# VESTAKEEP® 1000 G

PEEK — Evonik Operations GmbH

## Product Texts

**Low- viscosity, unreinforced polyether ether ketone**

**VESTAKEEP® 1000 G** is a low-viscosity, unreinforced polyether ether ketone for injection molding.

The semi-crystalline polymer features superior, thermal and chemical resistance. Parts made from VESTAKEEP® 1000 G are of low flammability.

VESTAKEEP® 1000 G can be processed by common injection machines for thermoplastics.

We recommend a melt temperature between 360°C and 380°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

VESTAKEEP® 1000 G is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

Pigmentation may affect values.

For information about processing VESTAKEEP® 1000 G, please follow the general recommendations in our brochure “VESTAKEEP® PEEK Processing Guidelines“.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.INDUSTRIAL.VESTAKEEP.COM

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Melt volume-flow rate, MVR | **150** | cm³/10min | ISO 1133 |
| Temperature | **380** | °C | - |
| Load | **5** | kg | - |
| [C] Molding shrinkage, parallel | **0.9** | % | ISO 294-4, 2577 |
| [C] Molding shrinkage, normal | **1.0** | % | ISO 294-4, 2577 |

[C]: CAMPUS

| Mechanical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Tensile Modulus | **3900** | MPa | ISO 527 |
| [C] Yield stress | **100** | MPa | ISO 527 |
| [C] Yield strain | **5.5** | % | ISO 527 |
| [C] Nominal strain at break | **10** | % | ISO 527 |
| [C] Charpy impact strength, +23°C | **60** | kJ/m² | ISO 179/1eU |
| [C] Type of failure | **C** | - | - |
| [C] Charpy impact strength, -30°C | **60** | kJ/m² | ISO 179/1eU |
| [C] Type of failure | **C** | - | - |
| [C] Charpy notched impact strength, +23°C | **5** | kJ/m² | ISO 179/1eA |
| [C] Type of failure | **C** | - | - |
| [C] Charpy notched impact strength, -30°C | **5** | kJ/m² | ISO 179/1eA |
| [C] Type of failure | **C** | - | - |

[C]: CAMPUS

| Thermal properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Melting temperature, 10°C/min | **340** | °C | ISO 11357-1/-3 |
| [C] Glass transition temperature, 10°C/min | **150** | °C | ISO 11357-1/-2 |
| [C] Temp. of deflection under load, 1.80 MPa | **155** | °C | ISO 75-1/-2 |
| [C] Temp. of deflection under load, 0.45 MPa | **205** | °C | ISO 75-1/-2 |

| | | | |
|---|---|---|---|
| [C] Vicat softening temperature, B | **310** | °C | ISO 306 |
| [C] Coeff. of linear therm. expansion, parallel | **60** | E-6/K | ISO 11359-1/-2 |
| [C] Burning Behav. at 1.5 mm nom. thickn. | **V-0** | class | IEC 60695-11-10 |
| Thickness tested | **1.6** | mm | - |
| [C] Oxygen index | **38** | % | ISO 4589-1/-2 |

[C]: CAMPUS

| Electrical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Relative permittivity, 1MHz | **2.8** | - | IEC 62631-2-1 |
| [C] Volume resistivity | **>1E13** | Ohm*m | IEC 62631-3-1 |
| [C] Comparative tracking index | **200** | - | IEC 60112 |

[C]: CAMPUS

| Other properties | Value | Unit | Test Standard |
|---|---|---|---|
| [C] Water absorption | **0.5** | % | Sim. to ISO 62 |
| [C] Density | **1300** | kg/m³ | ISO 1183 |

[C]: CAMPUS

| Test specimen production | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| [C] Injection Molding, melt temperature | **380** | °C | ISO 294 |
| Injection Molding, mold temperature | **180** | °C | ISO 294 |
| Injection Molding, injection velocity | **200** | mm/s | ISO 294 |

[C]: CAMPUS

## Characteristics

**Processing**
Injection Molding

**Delivery form**
Pellets

**Features**
Thermal Stability

**Chemical Resistance**
General Chemical Resistance

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