

Product Information

VESTAKEEP® Easy Slide 1

CARBON FIBER-REINFORCED, WEAR AND FRICTION MODIFIED POLYETHER ETHER KETONE



VESTAKEEP® Easy Slide I is a carbon fiber-reinforced, wear and friction modified polyether ether ketone for injection molding.

Parts made from VESTAKEEP® Easy Slide I are flame resistant and can be used for bearing bushing or gearbox parts due to the self-lubricating effect.

The semi-crystalline polymer features superior, thermal and chemical resistance.

VESTAKEEP® Easy Slide I can be processed by common 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® Easy Slide I 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.

Key Features

Industrial Sector
Industry and Engineering

Processing
Injection molding

Delivery form
Pellets, Granules

Resistance to
Heat (thermal stability), Fire / burn

Additives
Carbon fibers

Mechanical properties ISO

	dry	Unit	Test Standard
Tensile modulus	1.74E6	psi	ISO 527
Stress at break	23200	psi	ISO 527
Nominal strain at break, tB	2	%	ISO 527
Charpy notched impact strength, +23°C	2.62	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-
Friction coefficient f, parallel	0.21	-	ISO 7148-2
Friction coefficient f, normal	0.24	-	ISO 7148-2
Wear coefficient k, parallel	3.8	10E-6 mm ³ /Nm	ISO 7148-2
Wear coefficient k, normal	2.2	10E-6 mm ³ /Nm	ISO 7148-2
Test speed	0.5	m/s	ISO 7148-2
Load	580	psi	ISO 7148-2
Friction partner	Stahl	-	ISO 7148-2

Thermal properties

	dry	Unit	Test Standard
Melting temperature	644	°F	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	610	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	640	°F	ISO 75-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	5.56E-6	in/in/°F	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	2.78E-5	in/in/°F	ISO 11359-1/-2
Melting Temperature	644	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1.48	g/cm ³	ISO 1183
Moisture content	0.06	wt.-%	ISO 15512
Density	1.48	g/cm ³	ASTM D 792

Electrical properties	dry	Unit	Test Standard
Volume resistivity, V	1000	Ohm*m	IEC 62631-3-1
Surface resistance, RSD	1.00E5	Ohm	IEC 62631-3-2

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	716	°F	-
Load	11	lb	-
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7	%	ISO 294-4, 2577
Mold temperature	356	°F	-
Melt temperature	716	°F	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	716	°F	ISO 294
Injection Molding, mold temperature	356	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

Characteristics

Applications

Electrical and Electronical, Encapsulation

Special Characteristics

Semi-crystalline

Features

High coefficient of friction

Color

Natural color

Chemical Resistance

General chemical resistance