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Product Information VESTAKEEP[®] 4000 P

UNREINFORCED, HIGH-VISCOSITY POLYETHER ETHER KETONE POWDER

VESTAKEEP^{*} **4000 P** is an unreinforced, high-viscosity polyether ether ketone powder. The product is suitable for the manufacture of compounds or it can be used as scatter-powder for the manufacture of composites.

The semi-crystalline polymer features superior thermal and chemical resistance. VESTAKEEP* 4000 P is of low flammability.

VESTAKEEP® 4000 P is supplied as powder in 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 the values.

For information about processing of VESTAKEEP[®] 4000 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 <u>EVONIK-HP@EVONIK.COM</u> OR VISIT OUR PRODUCT AT <u>WWW.INDUSTRIAL.VESTAKEEP.COM</u>

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

Additives Unfilled

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	3600	MPa	ISO 527
Tensile strength	93	MPa	ISO 527
Yield stress	93	MPa	ISO 527







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Yield strain	5	%	ISO 527
Stress at break	78	MPa	ISO 527
Nominal strain at break, tB	30	%	ISO 527
Charpy impact strength, +23°C	Ν	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	Ν	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	7	kJ/m²	ISO 179/1eA
Type of failure	С	-	-
Charpy notched impact strength, -30°C	6	kJ/m²	ISO 179/1eA
Type of failure	С	-	-
Flexural modulus, 23°C	4100	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	130	MPa	ISO 178
Flexural stress at break, 23°C	125	MPa	ISO 178
Flexural strain at break, 23°C	9	%	ISO 178
Thermal properties	dry	Unit	Test Standard
Melting temperature	337	°C	ISO 11357-1/-3
Glass transition temperature, DSC	152	°C	ISO 11357-1/-2
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	337	°C	ASTM D 3418
Physical properties	dry	Unit	Test Standard
Density	1300	kg/m³	ISO 1183
Density	1300	kg/m³	ASTM D 792



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buinning benav.	ary	Unit	rest standard
Burnin behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3.2	mm	-
Optical properties	dry	Unit	Test Standard
Color L	62	-	CIE
Color a	2.53	-	CIE
Color b	7.2	-	CIE
Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	11	cm³/10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-
Powder properties	dry	Unit	Test Standard
Bulk density, powder	220	g/I	EN ISO 60
Particle size, D(50)	550	μm	ISO 13320, DIN ISO 8130-13
Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	380	°C	ISO 294
Injection Molding, mold temperature	180	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Characteristics

Applications Electrical and Electronical

Processing Scatter coating **Color** Natural color

Chemical Resistance General chemical resistance



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Special Characteristics Semi-crystalline, High viscosity

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