

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".

**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	5	%	ISO 527
Stress at break	70	MPa	ISO 527
Strain at break, B	25	%	ISO 527
Nominal strain at break, tB	30	%	ISO 527
Charpy impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	6	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	6	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	C	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	340	°C	ISO 11357-1/-3
Glass transition temperature, DSC	150	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	155	°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	310	°C	ISO 306
Melting Temperature	340	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1300	kg/m <sup>3</sup>	ISO 1183
Density	1300	kg/m <sup>3</sup>	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	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested	2	mm	-

Glow Wire Ignition Temperature (GWIT)	<b>800</b>	°C	IEC 60695-2-13
GWIT - thickness tested	<b>2</b>	mm	-

Rheological properties	dry	Unit	Test Standard
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	-

Powder properties	dry	Unit	Test Standard
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

Test specimen production	dry	Unit	Test Standard
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

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