

## EMS-Grivory Grivory® BG-15 PA6-GF15

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 20% Glass Fiber Filled

### Material Notes:

Product description: Grilon BG-15 is a heat stabilized PA 6 injection molding grade with 15% glass fiber reinforcement. Grilon BG-15 has the following important properties: Good surface finish Good balance between strength and toughness Easy flowing Application examples are automotive applications such as handles and levers and fixing parts in the electronic field. Information provided by EMS Grivory

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-BG-15-PA6-GF15.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-BG-15-PA6-GF15.php)

| Physical Properties               | Metric       | English                   | Comments        |
|-----------------------------------|--------------|---------------------------|-----------------|
| Density                           | 1.23 g/cc    | 0.0444 lb/in <sup>3</sup> | ISO 1183        |
| Water Absorption                  | 8.0 %        | 8.0 %                     | ISO 62          |
| Moisture Absorption               | 2.50 %       | 2.50 %                    | ISO 62          |
| Linear Mold Shrinkage, Flow       | 0.0010 cm/cm | 0.0010 in/in              | ISO 294-4, 2577 |
| Linear Mold Shrinkage, Transverse | 0.0060 cm/cm | 0.0060 in/in              | ISO 294-4, 2577 |

| Mechanical Properties     | Metric                 | English                    | Comments                  |
|---------------------------|------------------------|----------------------------|---------------------------|
| Ball Indentation Hardness | 80.0 MPa               | 11600 psi                  | conditioned; ISO 2039-1   |
|                           | 170 MPa                | 24700 psi                  | dry; ISO 2039-1           |
| Tensile Strength at Break | 140 MPa                | 20300 psi                  | dry; ISO 527-1/-2         |
| Tensile Strength, Yield   | 80.0 MPa               | 11600 psi                  | conditioned; ISO 527-1/-2 |
| Elongation at Break       | 4.0 %                  | 4.0 %                      | dry; ISO 527-1/-2         |
|                           | 15 %                   | 15 %                       | conditioned; ISO 527-1/-2 |
| Elongation at Yield       | 5.0 %                  | 5.0 %                      | conditioned; ISO 527-1/-2 |
| Tensile Modulus           | 3.40 GPa               | 493 ksi                    | conditioned; ISO 527-1/-2 |
|                           | 6.70 GPa               | 972 ksi                    | dry; ISO 527-1/-2         |
| Charpy Impact Unnotched   | 4.50 J/cm <sup>2</sup> | 21.4 ft-lb/in <sup>2</sup> | dry; ISO 179/1eU          |
|                           | 8.50 J/cm <sup>2</sup> | 40.4 ft-lb/in <sup>2</sup> | conditioned; ISO 179/1eU  |
|                           | 4.00 J/cm <sup>2</sup> | 19.0 ft-lb/in <sup>2</sup> | dry; ISO 179/1eU          |
|                           | @Temperature 30.0 °C   | @Temperature 86.0 °F       |                           |
|                           | 4.50 J/cm <sup>2</sup> | 21.4 ft-lb/in <sup>2</sup> | conditioned; ISO 179/1eU  |

| Mechanical Properties  | @Temperature 30.0 °C<br>Metric | @Temperature 86.0 °F<br>English | Comments                 |
|------------------------|--------------------------------|---------------------------------|--------------------------|
| Charpy Impact, Notched | 0.500 J/cm²                    | 2.38 ft-lb/in²                  | dry; ISO 179/1eA         |
|                        | 1.00 J/cm²                     | 4.76 ft-lb/in²                  | conditioned; ISO 179/1eA |
|                        | 0.400 J/cm²                    | 1.90 ft-lb/in²                  | dry; ISO 179/1eU         |
|                        | @Temperature 30.0 °C           | @Temperature 86.0 °F            |                          |
|                        | 0.500 J/cm²                    | 2.38 ft-lb/in²                  | conditioned; ISO 179/1eU |
|                        | @Temperature 30.0 °C           | @Temperature 86.0 °F            |                          |

| Thermal Properties                          | Metric        | English        | Comments                 |
|---------------------------------------------|---------------|----------------|--------------------------|
| CTE, linear, Parallel to Flow               | 50.0 µm/m-°C  | 27.8 µin/in-°F | ISO 11359-1/-2           |
| CTE, linear, Transverse to Flow             | 120 µm/m-°C   | 66.7 µin/in-°F | ISO 11359-1/-2           |
| Melting Point                               | 222 °C        | 432 °F         | 10°C/min; ISO 11357-1/-3 |
| Maximum Service Temperature, Air            | 80.0 - 110 °C | 176 - 230 °F   | long term; EMS           |
|                                             | 160 °C        | 320 °F         | short term; EMS          |
| Deflection Temperature at 1.8 MPa (264 psi) | 195 °C        | 383 °F         | ISO 75-1/-2              |
| Deflection Temperature at 8.0 MPa           | 60.0 °C       | 140 °F         | ISO 75-1/-2              |
| Flammability, UL94                          | HB            | HB             | IEC 60695-11-10          |

| Electrical Properties      | Metric          | English         | Comments                 |
|----------------------------|-----------------|-----------------|--------------------------|
| Volume Resistivity         | 1.00e+13 ohm-cm | 1.00e+13 ohm-cm | conditioned; IEC 60093   |
|                            | 1.00e+14 ohm-cm | 1.00e+14 ohm-cm | dry; IEC 60093           |
| Surface Resistance         | 1.00e+12 ohm    | 1.00e+12 ohm    | IEC 60093                |
| Dielectric Strength        | 37.0 kV/mm      | 940 kV/in       | conditioned; IEC 60243-1 |
|                            | 40.0 kV/mm      | 1020 kV/in      | dry; IEC 60243-1         |
| Comparative Tracking Index | 500 V           | 500 V           | conditioned; IEC 60112   |

| Descriptive Properties    | Value                 | Comments |
|---------------------------|-----------------------|----------|
| Automotive                | Air intake sytems     |          |
|                           | Interior              |          |
| Electricals & Electronics | Electrical appliances |          |

| Descriptive Properties | Value             | Comments |
|------------------------|-------------------|----------|
| Form                   | Granules          |          |
| Processing             | Injection Molding |          |

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