Polifil® PP GFPP-40

Polypropylene Homopolymer

The Plastics Group

Message:

Polifil® GFPP series compounds are homopolymer polypropylene resins reinforced with glass fibers. They provide high impact with increased strength, stiffness, surface hardness, and higher continuous temperature. Other benefits include reduced distortion under long-term stress. These compounds are used in appliances, electrical components, automotive, and utility products. Standard processing techniques are applicable. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	Good Dimensional Stability Good Stiffness High Hardness High Impact Resistance High Strength Homopolymer		
Uses	Appliances Automotive Applications Electrical Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.22	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	4.0 to 10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.20	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	102		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	4340	MPa	ASTM D638
Tensile Strength (23°C)	53.8	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	2.0	%	
Break, 23°C	3.0	%	
Flexural Modulus - Tangent (23°C)	5520	MPa	ASTM D790
Flexural Strength (23°C)	78.6	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	64	J/m	ASTM D256

Gardner Impact (23°C, 12.7 mm)	0.452	J	ASTM D3029
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	157	°C	
1.8 MPa, Unannealed	149	°C	
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2 to 104	°C	
Drying Time	1.0 to 2.0	hr	
Rear Temperature	210 to 221	°C	
Middle Temperature	216 to 227	°C	
Front Temperature	227 to 238	°C	
Nozzle Temperature	227 to 249	°C	
Processing (Melt) Temp	232 to 260	°C	
Mold Temperature	48.9 to 65.6	°C	
Injection Rate	Fast		
Back Pressure	0.172 to 0.517	MPa	
Screw Speed	30 to 60	rpm	

Recommended distributors for this material

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