

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.

Key Features

Industrial Sector
Energy, Oil and Gas

Additives
Carbon fibers

Processing
Injection molding

Mechanical properties ISO

	dry	Unit	Test Standard
Tensile modulus	3.48E6	psi	ISO 527
Tensile strength	35500	psi	ISO 527
Stress at break	35500	psi	ISO 527

Strain at break, B	2	%	ISO 527
Charpy notched impact strength, +23°C	5.23	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-

Mechanical properties ASTM	dry	Unit	Test Standard
tensile modulus, annealed	3.5E6	psi	ASTM D 638
Stress at break, 23°C, annealed	2	%	ASTM D 638
Strain at break, 23°C, annealed	38500	psi	ASTM D 638
Flexural Modulus	307500	psi	ASTM D 790
Flexural Strength	58000	psi	ASTM D 790

Physical properties	dry	Unit	Test Standard
Density	1.4	g/cm ³	ISO 1183
Moisture content	0.15	wt.-%	ISO 15512
Density	1.4	g/cm 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	788	°F	ISO 294
Injection Molding, mold temperature	392	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

Characteristics

Applications

Encapsulation