TECHNICAL DATASHEET

# Grilamid L XE 16175 (LVL-5H) natural

PA12-GF50

EMS-GRIVORY
Material Database

**Physical**
Low moisture absorption, High dimensional stability, Low density

**Chemical**
Excellent weatherability

**Mechanical**
High stiffness

**Others**
Good surface finish

**Processing**
Injection molding

**Delivery form**
Granules

**Product Attributes**
Long fiber reinforced

**Regional Availability**
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

## Product Information

Product-nomenclature: ISO 16396-PA 12,GF50,M1G,C12-140N

| Mechanical Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Tensile modulus | - / 13300 | MPa | ISO 527 |
| Stress at break | - / 205 | MPa | ISO 527 |
| Strain at break | - / 2.7 | % | ISO 527 |
| Charpy impact strength, +23°C | - / 100 | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | - / 100 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | - / 45 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | - / 45 | kJ/m² | ISO 179/1eA |

| Thermal Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Melting temperature, 10°C/min | 178 / - | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.80 MPa | 170 / - | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 8.00 MPa | 160 / - | °C | ISO 75-1/-2 |

| General Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Density | 1470 / - | kg/m³ | ISO 1183 |
| Burning behav. at thickness h | HB / - | class | IEC 60695-11-10 |
| Thickness tested | 0.8 / - | mm | |
| Water absorption | 0.8 / - | % | Sim. to ISO 62 |
| Humidity absorption | 0.4 / - | % | Sim. to ISO 62 |
| Molding shrinkage, parallel | 0.15 / - | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.35 / - | % | ISO 294-4, 2577 |

| Processing Injection Molding | Value | Unit | Standard |
|---|---|---|---|
| Hopper zone | ≤80 | °C | |

# Grilamid L XE 16175 (LVL-5H) natural

| Processing Injection Molding | Value | Unit | Standard |
|---|---|---|---|
| Feeding zone | ≤260 | °C | |
| Compression zone | ≤275 | °C | |
| Metering zone | ≤280 | °C | |
| Nozzle (IM) | ≤275 | °C | |
| Melt | 260 - 280 | °C | |
| Mold surface temperature | 80 - 120 | °C | |
| Injection speed | Low - Medium | - | |
| Pressure | 300 - 800 | bar | |
| Dynamic pressure (hydraulic) | 50 - 80 | bar | |
| Circumferencial screw speed | 0.07 - 0.3 | m/s | |

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