

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".

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

Key Features

Industrial Sector

Industry and Engineering

Processing

Injection molding, Extrusion

Delivery form

Pellets, Granules

Resistance to

Heat (thermal stability), Fire / burn

Additives

Unfilled

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