

EMS-Grivory Grivory® BG-40 HM PA6-GF40

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 40% Glass Fiber Filled

Material Notes:

Product description: Grilon BG-40 HM is a heat stabilized, normal viscosity, and adhesion modified PA6 injection molding grade with 40% glass fibers. Grilon BG-40 HM has the following important properties: Excellent adhesion with thermoplastic elastomers High stiffness Good impact strength Application examples are automotive plugs and seals, counter wheel sensors, housings with integrated switch membranes, housings (hard soft combinations), grip handles, and plug housings Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-BG-40-HM-PA6-GF40.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|--------------|---------------------------|-----------------|
| Density | 1.40 g/cc | 0.0506 lb/in ³ | ISO 1183 |
| Water Absorption | 5.0 % | 5.0 % | ISO 62 |
| Moisture Absorption | 1.50 % | 1.50 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0010 cm/cm | 0.0010 in/in | ISO 294-4, 2577 |
| Linear Mold Shrinkage, Transverse | 0.0040 cm/cm | 0.0040 in/in | ISO 294-4, 2577 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|------------------------|----------------------------|---------------------------|
| Ball Indentation Hardness | 130 MPa | 18900 psi | conditioned; ISO 2039-1 |
| | 200 MPa | 29000 psi | dry; ISO 2039-1 |
| Tensile Strength at Break | 130 MPa | 18900 psi | conditioned; ISO 527-1/-2 |
| | 150 MPa | 21800 psi | dry; ISO 527-1/-2 |
| Elongation at Break | 3.0 % | 3.0 % | dry; ISO 527-1/-2 |
| | 5.0 % | 5.0 % | conditioned; ISO 527-1/-2 |
| Tensile Modulus | 8.50 GPa | 1230 ksi | conditioned; ISO 527-1/-2 |
| | 12.0 GPa | 1740 ksi | dry; ISO 527-1/-2 |
| Charpy Impact Unnotched | 7.00 J/cm ² | 33.3 ft-lb/in ² | dry; ISO 179/1eU |
| | 7.00 J/cm ² | 33.3 ft-lb/in ² | conditioned; ISO 179/1eU |
| | 6.50 J/cm ² | 30.9 ft-lb/in ² | dry; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |
| | 6.50 J/cm ² | 30.9 ft-lb/in ² | conditioned; ISO 179/1eU |

| Mechanical Properties | @Temperature 30.0 °C Metric | @Temperature 86.0 °F English | Comments |
|------------------------|--------------------------------|---------------------------------|--------------------------|
| Charpy Impact, Notched | 1.50 J/cm ² | 7.14 ft-lb/in ² | dry; ISO 179/1eA |
| | 2.00 J/cm ² | 9.52 ft-lb/in ² | conditioned; ISO 179/1eA |
| | 1.20 J/cm ² | 5.71 ft-lb/in ² | dry; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |
| | 1.20 J/cm ² | 5.71 ft-lb/in ² | conditioned; ISO 179/1eU |
| | @Temperature 30.0 °C | @Temperature 86.0 °F | |

| Thermal Properties | Metric | English | Comments |
|---|---------------|----------------|--------------------------|
| CTE, linear, Parallel to Flow | 15.0 µm/m-°C | 8.33 µin/in-°F | ISO 11359-1/-2 |
| CTE, linear, Transverse to Flow | 100 µm/m-°C | 55.6 µin/in-°F | ISO 11359-1/-2 |
| Melting Point | 222 °C | 432 °F | 10°C/min; ISO 11357-1/-3 |
| Maximum Service Temperature, Air | 90.0 - 100 °C | 194 - 212 °F | long term; EMS |
| | 180 °C | 356 °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 | 130 °C | 266 °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 | 38.0 kV/mm | 965 kV/in | conditioned; IEC 60243-1 |
| | 41.0 kV/mm | 1040 kV/in | dry; IEC 60243-1 |
| Comparative Tracking Index | 550 V | 550 V | conditioned; IEC 60112 |

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

| Descriptive Properties | Value | Comments |
|-------------------------|--------------------------------|----------|
| Form | Granules | |
| Processing | Injection Molding | |
| Special Characteristics | High impact or impact modified | |

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