VESTAKEEP®

Technical Information

VESTAKEEP® CW4500 G



High viscosity, unreinforced polyether ether ketone

VESTAKEEP® CW4500 G is a high viscosity, unreinforced polyether ether ketone for injection molding.

The semi-crystalline polymer features superior mechanical, thermal and chemical resistance. Parts made from VESTAKEEP® CW4500 G are self-extinguishing.

VESTAKEEP® CW4500 G can be processed on common injection molding machines for thermoplastics.

We recommend a melt temperature of 370°C to 400°C during the injection molding process. The mold temperature should be in a range of 160°C to 200°C, preferably 180°C.

VESTAKEEP® CW4500 G is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

For information about processing VESTAKEEP®, please follow the general recommendations in our brochure “VESTAKEEP® Polyether Ether Ketone“.

For further information, please contact us at evonik-hp@evonik.com.

Properties of VESTAKEEP® CW4500 G

Properties	Test method	Unit	Value
Density	ISO 1183		
23°C		g/cm³	1.30
Hardness @ RT	ISO 868		
Shore D		–	86
Tensile test	ISO 527-1/-2		
Stress at yield		MPa	96
Strain at yield		%	5
Stress at break		MPa	82
Strain at break		%	35
Tensile modulus	ISO 527-1	MPa	
	ISO 527-2		3700
Flexural test	ISO 178		
Strength @3.5% strain		MPa	127
Flexural strength		MPa	154
CHARPY notched impact strength	ISO 179/1eA		
23°C		kJ/m²	6.5 C[1)]
Izod notched impact strength	ISO 180		
23°C		kJ/m²	7 C[1)]
Heat Deflection Temperature	ISO 75-1/-2		
0.45 MPa		°C	232
1.8 MPa		°C	156
Melting range	ISO 11357		
DSC 2nd heating		°C	approx. 340
Coefficient of thermal expansion	ISO 11359	10^{-6}/K	
In flow direction	Below Tg		48
In transverse direction	Below Tg		64
Mold shrinkage	ISO 294-4		
	Determined on 2mm		
In flow direction	heets with film gate at rim	%	0.9
In transverse direction	mold temperature 80°C	%	1.3
Melt volume-flow rate (MVR)	ISO 1133		
380°C/5kg		cm³/10min	9

Pigmentation may affect values.

1) C = Complete break, incl. hinge break H

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

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