

Product Information

VESTAKEEP® 5000 FP

UNREINFORCED, HIGH VISCOSITY POLYETHER ETHER KETONE FINE POWDER



VESTAKEEP® 5000 FP is an unreinforced, high viscosity polyether ether ketone fine powder. It can be used as a basic resin or in blends with different additives for manufacturing compression molding parts.

The semi-crystalline polymer features superior, thermal and chemical resistance. VESTAKEEP® 5000 FP is of low flammability.

VESTAKEEP® 5000 FP is supplied as powder in 10 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.

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 information about processing of VESTAKEEP® 5000 FP, please follow the general recommendations in our brochure “VESTAKEEP® High Performance in Powder Form Polyether Ether Ketone Powders”.

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, Aircraft and Aerospace

Resistance to

Heat (thermal stability), Fire / burn

Processing

Press and sintering

Additives

Unfilled

Delivery form

Powder

Mechanical properties ISO

Tensile modulus

Value

3400

Unit

MPa

Test Standard

ISO 527

Tensile strength

95

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, tB	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	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	Value	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
Melting Temperature	340	°C	ASTM D 3418

Physical properties	Value	Unit	Test Standard
Density	1300	kg/m ³	ISO 1183
Moisture content	0.29	Gew.-%	ISO 15512
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	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested	2	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested	2	mm	-

Electrical properties	Value	Unit	Test Standard
Volume resistivity, V	>1E13	Ohm*m	IEC 62631-3-1
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	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

Powder properties	Value	Unit	Test Standard
Bulk density, powder	250	g/l	EN ISO 60
Particle size, D(50)	60	µm	ISO 13320, DIN ISO 8130-13

Characteristics

Applications

Electrical and Electronical

Processing

Electrostatic coating

Special Characteristics

High viscosity

Color

Natural color

Delivery form

Fine powder (FP)

Chemical Resistance

General chemical resistance

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