

Product Information
VESTAKEEP® 4000 FP
UNREINFORCED, HIGH-VISCOSITY POLYETHER ETHER KETONE FINE POWDER


VESTAKEEP® 4000 FP is an unreinforced, highviscosity 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® 4000 FP is of low flammability.

VESTAKEEP® 4000 FP is supplied as powder in boxes with moisture-proof polyethyleneliners.

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 values.

For guidance processing of VESTAKEEP® 4000 FP 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.

Key Features
Industrial Sector

Automotive and Mobility, Aircraft and Aerospace

Resistance to

Heat (thermal stability), Fire / burn

Processing

Press and sintering

Conformity

Food contact

Delivery form

Powder

Additives

Unfilled

Mechanical properties ISO

Tensile modulus

dry

3500

Unit

MPa

Test Standard

ISO 527

Tensile strength

96

MPa

ISO 527

Yield stress

96

MPa

ISO 527

Yield strain

5

%

ISO 527

Stress at break	77	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	-	-

Thermal properties	dry	Unit	Test Standard
Melting temperature	340	°C	ISO 11357-1/-3
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	340	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1300	kg/m ³	ISO 1183
Moisture content	0.18	Gew.-%	ISO 15512
Bulk density, Granulate	273	kg/m ³	-
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	-

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	250	g/l	EN ISO 60
Particle size, D(50)	60	µm	ISO 13320, DIN ISO 8130-13

Characteristics

Applications

Electrical and Electronical

Processing

Electrostatic coating

Special Characteristics

Semi-crystalline, High viscosity

Color

Natural color

Delivery form

Fine powder (FP)

Chemical Resistance

General chemical resistance