

Product Information

VESTAKEEP® 4000G

High-viscosity, unreinforced polyether ether ketone

VESTAKEEP 4000G is a high-viscosity, unreinforced polyether ether ketone for injection molding and extrusion.

The semi-crystalline polymer features superior thermal and chemical resistance. Parts made from VESTAKEEP 4000G are self-extinguishing.

VESTAKEEP 4000G can be processed by common machines for thermoplastics.

We recommend a melt temperature between 370°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 4000G is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

For information about processing VESTAKEEP 4000G please follow the general recommendations in our brochure "VESTAKEEP Polyether Ether Ketone."

For further information, please contact our experts in the department Market Development of the High Performance Polymers Business Line.

| Property | Test method | | Unit | VESTAKEEP 4000G | |
|--------------------------------|-------------------------|---------------------------|--------------------|----------------------------------|-------------------|
| | international | national | | | |
| Density | 23°C | ISO 1183 | DIN EN ISO 1183 | g/cm ³ | 1.30 |
| Tensile test | | ISO 527-1 | DIN EN ISO 527-1 | | |
| Stress at yield | | ISO 527-2 | DIN EN ISO 527-2 | MPa | 96 |
| Strain at yield | | | | % | 5 |
| Strain at break | | | | % | 30 |
| Tensile modulus | | ISO 527-1 | DIN EN ISO 527-1 | MPa | 3500 |
| | | ISO 527-2 | DIN EN ISO 527-2 | | |
| CHARPY impact strength | | ISO 179/1eU | DIN EN ISO 179/1eU | | |
| | 23°C | | | kJ/m ² | N ¹⁾ |
| | -30°C | | | kJ/m ² | N ¹⁾ |
| CHARPY notched impact strength | | ISO 179/1eA | DIN EN ISO 179/1eA | | |
| | 23°C | | | kJ/m ² | 7 C ¹⁾ |
| | -30°C | | | kJ/m ² | 6 C ¹⁾ |
| Vicat softening temperature | | ISO 306 | DIN EN ISO 306 | | |
| Method A | 10 N | | | °C | 335 |
| Method B | 50 N | | | °C | 305 |
| Linear thermal expansion | | ISO 11359 | DIN 53752 | | |
| | 23-55°C | | | | |
| longitudinal | | | | 10 ⁻⁴ K ⁻¹ | 0.6 |
| Relative permittivity | | IEC 60250 | DIN VDE 0303-T4 | | |
| | 50 Hz | | | | 2.8 |
| | 1 MHz | | | | 2.8 |
| Electric strength | K20/P50 | IEC 60243-1 | IEC 60243-1 | kV/mm | 25 |
| Comparative tracking index | | IEC 60112 | IEC 60112 | | |
| Test solution A | CTI | | | | 200 |
| | 100 drops value | | | | 175 |
| Volume resistivity | | IEC 60093 | DIN IEC 60093 | Ohm · cm | 10 ¹⁵ |
| Surface resistance | | IEC 60093 | DIN IEC 60093 | Ohm | 10 ¹⁴ |
| Melting range | | ISO 11357 | | | |
| DSC | 2 nd heating | | | °C | approx. 340 |
| Melt volume-flow rate (MVR) | | ISO 1133 | DIN EN ISO 1133 | | |
| | 380°C/ 5kg | | | cm ³ /10 min | 11 |
| Flammability acc. UL94 | | IEC 60695 | UL94 | | |
| | 0.8 mm | | | | V-1 |
| | 1.6 mm | | | | V-0 |
| Glow wire test | | IEC 60695-2- | DIN EN 60695-2- | | |
| GWIT | 2 mm | 12/13 | 12/13 | °C | 850 |
| GWFI | 2 mm | | | °C | 960 |
| Mold shrinkage | | determined on 2 mm sheets | | | |
| | in flow direction | with film gate at rim | | % | 1.1 |
| | in transverse direction | mold temperature 180°C | | % | 1.8 |
| | | ISO 294-4 | | | |

Pigmentation may affect values.

¹⁾ C = Complete break, incl. hinge break H
N = No break

® = registered trademark

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