

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.

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

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	N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	7	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	6	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
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/m ³	ISO 1183
Density	1300	kg/m ³	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	-

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	cm ³ /10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-

Powder properties	dry	Unit	Test Standard
Bulk density, powder	220	g/l	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

Special Characteristics

Semi-crystalline, High viscosity

Color

Natural color

Chemical Resistance

General chemical resistance