

## EMS-Grivory Grivory® L 25 nat 6112 PA12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

### Material Notes:

Product Description: Grilamid L 25 natural 6112 is a high viscous, Polyamide 12 extrusion grade. Grilamid L 25 natural 6112 fulfils the requirements of DIN 73378, Type PA 12-H. Application examples: DIN 73378: Tubes made from Polyamide for Automotive vehicles  
Information provided by EMS Grivory

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-L-25-nat-6112-PA12.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-L-25-nat-6112-PA12.php)

| Physical Properties               | Metric       | English                   | Comments        |
|-----------------------------------|--------------|---------------------------|-----------------|
| Density                           | 1.01 g/cc    | 0.0365 lb/in <sup>3</sup> | ISO 1183        |
| Water Absorption                  | 1.5 %        | 1.5 %                     | ISO 62          |
| Moisture Absorption               | 0.700 %      | 0.700 %                   | ISO 62          |
| Linear Mold Shrinkage, Flow       | 0.0090 cm/cm | 0.0090 in/in              | ISO 294-4, 2577 |
| Linear Mold Shrinkage, Transverse | 0.011 cm/cm  | 0.011 in/in               | ISO 294-4, 2577 |

| Mechanical Properties     | Metric   | English   | Comments                  |
|---------------------------|----------|-----------|---------------------------|
| Ball Indentation Hardness | 70.0 MPa | 10200 psi | conditioned; ISO 2039-1   |
| Tensile Strength at Break | 50.0 MPa | 7250 psi  | conditioned; ISO 527-1/-2 |
|                           | 55.0 MPa | 7980 psi  | dry; ISO 527-1/-2         |
| Tensile Strength, Yield   | 40.0 MPa | 5800 psi  | dry; ISO 527-1/-2         |
|                           | 45.0 MPa | 6530 psi  | dry; ISO 527-1/-2         |
| Elongation at Break       | >= 50 %  | >= 50 %   | conditioned; ISO 527-1/-2 |
|                           | <= 50 %  | <= 50 %   | dry; ISO 527-1/-2         |
| Elongation at Yield       | 10 %     | 10 %      | dry; ISO 527-1/-2         |
|                           | 12 %     | 12 %      | conditioned; ISO 527-1/-2 |
| Tensile Modulus           | 1.10 GPa | 160 ksi   | conditioned; ISO 527-1/-2 |
|                           | 1.40 GPa | 203 ksi   | dry; ISO 527-1/-2         |
| Charpy Impact Unnotched   | NB       | NB        | dry; ISO 179/1eU          |
|                           | NB       | NB        | conditioned; ISO 179/1eU  |
|                           | NB       | NB        |                           |

| Mechanical Properties  | Metric<br>@ Temperature 30.0 °C | English<br>@ Temperature 86.0 °F | dry: ISO 179/1eU<br>Comments |
|------------------------|---------------------------------|----------------------------------|------------------------------|
| Charpy Impact, Notched | NB                              | NB                               | conditioned; ISO 179/1eU     |
|                        | @Temperature 30.0 °C            | @Temperature 86.0 °F             |                              |
|                        | 1.00 J/cm²                      | 4.76 ft-lb/in²                   | conditioned; ISO 179/1eA     |
|                        | 0.700 J/cm²                     | 3.33 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               | 120 µm/m-°C   | 66.7 µin/in-°F | ISO 11359-1/-2           |
| CTE, linear, Transverse to Flow             | 140 µm/m-°C   | 77.8 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 - 110 °C | 194 - 230 °F   | long term; EMS           |
|                                             | 150 °C        | 302 °F         | short term; EMS          |
| Deflection Temperature at 0.46 MPa (66 psi) | 115 °C        | 239 °F         | ISO 75-1/-2              |
| Deflection Temperature at 1.8 MPa (264 psi) | 45.0 °C       | 113 °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   |
| Surface Resistance         | 1.00e+12 ohm    | 1.00e+12 ohm    | IEC 60093                |
| Dielectric Strength        | 32.0 kV/mm      | 813 kV/in       | conditioned; IEC 60243-1 |
| Comparative Tracking Index | 600 V           | 600 V           | conditioned; IEC 60112   |

| Descriptive Properties    | Value                   | Comments |
|---------------------------|-------------------------|----------|
| Automotive                | Compressed air systems  |          |
| Form                      | Granules                |          |
| Industry & Consumer goods | Hydraulics & Pneumatics |          |
| Packaging                 | Non oriented film       |          |
| Processing                | Other Extrusion         |          |
|                           |                         |          |

| Product Attributes<br>Descriptive Properties | High viscosity<br>Value              | Comments |
|----------------------------------------------|--------------------------------------|----------|
| Special Characteristics                      | Improved UV resistance (outdoor use) |          |

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