

## Product Information

### **VESTAKEEP® 4000FP**

#### **Unreinforced, high-viscosity polyether ether ketone fine powder**

VESTAKEEP 4000FP 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 4000FP is self-extinguishing.

VESTAKEEP 4000FP is supplied as powder in boxes with moisture-proof polyethylene liners.

For guidance processing of VESTAKEEP please follow the general recommendations in our brochure "VESTAKEEP Polyether Ether Ketone".

**For further information, please contact us at [evonik-hp@evonik.com](mailto:evonik-hp@evonik.com).**

## Powder Information

Property	Test method		Unit	VESTAKEEP 4000FP
	international	national		
App. bulk density	ISO 60	DIN 53 468	g/dm <sup>3</sup>	250
Average particle size	d50	Malvern Mastersizer	µm	approx. 60

## Application technology properties

Property	Test method		Unit	VESTAKEEP 4000FP	
	international	national			
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm <sup>3</sup>	1.30
Tensile test		ISO 527-1	DIN EN ISO 527-1		
Stress at yield		ISO 527-2	DIN EN ISO 527-2	MPa	96
Strain at yield				%	5
Strain at break				%	30
Tensile modulus		ISO 527-1/2	DIN EN ISO 527-1/2	MPa	3500
CHARPY impact strength		ISO 179/1eU	DIN EN ISO 179/1eU		
	23°C			kJ/m <sup>2</sup>	N <sup>1)</sup>
	-30°C			kJ/m <sup>2</sup>	N <sup>1)</sup>
CHARPY notched impact strength		ISO 179/1eA	DIN EN ISO 179/1eA		
	23°C			kJ/m <sup>2</sup>	7 C <sup>1)</sup>
	-30°C			kJ/m <sup>2</sup>	6 C <sup>1)</sup>
Temperature of deflection under load		ISO 75-1	DIN EN ISO 75-1		
		ISO 75-2	DIN EN ISO 75-2		
Method A	1.8 MPa			°C	150
Method B	0.45 MPa			°C	205
Vicat softening temperature		ISO 306	DIN EN ISO 306		
Method A	10 N			°C	335
Method B	50 N			°C	305
Melting range		ISO 11357			
DSC	2 <sup>nd</sup> heating			°C	approx. 340
Melt volume-flow rate (MVR)		ISO 1133	DIN EN ISO 1133		
	380°C / 5 kg			cm <sup>3</sup> /10 min	11
Flammability acc. UL94	3.2 mm	IEC60695	UL94		V-0

Pigmentation may affect values

<sup>1)</sup> C = Complete break, incl. hinge break H  
N = No break

® = registered trademark

This information and all technical and other advice are based on Evonik's present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. Evonik disclaims all representations and warranties, whether express or implied, and shall have no liability for, merchantability of the product or its fitness for a particular purpose (even if Evonik is aware of such purpose), or otherwise. Evonik shall not be responsible for consequential, indirect or incidental damages (including loss of profits) of any kind. It is the customer's sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of the corresponding product, and does not imply that similar products could not be used.