# Polifil® Nylon 628-13GF

Polyamide 66

The Plastics Group

## Message:

Polifil® GFN/MRN 6/6 reinforced series of compounds offer superior strength, rigidity, and creep resistance. Glass fibers provide excellent thermal and dimensional stability while maintaining good heat and chemical resistance. Polifil® GFN/MRN are excellent candidates for bike components and fuel caps, as well as other automotive components. 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,13% Filler by Weight | | |
| Features | Good Chemical Resistance<br>Good Creep Resistance<br>Good Dimensional Stability<br>Good Thermal Stability<br>High Heat Resistance<br>High Rigidity<br>High Strength | | |
| Uses | Automotive Applications<br>Caps | | |
| Forms | Pellets | | |
| Processing Method | Injection Molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.22 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 0.50 | % | ASTM D955 |
| Water Absorption (24 hr) | 1.1 | % | 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) | 5100 | MPa | ASTM D638 |
| Tensile Strength (23°C) | 96.5 | MPa | ASTM D638 |
| Tensile Elongation | | | ASTM D638 |
| Yield, 23°C | 2.0 | % | |
| Break, 23°C | 3.0 | % | |
| Flexural Modulus - Tangent (23°C) | 4830 | MPa | ASTM D790 |
| Flexural Strength (23°C) | 138 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact (23°C) | 53 | J/m | ASTM D256 |
| Gardner Impact (23°C, 12.7 mm) | 0.678 | J | ASTM D3029 |

| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 249 | °C | |
| 1.8 MPa, Unannealed | 243 | °C | |

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 104 | °C |
| Drying Time | 2.0 | hr |
| Rear Temperature | 288 | °C |
| Middle Temperature | 274 | °C |
| Front Temperature | 282 | °C |
| Nozzle Temperature | 288 | °C |
| Processing (Melt) Temp | 282 to 304 | °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 |



## Recommended distributors for this material

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