

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](mailto:EVONIK-HP@EVONIK.COM) OR VISIT OUR PRODUCT AT [WWW.INDUSTRIAL.VESTAKEEP.COM](http://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

**Value**

**23000**

**Unit**

MPa

**Test Standard**

ISO 527

Tensile strength

**240**

MPa

ISO 527

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

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

<b>Physical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Density	<b>1400</b>	kg/m <sup>3</sup>	ISO 1183
Water absorption	<b>0.4</b>	%	Sim. to ISO 62
Moisture content	<b>0.03</b>	Gew.-%	ISO 15512

Density	<b>1400</b>	kg/m <sup>3</sup>	ASTM D 792
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<b>Burning Behav.</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Burning behav. at 1.5 mm nom. thickn.	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>1.6</b>	mm	-
Oxygen index	<b>50</b>	%	ISO 4589-1/-2
Limiting Oxygen Index	<b>50</b>	%	ASTM D 2863
GWFI - thickness tested	<b>960</b>	mm	-
GWIT - thickness tested	<b>875</b>	mm	-

<b>Rheological properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Melt volume-flow rate, MVR	<b>28</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>400</b>	°C	-
Load	<b>5</b>	kg	-
Melt volume-flow rate, MVR	<b>35</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>400</b>	°C	-
Load	<b>5</b>	kg	-
Melt volume-flow rate, MVR	<b>27</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>400</b>	°C	-
Load	<b>5</b>	kg	-
Molding shrinkage, parallel	<b>0</b>	%	ISO 294-4, 2577
Molding shrinkage, normal	<b>0.5</b>	%	ISO 294-4, 2577

### Characteristics

#### Color

Natural color

#### Chemical Resistance

General chemical resistance

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