

**InStruc® PA66GF45MD**

Americhem - Polyamide 66

**General Information**
**Product Description**

45% Glass Fiber Reinforced Nylon 66 for Healthcare applications.

**General**

|                        |  |
|------------------------|--|
| Material Status        | • Commercial: Active   |
| Availability           | • Africa & Middle East<br>• Asia Pacific<br>• Europe<br>• Latin America<br>• North America   |
| Filler / Reinforcement | • Glass Fiber, 45% Filler by Weight  |
| Features               | • Ethylene Oxide Sterilizable<br>• Filled<br>• Good Dimensional Stability<br>• High Stiffness<br>• High Strength                                       |
| Uses                   | • Closures<br>• Electrical/Electronic Applications<br>• Engineering Parts<br>• Housings<br>• Medical/Healthcare Applications<br>• Surgical Instruments |
| Forms                  | • Pellets  |
| Processing Method      | • Injection Molding  |

**Properties <sup>1</sup>**

| Physical  | Nominal Value    | Unit     | Test Method |
|---|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.52             |          | ASTM D792   |
| Molding Shrinkage - Flow                                | 3.0E-3 to 4.0E-3 | in/in    | ASTM D955   |
| Mechanical  | Nominal Value    | Unit     | Test Method |
| Tensile Modulus   | 2.10E+6          | psi      | ASTM D638   |
| Tensile Strength  | 31500            | psi      | ASTM D638   |
| Tensile Elongation (Yield)                              | 2.0 to 3.0       | %        | ASTM D638   |
| Flexural Modulus  | 2.00E+6          | psi      | ASTM D790   |
| Flexural Strength                                       | 46000            | psi      | ASTM D790   |
| Impact  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (0.125 in)                          | 2.5              | ft-lb/in | ASTM D256   |
| Unnotched Izod Impact (0.125 in)                        | 20               | ft-lb/in | ASTM D4812  |
| Thermal   | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 490              | °F       | ASTM D648   |

**Processing Information**

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 175           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.20          | %    |
| Processing (Melt) Temp | 530 to 570    | °F   |
| Mold Temperature       | 150 to 200    | °F   |
| Back Pressure          | 50.0 to 100   | psi  |
| Screw Speed            | 40 to 70      | rpm  |

