

# Grilon® BG-15 S

Polyamide 6

EMS-GRIVORY

Message:

Grilon® BG-15 S is a Polyamide 6 (Nylon 6) material filled with 15% 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-15 S are:

- Flame Rated
- RoHS Compliant
- Good Aesthetics

Typical applications include:

- Automotive
- Appliances
- Electrical/Electronic Applications

| General Information       |      |                                    |                   |             |
|---------------------------|------|------------------------------------|-------------------|-------------|
| UL YellowCard             |      | E53898-243854                      |                   |             |
| Filler / Reinforcement    |      | Glass Fiber, 15% Filler by Weight  |                   |             |
| Features                  |      | Good Surface Finish                |                   |             |
| Uses                      |      | Appliance Components               |                   |             |
|                           |      | Automotive Applications            |                   |             |
|                           |      | Automotive Interior Parts          |                   |             |
|                           |      | Electrical/Electronic Applications |                   |             |
| RoHS Compliance           |      | RoHS Compliant                     |                   |             |
| Forms                     |      | Granules                           |                   |             |
| Processing Method         |      | Injection Molding                  |                   |             |
| Physical                  | Dry  | Conditioned                        | Unit              | Test Method |
| Density                   | 1.23 | --                                 | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage         |      |                                    |                   | ISO 294-4   |
| Across Flow               | 0.60 | --                                 | %                 |             |
| Flow                      | 0.10 | --                                 | %                 |             |
| Water Absorption          |      |                                    |                   | ISO 62      |
| Saturation, 23°C          | 8.0  | --                                 | %                 |             |
| Equilibrium, 23°C, 50% RH | 2.5  | --                                 | %                 |             |
| Hardness                  | Dry  | Conditioned                        | Unit              | Test Method |
| Ball Indentation Hardness | 170  | 80.0                               | MPa               | ISO 2039-1  |
| Mechanical                | Dry  | Conditioned                        | Unit              | Test Method |
| Tensile Modulus           | 6700 | 3400                               | MPa               | ISO 527-2   |
| Tensile Stress (Break)    | 140  | 75.0                               | MPa               | ISO 527-2   |
| Tensile Strain (Break)    | 4.0  | 15                                 | %                 | ISO 527-2   |
| Impact                    | Dry  | Conditioned                        | Unit              | Test Method |

|                                        |                         |             |                   |                      |
|----------------------------------------|-------------------------|-------------|-------------------|----------------------|
| Charpy Notched Impact Strength         |                         |             |                   | ISO 179/1eA          |
| -30°C                                  | 4.0                     | 5.0         | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 5.0                     | 10          | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength       |                         |             |                   | ISO 179/1eU          |
| -30°C                                  | 40                      | 45          | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 45                      | 85          | kJ/m <sup>2</sup> |                      |
| Thermal                                | Dry                     | Conditioned | Unit              | Test Method          |
| Heat Deflection Temperature            |                         |             |                   |                      |
| 1.8 MPa, Unannealed                    | 195                     | --          | °C                | ISO 75-2/A           |
| 8.0 MPa, Unannealed                    | 60.0                    | --          | °C                | ISO 75-2/C           |
| Continuous Use Temperature             |                         |             |                   | Internal Method      |
| -- <sup>1</sup>                        | 90.0 to 110             | --          | °C                |                      |
| -- <sup>2</sup>                        | 160                     | --          | °C                |                      |
| Melting Temperature <sup>3</sup>       | 222                     | --          | °C                | ISO 11357-3          |
| CLTE                                   |                         |             |                   | ISO 11359-2          |
| Flow                                   | 5.0E-5                  | --          | cm/cm/°C          |                      |
| Transverse                             | 1.2E-4                  | --          | cm/cm/°C          |                      |
| Electrical                             | Dry                     | Conditioned | Unit              | Test Method          |
| Surface Resistivity                    | --                      | 1.0E+12     | ohms              | IEC 60093            |
| Volume Resistivity                     | 1.0E+14                 | 1.0E+13     | ohms·cm           | IEC 60093            |
| Electric Strength                      | 40                      | 37          | kV/mm             | IEC 60243-1          |
| Comparative Tracking Index             | --                      | 500         | V                 | IEC 60112            |
| Flammability                           | Dry                     | Conditioned | Unit              | Test Method          |
| Flammability Classification (0.800 mm) | HB                      | --          |                   | IEC 60695-11-10, -20 |
| Additional Information                 | Dry                     | Conditioned |                   | Test Method          |
| ISO Type                               | PA 6, MHR, 14-070, GF15 | --          |                   | ISO 1874             |
| NOTE                                   |                         |             |                   |                      |
| 1.                                     | Long Term               |             |                   |                      |
| 2.                                     | Short Term              |             |                   |                      |
| 3.                                     | 10°C/min                |             |                   |                      |

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