# HiFill® PA6/6 GF/M20 IM BK

#### Polyamide 66

### **Techmer Engineered Solutions**

#### Message:

HiFill®PA6/6 GF/M20 IM BK is a polyamide 66 (nylon 66) product, which contains 20% glass \minerals. It can be processed by injection molding and is available in North America. Features include: Impact modification Impact resistance heat stabilizer Lubrication

| General Information                 |                                      |       |              |  |  |
|-------------------------------------|--------------------------------------|-------|--------------|--|--|
| Filler / Reinforcement              | Glass \mineral, 20% filler by weight |       |              |  |  |
| Additive                            | Impact modifier                      |       |              |  |  |
|                                     | heat stabilizer                      |       |              |  |  |
|                                     | Lubricant                            |       |              |  |  |
| Features                            | Impact resistance, high              |       |              |  |  |
|                                     | Thermal Stability                    |       |              |  |  |
|                                     | Lubrication                          |       |              |  |  |
| Appearance                          | Plack                                |       |              |  |  |
| Appearance                          | Black                                |       |              |  |  |
| Forms                               | Particle                             |       |              |  |  |
| Processing Method                   | Injection molding                    | 11-2  | Test Mathead |  |  |
| Physical                            | Nominal Value                        | Unit  | Test Method  |  |  |
| Specific Gravity                    | 1.25                                 | g/cm³ | ASTM D792    |  |  |
| Molding Shrinkage - Flow (3.18 mm)  | 0.70                                 | %     | ASTM D955    |  |  |
| Water Absorption (24 hr)            | 1.2                                  | %     | ASTM D570    |  |  |
| Hardness                            | Nominal Value                        | Unit  | Test Method  |  |  |
| Rockwell Hardness (R-Scale)         | 112                                  |       | ASTM D785    |  |  |
| Mechanical                          | Nominal Value                        | Unit  | Test Method  |  |  |
| Tensile Strength (Break)            | 75.8                                 | MPa   | ASTM D638    |  |  |
| Tensile Elongation (Break)          | 4.5                                  | %     | ASTM D638    |  |  |
| Flexural Modulus                    | 4140                                 | MPa   | ASTM D790    |  |  |
| Flexural Strength                   | 124                                  | MPa   | ASTM D790    |  |  |
| Impact                              | Nominal Value                        | Unit  | Test Method  |  |  |
| Notched Izod Impact (23°C, 3.18 mm) | 75                                   | J/m   | ASTM D256    |  |  |
| Thermal                             | Nominal Value                        | Unit  | Test Method  |  |  |
| Deflection Temperature Under Load   |                                      |       | ASTM D648    |  |  |
| 0.45 MPa, not annealed              | 252                                  | °C    | ASTM D648    |  |  |
| 1.8 MPa, not annealed               | 210                                  | °C    | ASTM D648    |  |  |

| CLTE - Flow                      | 3.2E-5        | cm/cm/°C | ASTM D696   |
|----------------------------------|---------------|----------|-------------|
| Electrical                       | Nominal Value | Unit     | Test Method |
| Volume Resistivity               | 1.0E+15       | ohms∙cm  | ASTM D257   |
| Dielectric Strength <sup>1</sup> | 19            | kV/mm    | ASTM D149   |
| Injection                        | Nominal Value | Unit     |             |
| Drying Temperature               | 82.2          | °C       |             |
| Drying Time                      | 2.0 - 4.0     | hr       |             |
| Suggested Max Moisture           | 0.12          | %        |             |
| Rear Temperature                 | 282 - 293     | °C       |             |
| Middle Temperature               | 288 - 299     | °C       |             |
| Front Temperature                | 277 - 288     | °C       |             |
| Nozzle Temperature               | 282 - 293     | °C       |             |
| Processing (Melt) Temp           | 282 - 304     | °C       |             |
| Mold Temperature                 | 54.4 - 93.3   | °C       |             |
| Injection Rate                   | Moderate-Fast |          |             |
| Back Pressure                    | 0.345 - 0.689 | MPa      |             |
| Injection instructions           |               |          |             |

Screw Speed: MediumRecommendations for Molding and Tool Conditions: Well ventedMoisture Content, as received: Product is packaged at 0.2% or less.Recomended Max Moisture: 0.12% down to 0.08%

#### NOTE

1.

Method A (short time)

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