

Product Information

VESTAKEEP® 2000 G BK

MEDIUM VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE



VESTAKEEP® 2000 G BK is a medium viscosity, unreinforced polyether ether ketone for injection molding.

The semi-crystalline polymer features superior, thermal and chemical resistance. Parts made from VESTAKEEP® 2000 G BK are of low flammability.

VESTAKEEP® 2000 G BK can be processed by common machines for thermoplastics.

We recommend a melt temperature between 360°C and 380°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 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 values.

For information about processing VESTAKEEP® 2000 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

Key Features

Industrial Sector

Automotive and Mobility, Industry and Engineering

Resistance to

Fire / burn

Processing

Injection molding, Extrusion

Conformity

Food contact

Delivery form

Pellets, Granules

Additives

Unfilled

Mechanical properties ISO

Tensile modulus

Value

3700

Unit

MPa

Test Standard

ISO 527

Tensile strength

100

MPa

ISO 527

Yield stress	100	MPa	ISO 527
Yield strain	5	%	ISO 527
Stress at break	70	MPa	ISO 527
Nominal strain at break, tB	20	%	ISO 527
Poisson's ratio, 23°C	0.40	-	ISO 527
Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	5.5	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	5.5	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Flexural modulus, 23°C	3600	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	120	MPa	ISO 178
Flexural strength, 23°C	157	MPa	ISO 178
Flexural strain at flexural strength, 23°C	7	%	ISO 178
Flexural stress at break, 23°C	N	MPa	ISO 178
Flexural strain at break, 23°C	N	%	ISO 178

Thermal properties	Value	Unit	Test Standard
Melting temperature	340	°C	ISO 11357-1/-3
Glass transition temperature, DSC	149	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	156	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	204	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	335	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	310	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	60	E-6/K	ISO 11359-1/-2
Melting Temperature	340	°C	ASTM D 3418

Physical properties	Value	Unit	Test Standard
Density	1300	kg/m ³	ISO 1183
Water absorption	0.4	%	Sim. to ISO 62
Density	1300	kg/m ³	ASTM D 792

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

Electrical properties	Value	Unit	Test Standard
Volume resistivity, V	>1E13	Ohm*m	IEC 62631-3-1
Surface resistance, RSD	1E14	Ohm	IEC 62631-3-2
Relative permittivity, 1MHz	2.8	-	IEC 62631-2-1
Dielectric strength, AC, S20/P50	16	kV/mm	Sim. to IEC 60243-1
CTI, test solution A, 50 drops value	200	-	IEC 60112
CTI, test solution A, 100 drops value	175	-	IEC 60112
Assessment of the insulation group	III a	-	DIN EN 60664-1

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	70	cm ³ /10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-
Molding shrinkage, parallel	1.1	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Test specimen production	Value	Unit	Test Standard
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

Characteristics

Applications

Encapsulation

Special Characteristics

High heat resistant

Regulatory

Water contact KTW-BWGL, Water contact DIN EN 16421

Color

Black

Additives

External lubrication

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Evonik Operations GmbH
Smart Materials
High Performance Polymers
 45772 Marl / Germany
 Tel: +49 2365 49-9878
evonik-hp@evonik.com
www.plastics-database.com