

## EMS-Grivory Grivory® LBV-30H FWA nat PA12-GF30

Category : Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, 30% Glass Fiber Filled

### Material Notes:

**Product Description:** Grilamid LBV-30H FWA natural is a 30% glass fiber reinforced, heat stabilized polyamide 12 injection molding grade with the following special features: Stiffness combined with high toughnessVery high elongationVery low water absorptionHydrolysis and chemical resistanceEasy processing, particularly suitable for very thin- or very thick-walled moldings The special composition of Grilamid LBV 30H FWA natural makes it suitable for direct contact with potable water up to 85°C as well as with foodstuff. Application examples: Grilamid LBV-30H FWA natural is designed for applications predominantly in the following application fields: Robust valves and fittings for water and gas supply.Taps, fittings, meters, pumps in sanitary equipmentDomestic appliances and household goodsComponents in the food processing industryInformation provided by EMS Grivory

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-LBV-30H-FWA-nat-PA12-GF30.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-LBV-30H-FWA-nat-PA12-GF30.php)

| Physical Properties               | Metric       | English                   | Comments        |
|-----------------------------------|--------------|---------------------------|-----------------|
| Density                           | 1.22 g/cc    | 0.0441 lb/in <sup>3</sup> | ISO 1183        |
| Water Absorption                  | 1.1 %        | 1.1 %                     | ISO 62          |
| Moisture Absorption               | 0.600 %      | 0.600 %                   | ISO 62          |
| Linear Mold Shrinkage, Flow       | 0.0010 cm/cm | 0.0010 in/in              | ISO 294-4, 2577 |
| Linear Mold Shrinkage, Transverse | 0.0050 cm/cm | 0.0050 in/in              | ISO 294-4, 2577 |

| Mechanical Properties     | Metric                 | English                    | Comments                  |
|---------------------------|------------------------|----------------------------|---------------------------|
| Hardness, Shore D         | 83                     | 83                         | conditioned, 15s; ISO 868 |
| Ball Indentation Hardness | 155 MPa                | 22500 psi                  | conditioned; ISO 2039-1   |
| Tensile Strength at Break | 120 MPa                | 17400 psi                  | conditioned; ISO 527-1/-2 |
|                           | 130 MPa                | 18900 psi                  | dry; ISO 527-1/-2         |
| Elongation at Break       | 6.0 %                  | 6.0 %                      | dry; ISO 527-1/-2         |
|                           | 6.0 %                  | 6.0 %                      | conditioned; ISO 527-1/-2 |
| Tensile Modulus           | 7.50 GPa               | 1090 ksi                   | conditioned; ISO 527-1/-2 |
|                           | 8.00 GPa               | 1160 ksi                   | dry; ISO 527-1/-2         |
| Charpy Impact Unnotched   | 9.00 J/cm <sup>2</sup> | 42.8 ft-lb/in <sup>2</sup> | conditioned; ISO 179/1eU  |
|                           | 10.0 J/cm <sup>2</sup> | 47.6 ft-lb/in <sup>2</sup> | dry; ISO 179/1eU          |
|                           | 9.00 J/cm <sup>2</sup> | 42.8 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                 |
|------------------------|--------------------------------|---------------------------------|--------------------------|
|                        | 10.0 J/cm²                     | 47.6 ft-lb/in²                  | dry; ISO 179/1eU         |
|                        | @Temperature 30.0 °C           | @Temperature 86.0 °F            |                          |
| Charpy Impact, Notched | 1.50 J/cm²                     | 7.14 ft-lb/in²                  | dry; ISO 179/1eA         |
|                        | 1.50 J/cm²                     | 7.14 ft-lb/in²                  | conditioned; ISO 179/1eA |
|                        | 1.00 J/cm²                     | 4.76 ft-lb/in²                  | dry; ISO 179/1eU         |
|                        | @Temperature 30.0 °C           | @Temperature 86.0 °F            |                          |
|                        | 1.00 J/cm²                     | 4.76 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               | 20.0 µm/m-°C  | 11.1 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                               | 178 °C        | 352 °F         | 10°C/min; ISO 11357-1/-3 |
| Maximum Service Temperature, Air            | 90.0 - 120 °C | 194 - 248 °F   | long term; EMS           |
|                                             | 150 °C        | 302 °F         | short term; EMS          |
| Deflection Temperature at 1.8 MPa (264 psi) | 155 °C        | 311 °F         | ISO 75-1/-2              |
| Deflection Temperature at 8.0 MPa           | 90.0 °C       | 194 °F         | ISO 75-1/-2              |
| Flammability, UL94                          | HB            | HB             | IEC 60695-11-10          |

| Electrical Properties      | Metric          | English         | Comments                 |
|----------------------------|-----------------|-----------------|--------------------------|
| Volume Resistivity         | 1.00e+12 ohm-cm | 1.00e+12 ohm-cm | conditioned; IEC 60093   |
| Surface Resistance         | 1.00e+11 ohm    | 1.00e+11 ohm    | IEC 60093                |
| Dielectric Strength        | 45.0 kV/mm      | 1140 kV/in      | conditioned; IEC 60243-1 |
| Comparative Tracking Index | 600 V           | 600 V           | conditioned; IEC 60112   |

| Descriptive Properties | Value           | Comments |
|------------------------|-----------------|----------|
| Food contact           | EU Requirements |          |
|                        | FDA             |          |
| Form                   | Granules        |          |

| Industry & Consumer goods<br>Descriptive Properties | Heating systems<br>Value             | Comments |
|-----------------------------------------------------|--------------------------------------|----------|
|                                                     | Sanitary, water and gas supply       |          |
| Processing                                          | Injection Molding                    |          |
| Product Attributes                                  | Hydrolysis resistant                 |          |
| Special Characteristics                             | High impact or impact modified       |          |
|                                                     | Improved heat resistance             |          |
|                                                     | Improved UV resistance (outdoor use) |          |
| Water Contact                                       | ACS                                  |          |
|                                                     | DVGW W270                            |          |
|                                                     | KTW                                  |          |
|                                                     | NSF 61                               |          |
|                                                     | WRAS                                 |          |

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