

# Grilon® BG-50 FC

Polyamide 6

EMS-GRIVORY

## Message:

Grilon® BG-50 FC is a Polyamide 6 (Nylon 6) material filled with 50% glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilon® BG-50 FC are:

Flame Rated

RoHS Compliant

Good Mold Release

Typical applications include:

Automotive

Electrical/Electronic Applications

Appliances

Consumer Goods

Engineering/Industrial Parts

| General Information    |      |                                    |                   |             |
|------------------------|------|------------------------------------|-------------------|-------------|
| Filler / Reinforcement |      | Glass Fiber,50% Filler by Weight   |                   |             |
| Features               |      | Good Flow                          |                   |             |
|                        |      | Good Mold Release                  |                   |             |
| Uses                   |      | Appliance Components               |                   |             |
|                        |      | Automotive Applications            |                   |             |
|                        |      | Automotive Interior Parts          |                   |             |
|                        |      | Connectors                         |                   |             |
|                        |      | Consumer Applications              |                   |             |
|                        |      | Electrical/Electronic Applications |                   |             |
|                        |      | Engineering Parts                  |                   |             |
|                        |      | Household Goods                    |                   |             |
|                        |      | Industrial Applications            |                   |             |
|                        |      | Power/Other Tools                  |                   |             |
| RoHS Compliance        |      | RoHS Compliant                     |                   |             |
| Forms                  |      | Granules                           |                   |             |
| Processing Method      |      | Injection Molding                  |                   |             |
| Physical               | Dry  | Conditioned                        | Unit              | Test Method |
| Density                | 1.58 | --                                 | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage      |      |                                    |                   | ISO 294-4   |
| Across Flow            | 0.50 | --                                 | %                 |             |
| Flow                   | 0.10 | --                                 | %                 |             |
| Water Absorption       |      |                                    |                   | ISO 62      |
| Saturation, 23°C       | 5.0  | --                                 | %                 |             |

|                                        |                          |             |                   |                      |
|----------------------------------------|--------------------------|-------------|-------------------|----------------------|
| Equilibrium, 23°C, 50% RH              |                          |             |                   |                      |
|                                        | 1.5                      | --          | %                 |                      |
| Mechanical                             | Dry                      | Conditioned | Unit              | Test Method          |
| Tensile Modulus                        | 17200                    | 11500       | MPa               | ISO 527-2            |
| Tensile Stress (Break)                 | 240                      | 155         | MPa               | ISO 527-2            |
| Tensile Strain (Break)                 | 3.0                      | 6.0         | %                 | ISO 527-2            |
| Impact                                 | Dry                      | Conditioned | Unit              | Test Method          |
| Charpy Notched Impact Strength         |                          |             |                   | ISO 179/1eA          |
| -30°C                                  | 11                       | 12          | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 15                       | 25          | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength       |                          |             |                   | ISO 179/1eU          |
| -30°C                                  | 85                       | 90          | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 90                       | 95          | kJ/m <sup>2</sup> |                      |
| Thermal                                | Dry                      | Conditioned | Unit              | Test Method          |
| Heat Deflection Temperature            |                          |             |                   |                      |
| 1.8 MPa, Unannealed                    | 215                      | --          | °C                | ISO 75-2/A           |
| 8.0 MPa, Unannealed                    | 180                      | --          | °C                | ISO 75-2/C           |
| Continuous Use Temperature             |                          |             |                   | Internal Method      |
| -- <sup>1</sup>                        | 100 to 120               | --          | °C                |                      |
| -- <sup>2</sup>                        | 200                      | --          | °C                |                      |
| Melting Temperature <sup>3</sup>       | 222                      | --          | °C                | ISO 11357-3          |
| Flammability                           | Dry                      | Conditioned |                   | Test Method          |
| Flammability Classification (0.800 mm) | HB                       | --          |                   | IEC 60695-11-10, -20 |
| Additional Information                 | Dry                      | Conditioned |                   | Test Method          |
| ISO Type                               | PA 6, MHR, 12-190N, GF50 | --          |                   | ISO 1874             |
| NOTE                                   |                          |             |                   |                      |
| 1.                                     | Long Term                |             |                   |                      |
| 2.                                     | Short Term               |             |                   |                      |
| 3.                                     | 10°C/min                 |             |                   |                      |

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