

Polifil® PP C-10

Polypropylene Homopolymer

The Plastics Group

Message:

Polifil® C series compounds are homopolymer polypropylene resins reinforced with fine particle size calcium carbonate. They combine high impact with stiffness, heat aging, good colorability, resistance to environmental stress-cracking, good surface, and low mold shrinkage. These compounds are used in appliances, electrical components, housewares, toys, 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	Calcium Carbonate,10% Filler by Weight		
Features	Good Colorability		
	Good Heat Aging Resistance		
	Good Stiffness		
	Good Surface Finish		
	High ESCR (Stress Crack Resist.)		
	Homopolymer		
	Low Shrinkage		
Uses	Appliances		
	Automotive Applications		
	Electrical Parts		
	Household Goods		
	Toys		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.978	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	8.0 to 12	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	1.5	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	72		ASTM D1415
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	1450	MPa	ASTM D638
Tensile Strength (23°C)	30.3	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	8.0	%	
Break, 23°C	30	%	
Flexural Modulus - Tangent (23°C)	1590	MPa	ASTM D790

Flexural Strength (23°C)	35.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	37	J/m	ASTM D256
Gardner Impact (23°C, 12.7 mm)	2.71	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	93.3	°C	
1.8 MPa, Unannealed	54.4	°C	
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 104	°C	
Drying Time	1.0 to 2.0	hr	
Rear Temperature	199 to 210	°C	
Middle Temperature	210 to 221	°C	
Front Temperature	221 to 232	°C	
Nozzle Temperature	227 to 232	°C	
Processing (Melt) Temp	204 to 260	°C	
Mold Temperature	10.0 to 26.7	°C	
Injection Rate	Fast		
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	50 to 100	rpm	

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