

**Grivory GVL-6H nat**

PA\*-GF60

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA66+PA6I/X, MH, 14-220, GF60

| Mechanical properties                  | dry / cond           | Unit              | Test Standard |
|--|----------------------|-------------------|---------------|
| Tensile Modulus                        | <b>22500 / 21000</b> | MPa               | ISO 527-1/-2  |
| Stress at break                        | <b>290 / 255</b>     | MPa               | ISO 527-1/-2  |
| Strain at break                        | <b>2.1 / 2.1</b>     | %                 | ISO 527-1/-2  |
| Charpy impact strength (+23°C)         | <b>115 / 110</b>     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Charpy impact strength (-30°C)         | <b>95 / 95</b>       | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Charpy notched impact strength (+23°C) | <b>40 / 40</b>       | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Charpy notched impact strength (-30°C) | <b>40 / 40</b>       | kJ/m <sup>2</sup> | ISO 179/1eA   |

| Mechanical properties (TPE) | dry / cond       | Unit | Test Standard |
|-----------------------------|------------------|------|---------------|
| Ball indentation hardness   | <b>305 / 285</b> | MPa  | ISO 2039-1    |

| Thermal properties                           | dry / cond       | Unit  | Test Standard   |
|--|------------------|-------|-----------------|
| Melting temperature (10°C/min)               | <b>260 / -</b>   | °C    | ISO 11357-1/-3  |
| Temp. of deflection under load (1.80 MPa)    | <b>255 / -</b>   | °C    | ISO 75-1/-2     |
| Temp. of deflection under load (8.00 MPa)    | <b>225 / -</b>   | °C    | ISO 75-1/-2     |
| Coeff. of linear therm. expansion (parallel) | <b>20 / -</b>    | E-6/K | ISO 11359-1/-2  |
| Coeff. of linear therm. expansion (normal)   | <b>40 / -</b>    | E-6/K | ISO 11359-1/-2  |
| Burning Behav. at thickness h                | <b>HB / -</b>    | class | IEC 60695-11-10 |
| Thickness tested                             | <b>0.8 / -</b>   | mm    | IEC 60695-11-10 |
| Max. usage temperature (long term)           | <b>100 - 120</b> | °C    | ISO 2578        |
| Max. usage temperature (short term)          | <b>220</b>       | °C    | EMS             |

| Electrical properties      | dry / cond         | Unit  | Test Standard |
|----------------------------|--------------------|-------|---------------|
| Volume resistivity         | <b>1E10 / 1E10</b> | Ohm*m | IEC 60093     |
| Surface resistivity        | <b>- / 1E13</b>    | Ohm   | IEC 60093     |
| Electric strength          | <b>33 / 33</b>     | kV/mm | IEC 60243-1   |
| Comparative tracking index | <b>- / 600</b>     | -     | IEC 60112     |

| Other properties    | dry / cond      | Unit              | Test Standard  |
|---------------------|-----------------|-------------------|----------------|
| Water absorption    | <b>3.5 / -</b>  | %                 | Sim. to ISO 62 |
| Humidity absorption | <b>1.2 / -</b>  | %                 | Sim. to ISO 62 |
| Density             | <b>1690 / -</b> | kg/m <sup>3</sup> | ISO 1183       |

| Rheo/Phys properties         | dry / cond     | Unit | Test Standard   |
|------------------------------|----------------|------|-----------------|
| Molding shrinkage (parallel) | <b>0.1 / -</b> | %    | ISO 294-4, 2577 |
| Molding shrinkage (normal)   | <b>0.2 / -</b> | %    | ISO 294-4, 2577 |

**Characteristics**
**Processing**

Injection Molding

**Delivery form**

Granules

**Product Attributes**

Long Fiber Reinforced, Partially aromatic Polyamide

**Automotive**

Automotive electr. and electronics, lighting, Cooling and climate control, Powertrain and Chassis , Interior, Exterior



**Special Characteristics**

Improved heat resistance

**Regional Availability**

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

**Electricals & Electronics**

Electrical appliances, Electrical equipment, Connectors, Energy  
distribution

**Industry & Consumer goods**

Housewares, Hydraulics & Pneumatics, Mechanical Engineering,  
Power transmission, Sports & Leisure, Tools & Accessories

