TECHNICAL DATASHEET

# Grilamid LV-50H FWA black 9225

PA12-GF50

EMS-GRIVORY
Material Database

**Chemical**
Good chemical resistance, Resistant to hydrolysis

**Processing**
Injection molding

**Delivery form**
Granules

**Special Characteristics**
Light stabilized or stable to light

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

## Product Information

Product Nomenclature: ISO 16396-PA12,GF50,M1H,C18-120

| Mechanical Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Tensile modulus | 12000 / 11500 | MPa | ISO 527 |
| Stress at break | 155 / 135 | MPa | ISO 527 |
| Strain at break | 5 / 6 | % | ISO 527 |
| Charpy impact strength, +23°C | 90 / 80 | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | 90 / 80 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 19 / 20 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 15 / 15 | kJ/m² | ISO 179/1eA |
| Shore D hardness | 82 / - | | ISO 7619-1 |
| Ball indentation hardness | 160 / 155 | MPa | ISO 2039-1 |
| Shore A hardness (15s) | - / 82 | - | ISO 868 |

| 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 | 165 / - | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 8.00 MPa | 125 / - | °C | ISO 75-1/-2 |
| Max. usage temperature (long term) | 90 - 120 | °C | ISO 2578 |
| Max. usage temperature (short term) | 150 | °C | EMS |

| Electrical Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Electric strength | - / 35 | kV/mm | IEC 60243-1 |
| Comparative tracking index | - / 600 | | IEC 60112 |
| Volume resistivity | - / 1E11 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | - / 1E12 | Ohm | IEC 62631-3-2 |

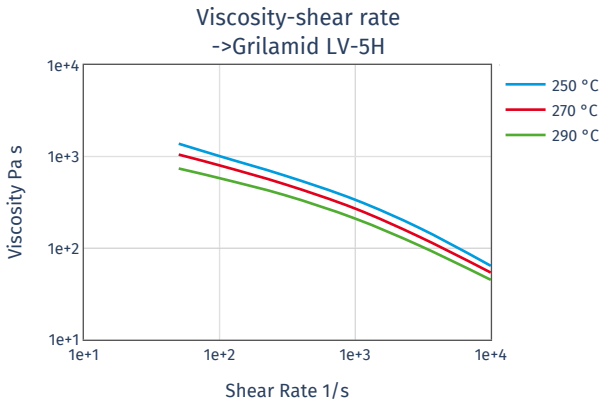
| General Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Density | 1470 / - | kg/m³ | ISO 1183 |
| Burning behav. at thickness h | HB / - | class | IEC 60695-11-10 |

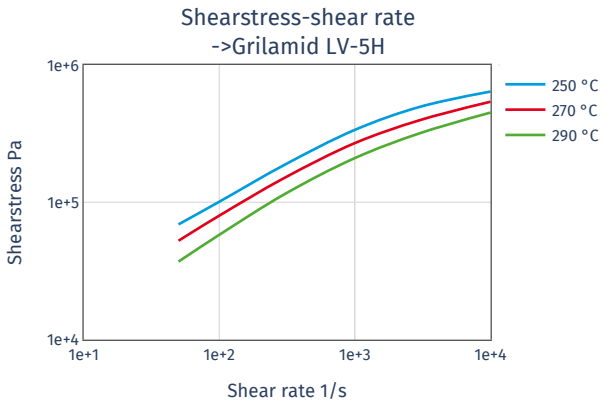
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| General Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Thickness tested | 0.8 / - | mm | |
| Water absorption | 0.8 / - | % | Sim. to ISO 62 |
| Humidity absorption | 0.4 / - | % | Sim. to ISO 62 |
| Molding shrinkage, parallel | 0.1 / - | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.5 / - | % | ISO 294-4, 2577 |

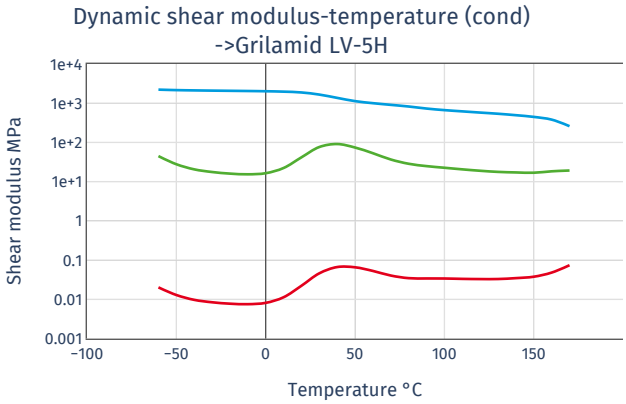
| Processing Injection Molding | Value | Unit | Standard |
|---|---|---|---|
| Hopper zone | 60 - 80 | °C | |
| Feeding zone | ≤265 | °C | |
| Compression zone | ≤270 | °C | |
| Metering zone | ≤275 | °C | |
| Nozzle (IM) | ≤270 | °C | |
| Melt | 270 - 290 | °C | |
| Mold surface temperature | ≤80 | °C | |
| Injection speed | Low - Medium | - | |
| Pressure | 300 - 800 | bar | |
| Dynamic pressure (hydraulic) | 50 - 100 | bar | |
| Circumferencial screw speed | 0.1 - 0.3 | m/s | |

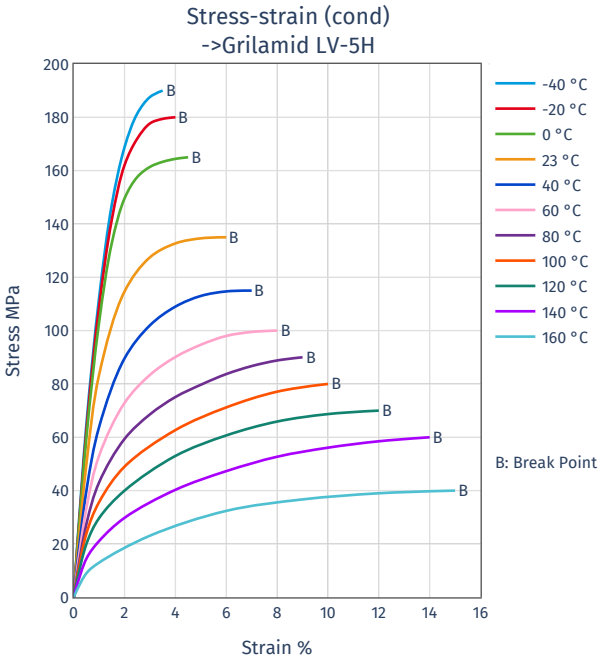
## Diagrams

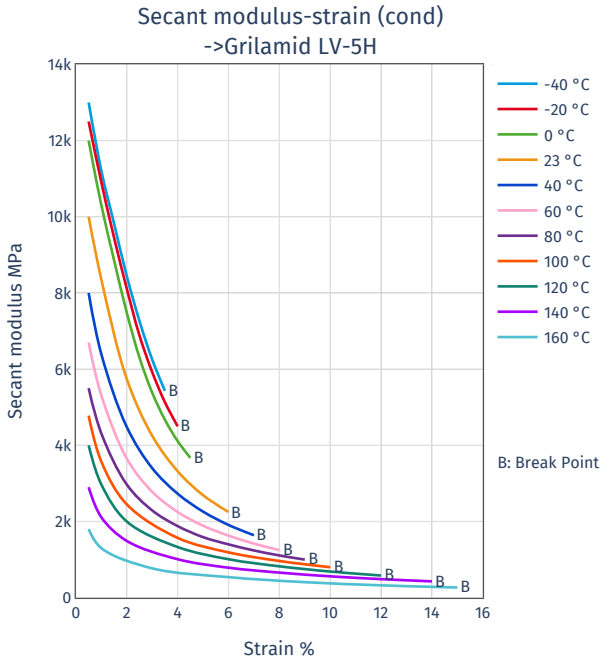


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