

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.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.INDUSTRIAL.VESTAKEEP.COM

Key Features

Industrial Sector

Industry and Engineering

Resistance to

Fire / burn

Processing

Injection molding

Additives

Carbon fibers

Delivery form

Pellets, Granules

Mechanical properties ISO

Tensile modulus

dry

23000

Unit

MPa

Test Standard

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/m ²	ISO 179/1eU
Type of failure	C	-	-
Charpy impact strength, -30°C	46	kJ/m ²	ISO 179/1eU
Type of failure	C	-	-
Charpy notched impact strength, +23°C	7	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	7	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Izod Impact unnotched, 23°C	45	kJ/m ²	ISO 180/1U
Izod Impact notched, 23°C	8	kJ/m ²	ISO 180/1A
Izod Impact notched, var. temp.	7	kJ/m ²	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/m ³	ISO 1183
Water absorption	0.4	%	Sim. to ISO 62

Moisture content	0.03	Gew.-%	ISO 15512
Density	1400	kg/m ³	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	cm ³ /10min	ISO 1133
Temperature	400	°C	-
Load	5	kg	-
Melt volume-flow rate, MVR	35	cm ³ /10min	ISO 1133
Temperature	400	°C	-
Load	5	kg	-
Melt volume-flow rate, MVR	27	cm ³ /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

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