VESTAKEEP® 4000 G BK

PEEK — Evonik Operations GmbH

Product Texts

High viscosity, unreinforced polyether ether ketone

VESTAKEEP® 4000 G BK 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® 4000 G BK are of low flammability.

VESTAKEEP® 4000 G BK can be processed by common 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® 4000 G BK 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 the values.

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

For information about processing VESTAKEEP® 4000 G BK, 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	**10**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
[C] Molding shrinkage, parallel	**0.9**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.1**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3500**	MPa	ISO 527
[C] Yield stress	**95**	MPa	ISO 527
[C] Yield strain	**5**	%	ISO 527
[C] Nominal strain at break	**30**	%	ISO 527
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C**	-	-
[C] Charpy notched impact strength, -30°C	**6**	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] Vicat softening temperature, B	**305**	°C	ISO 306

[C] Coeff. of linear therm. expansion, parallel	**60**	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	**2.8**	-	IEC 62631-2-1
[C] Comparative tracking index	**200**	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[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, 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