

Product Information

VESTAKEEP® 5000 G

HIGH VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE



VESTAKEEP® 5000 G 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® 5000 G are of low flammability.

VESTAKEEP® 5000 G can be processed by common machines for thermoplastics. We recommend a melt temperature between 370°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® 5000 G is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

Pigmentation may affect values.

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.

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
Yield stress	95	MPa	ISO 527
Yield strain	5	%	ISO 527
Stress at break	85	MPa	ISO 527
Nominal strain at break, εB	35	%	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	9	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	8	kJ/m ²	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
Water absorption	0.5	%	Sim. to ISO 62
Density	1300	kg/m ³	ISO 1183

Burning Behav.	dry	Unit	Test Standard
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3.2	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
Limiting Oxygen Index	36	%	ASTM D 2863

Electrical properties	dry	Unit	Test Standard
Relative permittivity, 1MHz	2.8	-	IEC 62631-2-1
Volume resistivity, pV	>1E13	Ohm*m	IEC 62631-3-1
Surface resistance, RSD	1E14	Ohm	IEC 62631-3-2
Electric strength, AC, S20/S20	19	kV/mm	IEC 60243-1
Electric 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

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	7	cm ³ /10min	ISO 1133
Temperature	380	°C	-

Load	5	kg	-
Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Characteristics

Key Feature, Industrial Sector

Automotive, Instustry and Building Construction, Oil and Gas

Key Feature, Processing

Injection Molding, Extrusion

Key Feature, Resistance to

Heat (Thermal Stability), Fire / Burn

Applications

Encapsulation, Tube and hose

Special Characteristics

Semi-crystalline, High viscosity

Features

General Chemical Resistance

Color

Natural Color

Delivery form

Pellets, Granules

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