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 OR VISIT OUR PRODUCT AT 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	**2**	%	ISO 527
Charpy notched impact strength, +23°C	**11**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-

Mechanical properties ASTM	Value	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	Value	Unit	Test Standard
Density	**1400**	kg/m³	ISO 1183
Moisture content	**0.15**	Gew.-%	ISO 15512
Density	**1400**	kg/m³	ASTM D 792
Shore D hardness, 1s, annealed	**92**	-	ASTM D 2240

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**24**	cm³/10min	ISO 1133
Temperature	**400**	°C	-
Load	**21.6**	kg	-

Test specimen production	Value	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

Additives
External lubrication

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