

# HiFill® HDPE LGF50 12mm

High Density Polyethylene

Techmer Engineered Solutions

## Message:

HiFill® HDPE LGF50 12mm is a High Density Polyethylene product filled with 50% glass fiber. It can be processed by injection molding and is available in North America.

| General Information                 |                                  |                   |             |
|-------------------------------------|----------------------------------|-------------------|-------------|
| Filler / Reinforcement              | Glass Fiber,50% Filler by Weight |                   |             |
| Appearance                          | Colors Available                 |                   |             |
| Forms                               | Pellets                          |                   |             |
| Processing Method                   | Injection Molding                |                   |             |
| Physical                            | Nominal Value                    | Unit              | Test Method |
| Specific Gravity                    | 1.32                             | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)  | 0.30                             | %                 | ASTM D955   |
| Water Absorption (24 hr)            | 0.050                            | %                 | ASTM D570   |
| Hardness                            | Nominal Value                    | Unit              | Test Method |
| Rockwell Hardness (R-Scale)         | 112                              |                   | ASTM D785   |
| Mechanical                          | Nominal Value                    | Unit              | Test Method |
| Tensile Strength (Break)            | 60.7                             | MPa               | ASTM D638   |
| Tensile Elongation (Break)          | 5.0                              | %                 | ASTM D638   |
| Flexural Modulus                    | 6210                             | MPa               | ASTM D790   |
| Flexural Strength                   | 91.0                             | MPa               | ASTM D790   |
| Impact                              | Nominal Value                    | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm) | 190                              | J/m               | ASTM D256   |
| Thermal                             | Nominal Value                    | Unit              | Test Method |
| Deflection Temperature Under Load   |                                  |                   | ASTM D648   |
| 0.45 MPa, Unannealed                | 143                              | °C                |             |
| 1.8 MPa, Unannealed                 | 127                              | °C                |             |
| CLTE - Flow                         | 3.4E-5                           | cm/cm/°C          | ASTM D696   |
| Injection                           | Nominal Value                    | Unit              |             |
| Drying Temperature                  | 76.7                             | °C                |             |
| Drying Time                         | 2.0 to 3.0                       | hr                |             |
| Rear Temperature                    | 232 to 260                       | °C                |             |
| Middle Temperature                  | 232 to 260                       | °C                |             |
| Front Temperature                   | 232 to 260                       | °C                |             |
| Processing (Melt) Temp              | 218 to 246                       | °C                |             |
| Mold Temperature                    | 26.7 to 48.9                     | °C                |             |
| Back Pressure                       | 0.345 to 0.689                   | MPa               |             |
| Screw Speed                         | 30 to 60                         | rpm               |             |

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