

Product Information

# VESTAKEEP® 4000 CF20

## CARBON FIBER-REINFORCED (20%), HIGH VISCOSITY POLYETHER ETHER KETONE



**VESTAKEEP® 4000 CF20** is a carbon fiber reinforced (20%) polyether ether ketone for injection molding.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP® 4000 CF20 are of low flammability.

VESTAKEEP® 4000 CF20 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 CF20 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 CF20, 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

Aircraft and Aerospace, Industry and Engineering, Energy, Oil and Gas

#### Processing

Injection molding

#### Delivery form

Pellets, Granules

#### Resistance to

Heat (thermal stability), Fire / burn

#### Additives

Carbon fibers

### Mechanical properties ISO

Tensile modulus

dry

**16900**

Unit

MPa

Test Standard

ISO 527

Tensile strength	<b>200</b>	MPa	ISO 527
Stress at break	<b>200</b>	MPa	ISO 527
Strain at break, B	<b>2.5</b>	%	ISO 527

Physical properties	dry	Unit	Test Standard
Density	<b>1360</b>	kg/m <sup>3</sup>	ISO 1183
Moisture content	<b>0.03</b>	Gew.-%	ISO 15512
Density	<b>1360</b>	kg/m <sup>3</sup>	ASTM D 792

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	<b>42</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>400</b>	°C	-
Load	<b>21.6</b>	kg	-
Molding shrinkage, parallel	<b>0.7</b>	%	ISO 294-4, 2577
Molding shrinkage, normal	<b>1.0</b>	%	ISO 294-4, 2577

Test specimen production	dry	Unit	Test Standard
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

Electrical and Electronical