VESTAKEEP® 2000 GF30

Glass fiber–reinforced (30%) polyether ether ketone

VESTAKEEP 2000 GF30 is a medium–viscosity, glass fiber–reinforced (30%) polyether ether ketone for injection molding.

The semi–crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP 2000 GF30 are self–extinguishing.

VESTAKEEP 2000 GF30 can be processed by common injection–molding machines for thermoplastics.

We recommend a melt temperature between 380°C and 400°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

VESTAKEEP 2000 GF30 is supplied as cylindrical pellets in 25 kg boxes with moisture–proof polyethylene liners.

For information about processing of VESTAKEEP 2000 GF30, 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 international | Test method national | Unit | VESTAKEEP 2000 GF30
---|---|---|---|---
Density | ISO 1183 | DIN EN ISO 1183 | g/cm³ | 1.50
Tensile test | ISO 527-1 | DIN EN ISO 527-1 | MPa | 165
Tensile strength | ISO 527-2 | DIN EN ISO 527-2 | % | 2
Strain at break | ISO 527-1 | DIN EN ISO 527-1 | MPa | 11000
Tensile modulus | ISO 527-2 | DIN EN ISO 527-2 | MPa | 11000
CHARPY impact strength | ISO 179/1eU | DIN EN ISO 179/1eU | kJ/m² | 55 C¹
| 23°C-30°C | | | kJ/m² | 65 C¹
CHARPY notched impact strength | ISO 179/1eA | DIN EN ISO 179/1eA | kJ/m² | 9 C¹
| 23°C-30°C | | | kJ/m² | 8 C¹
Vicat softening temperature | ISO 306 | DIN EN ISO 306 | °C | 340
Method A | | | °C | 335
Method B | | 50 N | | 335
Linear thermal expansion | ISO 11359 | DIN 53752 | 10⁻⁴K⁻¹ | 0.3
| 23-55°C | | | | |
Relative permittivity | IEC 60250 | DIN VDE 0303-T4 | | 3.4 | |
| 50 Hz | | | | |
| 1 MHz | | | | |
Electric strength | IEC 60243-1 | IEC 60243-1 | kV/mm | 25
| | | | |
Comparative tracking index | IEC 60112 | IEC 60112 | | 200
| Test solution A | | | | 175
| CTI | | | |
| 100 drops value | | | |
Volume resistivity | IEC 60093 | DIN IEC 60093 | Ohm·m | 10¹⁸
Surface resistance | IEC 60093 | DIN IEC 60093 | Ohm | 10¹⁴
Melting range DSC | ISO 11357 | | °C | approx. 340
2nd heating | | | | |
Melt volume-flow rate (MVR) | ISO 1133 | DIN EN ISO 1133 | cm³/10 min | 17
| 380°C/5kg | | | |
Flammability acc. UL94 | IEC 60695 | UL94 | | V-1
| 0.8 mm | | | |
| 1.6 mm | | | |
Glow wire test | IEC 60695-2 | DIN EN 60695-2 | °C | 875
| GWIT | 2 mm | 12/13 | |
| GWFI | 2 mm | 12/13 | |
| 2 mm | | | |
| 12/13 | | | |
Mold shrinkage | determined on 2 mm sheets | | | |
in flow direction | with film gate at rim | | % | 0.4
in transverse direction | mold temperature 180°C | | % | 0.9
ISO 294-4

Pigmentation may affect values.

¹) C = Complete break, incl. hinge break H

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