Product Information

VESTAKEEP® 4000 FP

UNREINFORCED, HIGH-VISCOSITY POLYETHER ETHER KETONE FINE POWDER



VESTAKEEP® 4000 FP is an unreinforced, highviscosity 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® 4000 FP is of low flammability.

VESTAKEEP® 4000 FP is supplied as powder in boxes with moisture-proof polyethyleneliners.

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 guidance processing of VESTAKEEP® 4000 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

Processing
Press and sintering

Delivery form
Powder

Resistance to
Heat (thermal stability), Fire / burn

Conformity
Food contact

Additives
Unfilled

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**3500**	MPa	ISO 527
Tensile strength	**96**	MPa	ISO 527
Yield stress	**96**	MPa	ISO 527
Yield strain	**5**	%	ISO 527

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Stress at break	**77**	MPa	ISO 527
Nominal strain at break, tB	**30**	%	ISO 527
Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**6**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-

Thermal properties	**dry**	**Unit**	**Test Standard**
Melting temperature	**340**	°C	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	**150**	°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	**305**	°C	ISO 306
Melting Temperature	**340**	°C	ASTM D 3418

Physical properties	**dry**	**Unit**	**Test Standard**
Density	**1300**	kg/m³	ISO 1183
Moisture content	**0.18**	Gew.-%	ISO 15512
Bulk density, Granulate	**273**	kg/m³	-
Density	**1300**	kg/m³	ASTM D 792

Burning Behav.	**dry**	**Unit**	**Test Standard**
Burnin behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**3.2**	mm	-

Rheological properties	**dry**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**11**	cm³/10min	ISO 1133

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Temperature	**380**	°C	-
Load	**5**	kg	-

Powder properties	dry	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
Semi-crystalline, High viscosity

Color
Natural color

Delivery form
Fine powder (FP)

Chemical Resistance
General chemical resistance

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