

# Grilamid® LVX-50H nat

Polyamide 12

EMS-GRIVORY

Message:

Grilamid® LVX-50H nat is a Polyamide 12 (Nylon 12) material filled with 50% glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilamid® LVX-50H nat are:

Flame Rated

RoHS Compliant

Good Mold Release

Heat Stabilizer

Typical applications include:

Automotive

Electrical/Electronic Applications

Appliances

Consumer Goods

Engineering/Industrial Parts

| General Information    |                                    |
|------------------------|------------------------------------|
| Filler / Reinforcement | Glass Fiber,50% Filler by Weight   |
| Additive               | Heat Stabilizer                    |
| Features               | Good Flow                          |
|                        | Good Mold Release                  |
|                        | Heat Stabilized                    |
| Uses                   | Appliance Components               |
|                        | Automotive Applications            |
|                        | Automotive Exterior Parts          |
|                        | Connectors                         |
|                        | Consumer Applications              |
|                        | Electrical/Electronic Applications |
|                        | Engineering Parts                  |
|                        | Household Goods                    |
|                        | Hydraulic Applications             |
|                        | Industrial Applications            |
|                        | Medical Devices                    |
|                        | Pneumatic Applications             |
|                        | Power/Other Tools                  |
|                        | Sporting Goods                     |
| RoHS Compliance        | RoHS Compliant                     |
| Appearance             | Natural Color                      |
| Forms                  | Granules                           |
| Processing Method      | Injection Molding                  |

| Physical                               | Dry         | Conditioned | Unit              | Test Method          |
|----------------------------------------|-------------|-------------|-------------------|----------------------|
| Density                                | 1.47        | --          | g/cm <sup>3</sup> | ISO 1183             |
| Molding Shrinkage                      |             |             |                   | ISO 294-4            |
| Across Flow                            | 0.40        | --          | %                 |                      |
| Flow                                   | 0.10        | --          | %                 |                      |
| Water Absorption                       |             |             |                   | ISO 62               |
| Saturation, 23°C                       | 0.80        | --          | %                 |                      |
| Equilibrium, 23°C, 50% RH              | 0.40        | --          | %                 |                      |
| Mechanical                             | Dry         | Conditioned | Unit              | Test Method          |
| Tensile Modulus                        | --          | 12000       | MPa               | ISO 527-2            |
| Tensile Stress (Break)                 | --          | 145         | MPa               | ISO 527-2            |
| Tensile Strain (Break)                 | --          | 3.5         | %                 | ISO 527-2            |
| Impact                                 | Dry         | Conditioned | Unit              | Test Method          |
| Charpy Notched Impact Strength         |             |             |                   | ISO 179/1eA          |
| -30°C                                  | --          | 20          | kJ/m <sup>2</sup> |                      |
| 23°C                                   | --          | 25          | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength       |             |             |                   | ISO 179/1eU          |
| -30°C                                  | --          | 85          | kJ/m <sup>2</sup> |                      |
| 23°C                                   | --          | 85          | kJ/m <sup>2</sup> |                      |
| Thermal                                | Dry         | Conditioned | Unit              | Test Method          |
| Heat Deflection Temperature            |             |             |                   |                      |
| 1.8 MPa, Unannealed                    | 170         | --          | °C                | ISO 75-2/A           |
| 8.0 MPa, Unannealed                    | 130         | --          | °C                | ISO 75-2/C           |
| Continuous Use Temperature             |             |             |                   | Internal Method      |
| -- <sup>1</sup>                        | 90.0 to 120 | --          | °C                |                      |
| -- <sup>2</sup>                        | 150         | --          | °C                |                      |
| Melting Temperature <sup>3</sup>       | 178         | --          | °C                | ISO 11357-3          |
| CLTE                                   |             |             |                   | ISO 11359-2          |
| Flow                                   | 1.5E-5      | --          | cm/cm/°C          |                      |
| Transverse                             | 9.0E-5      | --          | cm/cm/°C          |                      |
| Electrical                             | Dry         | Conditioned | Unit              | Test Method          |
| Surface Resistivity                    | --          | 1.0E+12     | ohms              | IEC 60093            |
| Volume Resistivity                     | --          | 1.0E+13     | ohms·cm           | IEC 60093            |
| Electric Strength                      | --          | 55          | kV/mm             | IEC 60243-1          |
| Comparative Tracking Index             | --          | 600         | 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               | PA12, MHR, 18-190, GF50 | --          | ISO 1874    |
| NOTE                   |                         |             |             |
| 1.                     | Long Term               |             |             |
| 2.                     | Short Term              |             |             |
| 3.                     | 10°C/min                |             |             |

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