

## 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](mailto:EVONIK-HP@EVONIK.COM) OR VISIT OUR PRODUCT AT [WWW.INDUSTRIAL.VESTAKEEP.COM](http://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

**Additives**

Unfilled

**Mechanical properties ISO**

Tensile modulus

**dry**

**3400**

**Unit**

MPa

**Test Standard**

ISO 527

Tensile strength

**95**

MPa

ISO 527

Yield stress	<b>95</b>	MPa	ISO 527
Yield strain	<b>5</b>	%	ISO 527
Stress at break	<b>85</b>	MPa	ISO 527
Nominal strain at break, tB	<b>40</b>	%	ISO 527
Charpy impact strength, +23°C	<b>N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	<b>N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	<b>9</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>8</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-

<b>Thermal properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Melting temperature	<b>340</b>	°C	ISO 11357-1/-3
Vicat softening temperature A, 10 N, 50 K/h	<b>335</b>	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	<b>305</b>	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	<b>60</b>	E-6/K	ISO 11359-1/-2
Melting Temperature	<b>340</b>	°C	ASTM D 3418

<b>Physical properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Density	<b>1300</b>	kg/m <sup>3</sup>	ISO 1183
Moisture content	<b>0.29</b>	Gew.-%	ISO 15512
Density	<b>1300</b>	kg/m <sup>3</sup>	ASTM D 792

<b>Burning Behav.</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Burnin behav. at thickness h	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>3.2</b>	mm	-
Glow Wire Flammability Index (GWFI)	<b>960</b>	°C	IEC 60695-2-12
GWFI - thickness tested	<b>2</b>	mm	-
Glow Wire Ignition Temperature (GWIT)	<b>850</b>	°C	IEC 60695-2-13

GWIT - thickness tested

**2**

mm

-

**Electrical properties**
**dry**
**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

Assessment of the insulation group

**III a**

-

DIN EN 60664-1

**Rheological properties**
**dry**
**Unit**
**Test Standard**

Melt volume-flow rate, MVR

**7**

 cm<sup>3</sup>/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**
**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

**Color**

Natural color

**Processing**

Electrostatic coating

**Delivery form**

Fine powder (FP)

**Special Characteristics**

High viscosity

**Chemical Resistance**

General chemical resistance

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**Evonik Operations GmbH**  
**Smart Materials**  
**High Performance Polymers**  
 45772 Marl / Germany  
 Tel: +49 2365 49-9878  
[evonik-hp@evonik.com](mailto:evonik-hp@evonik.com)  
[www.plastics-database.com](http://www.plastics-database.com)