Product Information

VESTAKEEP® 1000 CF30

CARBON FIBER-REINFORCED, LOW VISCOSITY POLYETHER ETHER KETONE

VESTAKEEP® 1000 CF30 is a low viscosity, carbon fiber-reinforced (30%) polyether ether ketone for injection molding.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP® 1000 CF30 are self-extinguishing.

VESTAKEEP® 1000 CF30 can be processed by common injection molding machines for thermoplastics.

We recommend a melt temperature between 380°C and 400°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

VESTAKEEP® 1000 CF30 is supplied as granules in 25 kg 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® 1000 CF30, please follow the general recommendations in our brochure "VESTAKEEP® PEEK Processing Guidelines".

The values presented are typical or average values, they do not constitute a specification.

Key Features

Industrial Sector
Industry and Engineering

Processing
Injection molding

Delivery form
Pellets, Granules

Resistance to
Fire / burn

Additives
Carbon fibers

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**23000**	MPa	ISO 527

Tensile strength	**240**	MPa	ISO 527
Stress at break	**240**	MPa	ISO 527
Strain at break, B	**2**	%	ISO 527
Charpy impact strength, +23°C	**47**	kJ/m²	ISO 179/1eU
Type of failure	**C**	-	-
Charpy impact strength, -30°C	**46**	kJ/m²	ISO 179/1eU
Type of failure	**C**	-	-
Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Charpy notched impact strength, -30°C	**7**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Izod Impact unnotched, 23°C	**45**	kJ/m²	ISO 180/1U
Izod Impact notched, 23°C	**8**	kJ/m²	ISO 180/1A
Izod Impact notched, var. temp.	**7**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-

Thermal properties	**dry**	**Unit**	**Test Standard**
Melting temperature	**340**	°C	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	**240**	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**240**	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**344**	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**339**	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**110**	E-6/K	ISO 11359-1/-2
Melting Temperature	**340**	°C	ASTM D 3418

Physical properties	**dry**	**Unit**	**Test Standard**
Density	**1400**	kg/m³	ISO 1183
Water absorption	**0.4**	%	Sim. to ISO 62

Moisture content	**0.03**	Gew.-%	ISO 15512
Density	**1400**	kg/m³	ASTM D 792

Burning Behav.	**dry**	**Unit**	**Test Standard**
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.6**	mm	-
Oxygen index	**50**	%	ISO 4589-1/-2
Limiting Oxygen Index	**50**	%	ASTM D 2863
GWFI - thickness tested	**960**	mm	-
GWIT - thickness tested	**875**	mm	-

Rheological properties	**dry**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**28**	cm³/10min	ISO 1133
Temperature	**400**	°C	-
Load	**5**	kg	-
Melt volume-flow rate, MVR	**35**	cm³/10min	ISO 1133
Temperature	**400**	°C	-
Load	**5**	kg	-
Melt volume-flow rate, MVR	**27**	cm³/10min	ISO 1133
Temperature	**400**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0**	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.5**	%	ISO 294-4, 2577

Characteristics

Color
Natural color

Chemical Resistance
General chemical resistance