

# performanceplastics

## Grivory GV-5H

50% glass fibre reinforced engineering thermoplastic material based on a combination of semi-crystalline polyamide with partially aromatic co-polyamide, injection-moulding grade.

| Property  | Test Method | Unit                |               | Value   |
|---|-------------|---------------------|---------------|---------|
| <b>Mechanical</b>   |             |                     |               |         |
| Density   | ISO 1183    | g/cm <sup>3</sup>   | dry           | 1.56    |
| Tensile E Modulus   | ISO 527     | MPa                 | dry           | 18000   |
|   | ISO 527     | MPa                 | cond          | 17000   |
| Tensile strength at yield                                 | ISO 527     | MPa                 | dry           | *       |
|   | ISO 527     | MPa                 | cond          | *       |
| Elongation at yield                                       | ISO 527     | %                   | dry           | *       |
|   | ISO 527     | %                   | cond          | *       |
| Tensile strength at break                                 | ISO 527     | MPa                 | dry           | 250     |
|   | ISO 527     | MPa                 | cond          | 220     |
| Elongation at break                                       | ISO 527     | %                   | dry           | 3       |
|   | ISO 527     | %                   | cond          | 3       |
| Charpy notched impact 23°C                                | ISO 179/1eA | KJ/m <sup>2</sup>   | dry           | 14      |
|   | ISO 179/1eA | KJ/m <sup>2</sup>   | cond          | 14      |
| Charpy notched impact -30°C                               | ISO 179/1eA | KJ/m <sup>2</sup>   | dry           | 13      |
|   | ISO 179/1eA | KJ/m <sup>2</sup>   | cond          | 13      |
| <b>Thermal</b>  |             |                     |               |         |
| Melting Point   | ISO 11357   | °C                  | dry           | 260     |
| HDT A (1.8 MPa)   | ISO 75      | °C                  | dry           | 235     |
| Coefficient of linear thermal expansion (long) 23 - 80°C  | ISO 11359   | 10 <sup>-4</sup> /K | dry           | 0.15    |
| Coefficient of linear thermal expansion (trans) 23 - 80°C | ISO 11359   | 10 <sup>-4</sup> /K | dry           | 0.9     |
| Maximum usage Temp. (long term)                           | EMS         | °C                  | dry           | 100-120 |
| Maximum usage Temp. (short term)                          | EMS         | °C                  | dry           | 180     |
| <b>Electrical</b>   |             |                     |               |         |
| Comparative tracking index (CTI)                          | IEC 112     |                     | dry           |         |
|   | IEC 112     |                     | cond          | 600     |
| <b>Behavioural</b>  |             |                     |               |         |
| Flammability (0.8mm)                                      | UL94        | Rating              |               | HB      |
| Water absorption  | ISO 62      | %                   | (23°C/sat)    | 4.5     |
| Moisture absorption                                       | ISO 62      | %                   | (23°C/50% RH) | 1.3     |
| <b>Mould Shrinkage</b>                                    |             |                     |               |         |
| Linear  | ISO 294     | %                   | dry           | 0.05    |
| Transverse  | ISO 294     | %                   | dry           | 0.4     |

The values quoted are the average of results obtained under laboratory conditions and are given only as an indication to enable customers to make use of our products. Prospective users should determine the suitability of materials before adopting them on a commercial scale.

### Features

- Exhibits Exceptional Characteristics Even After Water Absorption
- Economical Alternative to Die Cast Alloys
- High Stiffness and Strength
- Dimensional Stability, Low Warp
- Good Chemical Resistance
- Good Surface Finish

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