

Product Texts

Glass fiber-reinforced (30%) polyether ether ketone

VESTAKEEP® 4000 GF30 BK 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 BK are of low flammability.

VESTAKEEP® 4000 GF30 BK 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 BK is supplied as cylindrical pellets 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 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	cm ³ /10min	ISO 1133
Temperature	400	°C	-
Load	21.6	kg	-
^[C] Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.6	%	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/m ²	ISO 179/1eU
^[C] Type of failure	C	-	-
^[C] Charpy impact strength, -30°C	75	kJ/m ²	ISO 179/1eU
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, +23°C	10	kJ/m ²	ISO 179/1eA
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, -30°C	9	kJ/m ²	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]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	3.3	-	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] 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

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Other Extrusion

Delivery form

Pellets, Black

Special Characteristics

Flame retardant

Features

Thermal Stability

Chemical Resistance

General Chemical Resistance

Regional Availability

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