

# Polifil® PC GFPC-40

Polycarbonate

The Plastics Group

## Message:

Polifil® GFPC series compounds offer a combination of improved dimensional stability and decreased flammability. The excellent balance of physical properties make the Polifil® glass-filled polycarbonate line an excellent choice for electrical, appliance, and hardware applications. 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	Flame Retardant		
	Good Dimensional Stability		
Uses	Appliance Components		
	Electrical/Electronic Applications		
Agency Ratings	CSA Unspecified Rating		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.52	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.20	%	ASTM D955
Water Absorption (24 hr)	0.15	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	11000	MPa	ASTM D638
Tensile Strength (23°C)	138	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	2.0	%	
Break, 23°C	3.0	%	
Flexural Modulus - Tangent (23°C)	9310	MPa	ASTM D790
Flexural Strength (23°C)	185	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	96	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	149	°C
1.8 MPa, Unannealed	146	°C
Injection	Nominal Value	Unit
Drying Temperature	121	°C
Drying Time	4.0 to 5.0	hr
Rear Temperature	266 to 277	°C
Middle Temperature	271 to 282	°C
Front Temperature	277 to 293	°C
Nozzle Temperature	282 to 299	°C
Processing (Melt) Temp	277 to 304	°C
Mold Temperature	76.7 to 98.9	°C
Injection Rate	Moderate	
Back Pressure	0.172 to 0.517	MPa
Screw Speed	30 to 60	rpm

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#### Recommended distributors for this material

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