

Polifil® Nylon 82MR

Polyamide 6

The Plastics Group

Message:

Polifil® GFN/MRN 6 reinforced series of compounds provide good heat and dimensional stability. These have been found useful in industrial clamp components as well as bearings. 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	Mineral,40% Filler by Weight		
Features	Good Dimensional Stability		
	Good Thermal Stability		
Uses	Bearings		
	Closures		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.45	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.60	%	ASTM D955
Water Absorption (24 hr)	0.90	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	114		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	5520	MPa	ASTM D638
Tensile Strength (23°C)	82.7	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	3.0	%	
Break, 23°C	6.0	%	
Flexural Modulus - Tangent (23°C)	5170	MPa	ASTM D790
Flexural Strength (23°C)	131	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	48	J/m	ASTM D256
Gardner Impact (23°C, 12.7 mm)	1.36	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	204	°C	
1.8 MPa, Unannealed	120	°C	
Injection	Nominal Value	Unit	
Drying Temperature	104	°C	

Drying Time	2.0	hr
Rear Temperature	249	°C
Middle Temperature	271	°C
Front Temperature	282	°C
Nozzle Temperature	282	°C
Processing (Melt) Temp	277 to 293	°C
Mold Temperature	37.8 to 93.3	°C
Injection Rate	Fast	
Back Pressure	0.172 to 0.517	MPa
Screw Speed	30 to 60	rpm

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