

**InStruc® PA66GF20IM**  
 Americhem - Polyamide 66

## General Information

**Product Description**

20% GLASS FIBER REINFORCED IMPACT MODIFIED NYLON 6/6

**General**

|                        |                                      |                           |                               |
|------------------------|--------------------------------------|---------------------------|-------------------------------|
| Material Status        | • Commercial: Active                 |                           |                               |
| Availability           | • Africa & Middle East               | • Europe                  | • North America               |
|                        | • Asia Pacific                       | • Latin America           |                               |
| Filler / Reinforcement | • Glass Fiber, 20% Filler by Weight  |                           |                               |
| Additive               | • Impact Modifier                    |                           |                               |
| Features               | • Filled                             | • High Stiffness          | • Low Temperature Toughness   |
|                        | • Good Dimensional Stability         | • High Strength           |                               |
|                        | • High Impact Resistance             | • Impact Modified         |                               |
| Uses                   | • Automotive Applications            | • Engineering Parts       | • Office Automation Equipment |
|                        | • Closures                           | • Household Goods         | • Outdoor Applications        |
|                        | • Consumer Applications              | • Industrial Applications | • Window & Door Components    |
|                        | • Electrical/Electronic Applications | • Industrial Parts        |                               |
| Forms                  | • Pellets                            |                           |                               |
| Processing Method      | • Injection Molding                  |                           |                               |

 Properties <sup>1</sup>

| Physical  | Nominal Value    | Unit                | Test Method |
|---|------------------|---------------------|-------------|
| Density / Specific Gravity                              | 1.23             |                     | ASTM D792   |
| Specific Volume   | 22.5             | in <sup>3</sup> /lb |             |
| Molding Shrinkage - Flow                                | 5.0E-3 to 7.0E-3 | in/in               | ASTM D955   |
| Water Absorption (24 hr)                                | 0.90             | %                   | ASTM D570   |
| Mechanical  | Nominal Value    | Unit                | Test Method |
| Tensile Strength  | 15500            | psi                 | ASTM D638   |
| Tensile Elongation (Yield)                              | 3.0 to 6.0       | %                   | ASTM D638   |
| Flexural Modulus  | 650000           | psi                 | ASTM D790   |
| Flexural Strength                                       | 24000            | psi                 | ASTM D790   |
| Impact  | Nominal Value    | Unit                | Test Method |
| Notched Izod Impact (0.125 in)                          | 3.6              | ft-lb/in            | ASTM D256   |
| Unnotched Izod Impact (0.125 in)                        | 15               | ft-lb/in            | ASTM D4812  |
| Thermal   | Nominal Value    | Unit                | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 465              | °F                  | ASTM D648   |
| CLTE - Flow   | 3.0E-5           | in/in/°F            | ASTM D696   |
| Electrical  | Nominal Value    | Unit                | Test Method |
| Surface Resistivity                                     | 1.0E+17          | ohms                |             |
| Flammability  | Nominal Value    | Unit                | Test Method |
| Flame Rating (0.06 in)                                  | HB               |                     | UL 94       |

## Processing Information

| Injection              | Nominal Value    | Unit |
|------------------------|------------------|------|
| Drying Temperature     | 175              | °F   |
| Drying Time            | 4.0              | hr   |
| Processing (Melt) Temp | 500 to 575       | °F   |
| Mold Temperature       | 200              | °F   |
| Back Pressure          | 50.0 to 100      | psi  |
| Screw Speed            | 40 to 70         | rpm  |
| Vent Depth             | 5.0E-4 to 1.0E-3 | in   |

