americhem
PERFORMANCE | SOLUTIONS | TRUST

# InStruc® PA12GF10

**Product Description** 10% GLASS FIBER REINFORCED NYLON 12

**Material Status** Commercial: Active

**Availability** Africa & Middle East, Asia Pacific, Europe, Latin America, North America

**Filler / Reinforcement** Glass Fiber, 10% Filler by Weight

**Features** Filled, Good Dimensional Stability, High Stiffness, High Strength

**Uses** Automotive Applications, Closures, Consumer Applications, Electrical/Electronic Applications, Engineering Parts, Household Goods, Housings, Industrial Applications, Industrial Parts, Office Automation Equipment, Oil/Gas Applications, Outdoor Applications, Window & Door Components

**Forms** Pellets

**Processing Method** Injection Molding

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 1.08 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 0.40 to 0.60 | % | ASTM D955 |

| Mechanical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Modulus | 2480 | MPa | ASTM D638 |
| Tensile Strength | 48.3 | MPa | ASTM D638 |
| Tensile Elongation (Yield) | > 10 | % | ASTM D638 |
| Flexural Modulus | 2070 | MPa | ASTM D790 |
| Flexural Strength | 65.5 | MPa | ASTM D790 |

| Impact | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Notched Izod Impact | 53 | J/m | ASTM D256 |

| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Deflection Temperature Under Load | | | ASTM D648 |
| 1.8 MPa, Unannealed | 149 | °C | |

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 79 | °C |
| Drying Time | 4.0 | hr |
| Processing (Melt) Temp | 227 to 238 | °C |
| Mold Temperature | 71 to 82 | °C |
| Back Pressure | 0.345 to 0.689 | MPa |
| Screw Speed | 40 to 70 | rpm |

Properties provided are only typical values and Americhem assumes no liability for the customer's use of the information provided. The customer assumes all responsibility for testing determining this products suitability in the customer's specific end application.

Revision Date: 7/9/2025

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**Notes**

[1] Typical properties: these are not to be construed as specifications.

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