

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.

Key Features

Industrial Sector
Energy, Oil and Gas

Additives
Carbon fibers

Processing
Injection molding

Mechanical properties ISO

	dry	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	2	%	ISO 527
Charpy notched impact strength, +23°C	11	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-

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

Physical properties	dry	Unit	Test Standard
Density	1400	kg/m ³	ISO 1183
Moisture content	0.15	Gew.-%	ISO 15512
Density	1400	kg/m ³	ASTM D 792
Shore D hardness, 1s, annealed	92	-	ASTM D 2240

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

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

Characteristics

Applications
Encapsulation