

Product Information

VESTAKEEP® 3300 G High Purity

MEDIUM VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE



VESTAKEEP® 3300 G High Purity is a medium- viscosity, unreinforced polyether ether ketone for injection molding and extrusion. The product is refined by Evonik's special filtration technology.

The semi-crystalline polymer features superior thermal and chemical resistance. Parts made from VESTAKEEP® 3300 G High Purity are of low flammability.

VESTAKEEP® 3300 G High Purity can be processed by common machines for thermoplastics.

We recommend a melt temperature between 360°C and 380°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

VESTAKEEP® 3300 G High Purity is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

Pigmentation may affect values.

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.

For information about processing VESTAKEEP® 3300 G High Purity, please follow the general recommendations in our brochure "VESTAKEEP® PEEK Processing Guidelines".

Key Features

Industrial Sector

Industry and Engineering

Resistance to

Heat (thermal stability), Fire / burn

Processing

Injection molding, Extrusion

Additives

Unfilled

Delivery form

Pellets, Granules

Mechanical properties ISO

Tensile modulus

dry

3600

Unit

MPa

Test Standard

ISO 527

Tensile strength	95	MPa	ISO 527
Yield stress	95	MPa	ISO 527
Yield strain	5	%	ISO 527
Stress at break	75	MPa	ISO 527
Nominal strain at break, tB	25	%	ISO 527
Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	6	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	6	kJ/m ²	ISO 179/1eA
Type of failure	C	-	-
Flexural modulus, 23°C	3350	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	110	MPa	ISO 178
Flexural strength, 23°C	145	MPa	ISO 178
Flexural strain at flexural strength, 23°C	6.5	%	ISO 178

Thermal properties	dry	Unit	Test Standard
Melting temperature	340	°C	ISO 11357-1/-3
Glass transition temperature, DSC	151	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	155	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	205	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	335	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	305	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	60	E-6/K	ISO 11359-1/-2
Melting Temperature	340	°C	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1290	kg/m ³	ISO 1183

Density	1290	kg/m ³	ASTM D 792
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Burning Behav.	dry	Unit	Test Standard
Burnin behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3.2	mm	-
Limiting Oxygen Index	38	%	ASTM D 2863
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested	2	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested	2	mm	-

Electrical properties	dry	Unit	Test Standard
Volume resistivity, V	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity, C, circular electrodes	>1E15	Ohm per square	IEC 62631-3-2
Relative permittivity, 50Hz	3.2	-	IEC 62631-2-1
Relative permittivity, 100Hz	3.2	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.2	-	IEC 62631-2-1
Dissipation factor, 100Hz	12	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	91	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/P50	16	kV/mm	Sim. to IEC 60243-1
CTI, test solution A, 50 drops value	200	-	IEC 60112
Assessment of the insulation group	III a	-	DIN EN 60664-1

Optical properties	dry	Unit	Test Standard
Color L	61	-	CIE
Color a	2.3	-	CIE
Color b	7.9	-	CIE

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-
Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

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, Multifilament, Tube and hose

Color

Natural color

Processing

Compression molding

Chemical Resistance

Hydrolytically stable, General chemical resistance