

Product Information

# VESTAKEEP® 2000 P

## MEDIUM-VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE POWDER



**VESTAKEEP® 2000 P** is a medium-viscosity, unreinforced polyether ether ketone powder grade and serves as basis material for compounds and scattering powder for composites.

The semi-crystalline polymer features superior thermal and chemical resistance. Parts made from VESTAKEEP® 2000 P are of low flammability.

VESTAKEEP® 2000 P is supplied as powder in boxes with moisture-proof polyethylene liners.

Pigmentation may affect values.

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.

For information about processing VESTAKEEP® 2000 P, 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, Industry and Engineering

#### Processing

Press and sintering, Coating

#### Delivery form

Powder

#### Resistance to

Heat (thermal stability), Fire / burn

#### Conformity

Food contact

#### Additives

Unfilled

### Mechanical properties ISO

	dry	Unit	Test Standard
Tensile modulus	<b>3700</b>	MPa	ISO 527
Tensile strength	<b>100</b>	MPa	ISO 527
Yield stress	<b>100</b>	MPa	ISO 527

Yield strain	<b>5</b>	%	ISO 527
Stress at break	<b>70</b>	MPa	ISO 527
Strain at break, B	<b>25</b>	%	ISO 527
Nominal strain at break, tB	<b>30</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>6</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>6</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
Glass transition temperature, DSC	<b>150</b>	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	<b>155</b>	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	<b>205</b>	°C	ISO 75-1/-2
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>310</b>	°C	ISO 306
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
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>800</b>	°C	IEC 60695-2-13
GWIT - thickness tested	<b>2</b>	mm	-

<b>Rheological properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Melt volume-flow rate, MVR	<b>70</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>380</b>	°C	-
Load	<b>5</b>	kg	-

<b>Powder properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Bulk density, powder	<b>195</b>	g/l	EN ISO 60
Particle size, D(50)	<b>550</b>	µm	ISO 13320, DIN ISO 8130-13

<b>Test specimen production</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Injection Molding, melt temperature	<b>380</b>	°C	ISO 294
Injection Molding, mold temperature	<b>180</b>	°C	ISO 294
Injection Molding, injection velocity	<b>200</b>	mm/s	ISO 294

## Characteristics

### Applications

Electrical and Electronical

### Color

Natural color

### Processing

Scatter coating

### Chemical Resistance

General chemical resistance

### Special Characteristics

Semi-crystalline, Environmental stress crack resistance, Medium viscosity

<b>Processing Recommendation Injection Molding</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Melt temperature	<b>380</b>	°C	-
Mold temperature	<b>180</b>	°C	-
Back pressure	<b>5</b>	MPa	-

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