Product Information

VESTAKEEP® 4000 G BK

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.

For information about processing VESTAKEEP® 4000 G BK, please follow the general recommendations in our brochure "VESTAKEEP® PEEK Processing Guidelines".

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.

Pigmentation may affect the values.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.INDUSTRIAL.VESTAKEEP.COM

Mechanical properties ISO	dry	Unit	Test Standard
Tensile Modulus	**3500**	MPa	ISO 527
Tensile Strength	**95**	MPa	ISO 527
Yield stress	**95**	MPa	ISO 527
Yield strain	**5**	%	ISO 527
Stress at break	**77**	MPa	ISO 527
Nominal strain at break, εtB	**30**	%	ISO 527
Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU

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Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**6**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-

Thermal properties	**dry**	**Unit**	**Test Standard**
Melting temperature	**340**	°C	ISO 11357-1/-3
Vicat softening temperature A, 10 N, 50 K/h	**335**	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**305**	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**60**	E-6/K	ISO 11359-1/-2

Physical properties	**dry**	**Unit**	**Test Standard**
Density	**1300**	kg/m³	ISO 1183

Burning Behav.	**dry**	**Unit**	**Test Standard**
Burnin behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**3.2**	mm	-

Electrical properties	**dry**	**Unit**	**Test Standard**
Relative permittivity, 1MHz	**2.8**	-	IEC 62631-2-1
Electric strength, AC, S20/P50	**16**	kV/mm	Sim. to IEC 60243-1
CTI, test solution A, 50 drops value	**200**	-	IEC 60112

Rheological properties	**dry**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**10**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0.9**	%	ISO 294-4, 2577

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Molding shrinkage, normal	**1.1**	%	ISO 294-4, 2577

Characteristics

Key Feature, Processing
Injection Molding

Key Feature, Resistance to
Heat (Thermal Stability), Fire / Burn

Key Feature, Certificate / Licence
Food contact

Special Characteristics
Semi-crystalline, High viscosity

Features
General Chemical Resistance

Color
Black

Delivery form
Pellets, Granules

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