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.

The use of colorants may affect property values.

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.

For information about processing of VESTAKEEP® Easy Slide I, please follow the general recommendations in our brochure "VESTAKEEP® PEEK Processing Recommendations".

The values presented are typical or average values, they do not constitute a specification.

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	**12000**	MPa	ISO 527
Stress at break	**160**	MPa	ISO 527
Nominal strain at break, tB	**2**	%	ISO 527
Charpy notched impact strength, +23°C	**5.5**	kJ/m²	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 mm³/Nm	ISO 7148-2
Wear coefficient k, normal	**2.2**	10E-6 mm³/Nm	ISO 7148-2
Test speed	**0.5**	m/s	ISO 7148-2
Load	**4**	MPa	ISO 7148-2
Friction partner	**Stahl**	-	ISO 7148-2

Thermal properties	dry	Unit	Test Standard
Melting temperature	**340**	°C	ISO 11357-1/-3
Temp. of deflection under load A, 1.80 MPa	**321**	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**338**	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**10**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	**50**	E-6/K	ISO 11359-1/-2
Melting Temperature	**340**	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	**1480**	kg/m³	ISO 1183
Moisture content	**0.06**	Gew.-%	ISO 15512
Density	**1480**	kg/m³	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**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
Melt volume-flow rate, MVR	**20**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0.3**	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.7**	%	ISO 294-4, 2577
Mold temperature	**180**	°C	-
Melt temperature	**380**	°C	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	**380**	°C	ISO 294
Injection Molding, mold temperature	**180**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/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