

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".

Key Features

Industrial Sector

Automotive and Mobility, Industry and Engineering

Resistance to

Fire / burn

Processing

Injection molding

Conformity

Food contact

Delivery form

Pellets, Granules

Additives

Unfilled

Mechanical properties ISO

Tensile modulus

dry

566000

Unit

psi

Test Standard

ISO 527

Tensile strength	14500	psi	ISO 527
Yield stress	14500	psi	ISO 527
Yield strain	5.5	%	ISO 527
Stress at break	10200	psi	ISO 527
Nominal strain at break, tB	10	%	ISO 527
Charpy impact strength, +23°C	28.5	ftlb/in ²	ISO 179/1eU
Type of failure	C	-	-
Charpy impact strength, -30°C	28.5	ftlb/in ²	ISO 179/1eU
Type of failure	C	-	-
Charpy notched impact strength, +23°C	2.38	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	2.38	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	644	°F	ISO 11357-1/-3
Glass transition temperature, DSC	302	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	311	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	401	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	635	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	590	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	3.33E-5	in/in/°F	ISO 11359-1/-2
Melting Temperature	644	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1.3	g/cm ³	ISO 1183
Water absorption	0.5	%	Sim. to ISO 62
Density	1.3	g/cm ³	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	0.0630	in	-
Oxygen index	38	%	ISO 4589-1/-2
Limiting Oxygen Index	38	%	ASTM D 2863
Glow Wire Flammability Index (GWFI)	1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	1470	°F	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	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	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	716	°F	ISO 294
Injection Molding, mold temperature	356	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

Characteristics

Applications

Electrical and Electronical, Encapsulation

Color

Natural color

Special Characteristics

Semi-crystalline, Low viscosity