Product Information

VESTAKEEP® 1000 G

LOW- VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE

VESTAKEEP® 1000 G is a low-viscosity, unreinforced polyether ether ketone for injection molding.

The semi-crystalline polymer features superior, thermal and chemical resistance. Parts made from VESTAKEEP® 1000 G are of low flammability.

VESTAKEEP® 1000 G can be processed by common injection 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® 1000 G 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® 1000 G, 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

Processing
Injection molding

Delivery form
Pellets, Granules

Resistance to
Fire / burn

Conformity
Food contact

Additives
Unfilled

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**3900**	MPa	ISO 527

EVONIK Leading Beyond Chemistry

Tensile strength	**100**	MPa	ISO 527
Yield stress	**100**	MPa	ISO 527
Yield strain	**5.5**	%	ISO 527
Stress at break	**70**	MPa	ISO 527
Nominal strain at break, tB	**10**	%	ISO 527
Charpy impact strength, +23°C	**60**	kJ/m²	ISO 179/1eU
Type of failure	**C**	-	-
Charpy impact strength, -30°C	**60**	kJ/m²	ISO 179/1eU
Type of failure	**C**	-	-
Charpy notched impact strength, +23°C	**5**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**5**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-

Thermal properties	**dry**	**Unit**	**Test Standard**
Melting temperature	**340**	°C	ISO 11357-1/-3
Glass transition temperature, DSC	**150**	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**155**	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**205**	°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	**dry**	**Unit**	**Test Standard**
Density	**1300**	kg/m³	ISO 1183
Water absorption	**0.5**	%	Sim. to ISO 62
Density	**1300**	kg/m³	ASTM D 792

Burning Behav.	dry	Unit	Test Standard
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.6**	mm	-
Oxygen index	**38**	%	ISO 4589-1/-2
Limiting Oxygen Index	**38**	%	ASTM D 2863
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	**800**	°C	IEC 60695-2-13

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	**16**	kV/mm	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	**150**	cm^3/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0.9**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.0**	%	ISO 294-4, 2577

Test specimen production	dry	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
Electrical and Electronical, Encapsulation

Color
Natural color

Special Characteristics
Semi-crystalline, Low viscosity

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