

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".

**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

**3.34E6**

Unit

psi

Test Standard

ISO 527

Tensile strength	<b>34800</b>	psi	ISO 527
Stress at break	<b>34800</b>	psi	ISO 527
Strain at break, B	<b>2</b>	%	ISO 527
Charpy impact strength, +23°C	<b>22.4</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C</b>	-	-
Charpy impact strength, -30°C	<b>21.9</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, +23°C	<b>3.33</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>3.33</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Izod Impact unnotched, 23°C	<b>21.4</b>	ftlb/in <sup>2</sup>	ISO 180/1U
Izod Impact notched, 23°C	<b>3.81</b>	ftlb/in <sup>2</sup>	ISO 180/1A
Izod Impact notched, var. temp.	<b>3.33</b>	ftlb/in <sup>2</sup>	ISO 180/1A
Temperature	<b>-22</b>	°F	-

<b>Thermal properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Melting temperature	<b>644</b>	°F	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	<b>464</b>	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	<b>464</b>	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	<b>651</b>	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	<b>642</b>	°F	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	<b>6.11E-5</b>	in/in/°F	ISO 11359-1/-2
Melting Temperature	<b>644</b>	°F	ASTM D 3418

<b>Physical properties</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Density	<b>1.4</b>	g/cm <sup>3</sup>	ISO 1183
Water absorption	<b>0.4</b>	%	Sim. to ISO 62

Moisture content	<b>0.03</b>	wt.-%	ISO 15512
Density	<b>1.4</b>	g/cm <sup>3</sup>	ASTM D 792

<b>Burning Behav.</b>	<b>dry</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>0.0630</b>	in	-
Oxygen index	<b>50</b>	%	ISO 4589-1/-2
Limiting Oxygen Index	<b>50</b>	%	ASTM D 2863
GWFI - thickness tested	<b>37.8</b>	in	-
GWIT - thickness tested	<b>34.4</b>	in	-

<b>Rheological properties</b>	<b>dry</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>752</b>	°F	-
Load	<b>11</b>	lb	-
Melt volume-flow rate, MVR	<b>27</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>752</b>	°F	-
Load	<b>11</b>	lb	-
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