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."

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	dry	Unit	Test Standard
Tensile modulus	**2.45E6**	psi	ISO 527

Tensile strength	**29000**	psi	ISO 527
Stress at break	**29000**	psi	ISO 527
Strain at break, B	**2.5**	%	ISO 527

Physical properties	**dry**	**Unit**	**Test Standard**
Density	**1.36**	g/cm³	ISO 1183
Moisture content	**0.03**	wt.-%	ISO 15512
Density	**1.36**	g/cm³	ASTM D 792

Rheological properties	**dry**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**42**	cm³/10min	ISO 1133
Temperature	**400**	°C	-
Load	**21.6**	kg	-
Molding shrinkage, parallel	**0.7**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.0**	%	ISO 294-4, 2577

Test specimen production	**dry**	**Unit**	**Test Standard**
Injection Molding, melt temperature	**788**	°F	ISO 294
Injection Molding, mold temperature	**392**	°F	ISO 294
Injection Molding, injection velocity	**7.87**	in/s	ISO 294

Characteristics

Applications
Electrical and Electronical