VESTAKEEP® 4000 CC20

PEEK-MX20 Evonik Operations GmbH

Product Texts

Ceramic-filled (20%), high viscosity polyether ether ketone

VESTAKEEP® 4000 CC20 is a ceramic-filled (20%) polyether ether ketone for injection molding and extrusion.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP® 4000 CC20 are of low flammability.

VESTAKEEP® 4000 CC20 can be processed on common injection molding machines for thermoplastics.

We recommend a melt temperature of 380°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® 4000 CC20 is supplied as cylindrical pellets 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.

Pigmentation may affect the values.

For information about processing of VESTAKEEP® 4000 CC20, 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.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM OR VISIT OUR PRODUCT AT WWW.INDUSTRIAL.VESTAKEEP.COM

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**10**	cm³/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-
[C] Molding shrinkage, parallel	**0.7**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.0**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**4300**	MPa	ISO 527
[C] Yield stress	**95**	MPa	ISO 527
[C] Yield strain	**5**	%	ISO 527
[C] Nominal strain at break	**20**	%	ISO 527
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C**	-	-
[C] Charpy notched impact strength, -30°C	**7**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C**	-	-

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**340**	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**153**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**155**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**210**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**305**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**45**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10

Thickness tested	**1.6**	mm	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	**3.8**	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**200**	E-4	IEC 62631-2-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**0.4**	%	Sim. to ISO 62
[C] Density	**1490**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**385**	°C	ISO 294
Injection Molding, mold temperature	**180**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/s	ISO 294
Injection Molding, pressure at hold	**120**	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Other Extrusion

Delivery form
Pellets, Granules

Special Characteristics
Heat stabilized or stable to heat

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa