

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".

**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

dry

**537000**

Unit

psi

Test Standard

ISO 527

Tensile strength	<b>14500</b>	psi	ISO 527
Yield stress	<b>14500</b>	psi	ISO 527
Yield strain	<b>5</b>	%	ISO 527
Stress at break	<b>10200</b>	psi	ISO 527
Nominal strain at break, tB	<b>20</b>	%	ISO 527
Poisson's ratio, 23°C	<b>0.40</b>	-	ISO 527
Charpy impact strength, +23°C	<b>N</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	<b>N</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	<b>2.62</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>2.62</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Flexural modulus, 23°C	<b>522000</b>	psi	ISO 178
Flexural stress at conv. deflection, 23°C	<b>17400</b>	psi	ISO 178
Flexural strength, 23°C	<b>22800</b>	psi	ISO 178
Flexural strain at flexural strength, 23°C	<b>7</b>	%	ISO 178
Flexural stress at break, 23°C	<b>N</b>	psi	ISO 178
Flexural strain at break, 23°C	<b>N</b>	%	ISO 178

<b>Thermal properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Melting temperature	<b>644</b>	°F	ISO 11357-1/-3
Glass transition temperature, DSC	<b>300</b>	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	<b>313</b>	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	<b>399</b>	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	<b>635</b>	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	<b>590</b>	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	<b>3.33E-5</b>	in/in/°F	ISO 11359-1/-2
Melting Temperature	<b>644</b>	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1.3	g/cm <sup>3</sup>	ISO 1183
Water absorption	0.4	%	Sim. to ISO 62
Density	1.3	g/cm <sup>3</sup>	ASTM D 792

Burning Behav.	dry	Unit	Test Standard
Burnin behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.1260	in	-

Electrical properties	dry	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	406	V/mil	Sim. to IEC 60243-1
CTI, test solution A, 50 drops value	200	-	IEC 60112
Assessment of the insulation group	III a	-	DIN EN 60664-1

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	70	cm <sup>3</sup> /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	dry	Unit	Test Standard
Injection Molding, melt temperature	716	°F	ISO 294
Injection Molding, mold temperature	356	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

VESTAKEEP®

**Characteristics**

**Applications**

Encapsulation

**Special Characteristics**

High heat resistant

**Regulatory**

Water contact KTW-BWGL, Water contact DIN EN 16421

**Color**

Black