

Polifil® PP GFRMPPCC-20

Polypropylene Impact Copolymer

The Plastics Group

Message:

Polifil® GFRMPPCC series compounds are high impact polypropylenes reinforced with chemically coupled glass fibers. This combination provides higher impact strength while retaining high stiffness. 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,20% Filler by Weight		
Features	Chemically Coupled		
	Good Stiffness		
	High Impact Resistance		
	Impact Copolymer		
Uses	Appliances		
	Automotive Applications		
	Electrical Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	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)	0.40	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	88		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2620	MPa	ASTM D638
Tensile Strength (23°C)	55.8	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	4.0	%	
Break, 23°C	5.0	%	
Flexural Modulus - Tangent (23°C)	2900	MPa	ASTM D790
Flexural Strength (23°C)	64.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	160	J/m	ASTM D256
Gardner Impact (23°C, 12.7 mm)	1.13	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed	143	°C
1.8 MPa, Unannealed	135	°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

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