

Product Texts

Glass fiber-reinforced (30%) polyether ether ketone

VESTAKEEP® 4000 GF30 is a 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® 4000 GF30 are of low flammability.

VESTAKEEP® 4000 GF30 can be processed on common injection molding machines for thermoplastics.

We recommend a melt temperature of 380°C to 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® 4000 GF30 is supplied as cylindrical pellets in 25kg 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 the values.

For guidance processing of VESTAKEEP® 4000 GF30 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	32	cm³/10min	ISO 1133
Temperature	400	°C	-
Load	21.6	kg	-
^[C] Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.7	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	11000	MPa	ISO 527
^[C] Stress at break	160	MPa	ISO 527
^[C] Strain at break	2	%	ISO 527
^[C] Charpy impact strength, +23°C	70	kJ/m²	ISO 179/1eU
^[C] Type of failure	C	-	-
^[C] Charpy impact strength, -30°C	75	kJ/m²	ISO 179/1eU
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, +23°C	11	kJ/m²	ISO 179/1eA
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, -30°C	9	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] Temp. of deflection under load, 1.80 MPa	312	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	335	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	335	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	30	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	45	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	3.3	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	40	E-4	IEC 62631-2-1
[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	1E15	Ohm	IEC 62631-3-2
[C] Comparative tracking index	200	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	0.4	%	Sim. to ISO 62
[C] Density	1500	kg/m ³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	400	°C	ISO 294
Injection Molding, mold temperature	180	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294
Injection Molding, pressure at hold	120	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Other Extrusion

Delivery form

Pellets

Regional Availability

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