

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

3.77E6 / -

Unit

psi

Test Standard

ISO 527

Tensile strength

36300 / -

psi

ISO 527

Strain at break, B	1.8 / -	%	ISO 527
Charpy impact strength, +23°C	23.8 / -	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	C / -	-	-
Charpy impact strength, -30°C	22.8 / -	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	C / -	-	-
Charpy notched impact strength, +23°C	4.76 / -	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	3.81 / -	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	C / -	-	-

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	642 / *	°F	ISO 11357-1/-3
Glass transition temperature, DSC	306 / *	°F	ISO 11357-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	3.33E-6 / *	in/in/°F	ISO 11359-1/-2

Physical properties	dry / cond	Unit	Test Standard
Density	1.4 / -	g/cm <sup>3</sup>	ISO 1183
Moisture content	0.05 / -	wt.-%	ISO 15512

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	22 / *	cm <sup>3</sup> /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

<b>Processing Recommendation Injection Molding</b>	<b>dry</b>	<b>Unit</b>	<b>Test Standard</b>
Pre-drying - Temperature	<b>302 - 320</b>	°F	-
Pre-drying - Time	<b>4 - 6</b>	h	-
Melt temperature	<b>716 - 788</b>	°F	-
Mold temperature	<b>320 - 392</b>	°F	-
Feed temperature	<b>158 - 212</b>	°F	-