

Product Information

# VESTAKEEP® 4000 CFL30

## CARBON FIBER-REINFORCED, HIGH VISCOSITY POLYETHER ETHER KETONE



VESTAKEEP® 4000 CFL30 is a carbon fiber reinforced polyether ether ketone for injection molding.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP® 4000 CFL30 are characterized by low flammability.

VESTAKEEP® 4000 CFL30 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® 4000 CFL30 is supplied as granules in 25 kg 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 values.

For information about processing VESTAKEEP® 4000 CFL30, 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**

Energy, Oil and Gas

**Additives**

Carbon fibers

**Processing**

Injection molding

**Mechanical properties ISO**

	Value	Unit	Test Standard
Tensile modulus	24000	MPa	ISO 527
Tensile strength	245	MPa	ISO 527
Stress at break	245	MPa	ISO 527

Strain at break, B	<b>2</b>	%	ISO 527
Charpy notched impact strength, +23°C	<b>11</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-

<b>Mechanical properties ASTM</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
tensile modulus, annealed	<b>24131.6</b>	MPa	ASTM D 638
Stress at break, 23°C, annealed	<b>2</b>	%	ASTM D 638
Strain at break, 23°C, annealed	<b>265000</b>	Pa	ASTM D 638
Flexural Modulus	<b>2120</b>	MPa	ASTM D 790
Flexural Strength	<b>400</b>	MPa	ASTM D 790

<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
Moisture content	<b>0.15</b>	Gew.-%	ISO 15512
Density	<b>1400</b>	kg/m <sup>3</sup>	ASTM D 792
Shore D hardness, 1s, annealed	<b>92</b>	-	ASTM D 2240

<b>Rheological properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Melt volume-flow rate, MVR	<b>24</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>400</b>	°C	-
Load	<b>21.6</b>	kg	-

<b>Test specimen production</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Injection Molding, melt temperature	<b>420</b>	°C	ISO 294
Injection Molding, mold temperature	<b>200</b>	°C	ISO 294
Injection Molding, injection velocity	<b>200</b>	mm/s	ISO 294

## Characteristics

## Applications

Encapsulation

## Additives

External lubrication

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