

# HiFill® PA6 GM40 L

Polyamide 6

Techmer Engineered Solutions

## Message:

HiFill® PA6 GM40 L is a Polyamide 6 (Nylon 6) product filled with 40% milled glass fiber. It can be processed by injection molding and is available in North America. Primary characteristic: lubricated.

| General Information                 |   |                   |             |
|-------------------------------------|---|-------------------|-------------|
| Filler / Reinforcement              | Milled Glass Fiber,40% Filler by Weight |                   |             |
| Additive                            | Lubricant                               |                   |             |
| Features                            | Lubricated                              |                   |             |
| Appearance                          | Colors Available                        |                   |             |
|                                     | Natural Color                           |                   |             |
| Forms                               | Pellets                                 |                   |             |
| Processing Method                   | Injection Molding                       |                   |             |
| Physical                            | Nominal Value                           | Unit              | Test Method |
| Specific Gravity                    | 1.48                                    | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)  | 0.70                                    | %                 | ASTM D955   |
| Water Absorption (24 hr)            | 0.95                                    | %                 | ASTM D570   |
| Hardness                            | Nominal Value                           | Unit              | Test Method |
| Rockwell Hardness (R-Scale)         | 121                                     |                   | ASTM D785   |
| Mechanical                          | Nominal Value                           | Unit              | Test Method |
| Tensile Strength (Break)            | 86.2                                    | MPa               | ASTM D638   |
| Tensile Elongation (Break)          | 3.0                                     | %                 | ASTM D638   |
| Flexural Modulus                    | 5720                                    | MPa               | ASTM D790   |
| Flexural Strength                   | 131                                     | MPa               | ASTM D790   |
| Impact                              | Nominal Value                           | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm) | 53                                      | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.18 mm)     | 320                                     | J/m               | ASTM D256   |
| Thermal                             | Nominal Value                           | Unit              | Test Method |
| Deflection Temperature Under Load   |   |                   | ASTM D648   |
| 0.45 MPa, Unannealed                | 204                                     | °C                |             |
| 1.8 MPa, Unannealed                 | 119                                     | °C                |             |
| CLTE - Flow                         | 7.2E-6                                  | cm/cm/°C          | ASTM D696   |
| Electrical                          | Nominal Value                           | Unit              | Test Method |
| Volume Resistivity                  | 1.0E+13                                 | ohms · cm         | ASTM D257   |
| Dielectric Strength <sup>1</sup>    | 18                                      | kV/mm             | ASTM D149   |
| Injection                           | Nominal Value                           | Unit              |             |
| Drying Temperature                  | 82.2                                    | °C                |             |

|                        |               |     |
|------------------------|---------------|-----|
| Drying Time            | 4.0           | hr  |
| Rear Temperature       | 260 to 304    | °C  |
| Middle Temperature     | 260 to 304    | °C  |
| Front Temperature      | 260 to 304    | °C  |
| Processing (Melt) Temp | 243 to 271    | °C  |
| Mold Temperature       | 65.6 to 93.3  | °C  |
| Back Pressure          | 0.00 to 0.345 | MPa |
| Screw Speed            | 30 to 60      | rpm |

NOTE

1.
- Method A (Short-Time)

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