

Product Information

VESTAKEEP® 4500 CF30

**CARBON FIBER-REINFORCED (30%), HIGH VISCOSITY
POLYETHER ETHER KETONE**



VESTAKEEP® 4500 CF30 is a high viscosity, carbon fiber-reinforced (30%) polyether ether ketone for the production of injection molded parts.

VESTAKEEP® 4500 CF30 can be processed by common injection molding machines for thermoplastics.

We recommend a melt temperature between 380°C and 420°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 200°C.

The use of colorants may affect property values.

The material is supplied as granules in boxes with moisture barrier 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.

Key Features

Industrial Sector

Automotive and Mobility, Aircraft and Aerospace, Energy, Oil and Gas

Resistance to

Heat (thermal stability), Hydrolysis / hot water, Wear / abrasion

Processing

Injection molding

Electrical

Conductive

Delivery form

Pellets, Granules

Additives

Carbon fibers

Optics

Opaque

Mechanical properties ISO

Tensile modulus

dry / cond

26000 / -

Unit

MPa

Test Standard

ISO 527

Tensile strength

250 / -

MPa

ISO 527

Strain at break, B	1.8 / -	%	ISO 527
Charpy impact strength, +23°C	50 / -	kJ/m ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy impact strength, -30°C	48 / -	kJ/m ²	ISO 179/1eU
Type of failure	C / -	-	-
Charpy notched impact strength, +23°C	10 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	8 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	339 / *	°C	ISO 11357-1/-3
Glass transition temperature, DSC	152 / *	°C	ISO 11357-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	6 / *	E-6/K	ISO 11359-1/-2

Physical properties	dry / cond	Unit	Test Standard
Density	1400 / -	kg/m ³	ISO 1183
Moisture content	0.05 / -	Gew.-%	ISO 15512

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	22 / *	cm ³ /10min	ISO 1133
Temperature	400 / *	°C	-
Load	21.6 / *	kg	-

Characteristics

Applications

General purpose

Additives

Inorganic fillers

Special Characteristics

PTFE-free, Semi-crystalline, U.V. stabilized, High heat resistant, High viscosity

Features

Lightweight

Color

Black

Delivery form

Cylindrical pellets

Chemical Resistance

Solvent resistance, General chemical resistance

Processing Recommendation Injection Molding	dry	Unit	Test Standard
Pre-drying - Temperature	150 - 160	°C	-
Pre-drying - Time	4 - 6	h	-
Melt temperature	380 - 420	°C	-
Mold temperature	160 - 200	°C	-
Feed temperature	70 - 100	°C	-