	40 to 70 °C

Injection Notes

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

¹ Type 1A

Notes

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