VESTAKEEP®

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	**522000**	psi	ISO 527
Tensile strength	**13500**	psi	ISO 527
Yield stress	**13500**	psi	ISO 527

Yield strain	**5**	%	ISO 527
Stress at break	**11300**	psi	ISO 527
Nominal strain at break, tB	**30**	%	ISO 527
Charpy impact strength, +23°C	**N**	ftlb/in^2	ISO 179/1eU
Charpy impact strength, -30°C	**N**	ftlb/in^2	ISO 179/1eU
Charpy notched impact strength, +23°C	**3.33**	ftlb/in^2	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**2.85**	ftlb/in^2	ISO 179/1eA
Type of failure	**C**	-	-
Flexural modulus, 23°C	**595000**	psi	ISO 178
Flexural stress at conv. deflection, 23°C	**18900**	psi	ISO 178
Flexural stress at break, 23°C	**18100**	psi	ISO 178
Flexural strain at break, 23°C	**9**	%	ISO 178

Thermal properties	**dry**	**Unit**	**Test Standard**
Melting temperature	**639**	°F	ISO 11357-1/-3
Glass transition temperature, DSC	**306**	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**302**	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**401**	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**635**	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**581**	°F	ISO 306
Melting Temperature	**639**	°F	ASTM D 3418

Physical properties	**dry**	**Unit**	**Test Standard**
Density	**1.3**	g/cm^3	ISO 1183
Density	**1.3**	g/cm^3	ASTM D 792

Burning Behav.	dry	Unit	Test Standard
Burnin behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**0.1260**	in	-

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	**716**	°F	ISO 294
Injection Molding, mold temperature	**356**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Characteristics

Applications
Electrical and Electronical

Color
Natural color

Processing
Scatter coating

Chemical Resistance
General chemical resistance

Special Characteristics
Semi-crystalline, High viscosity