Product Information

VESTAKEEP® Care M40 R

HIGH VISCOSITY, UNREINFORCED POLYETHER ETHER KETONE DESIGNED FOR THE MEDICAL DEVICE INDUSTRY

VESTAKEEP® Care is the ideal materials for the fabrication of medical devices with short time contact to human blood, tissue or bone for up to 30 days. VESTAKEEP® Care Grades have a good biocompatibility, processability and the option to pigment.

VESTAKEEP® Care M40 R are semi finished goods based on the high viscosity VESTAKEEP® Care M40 G polymer resin.

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

Biocompatibility of VESTAKEEP® Care

Biocompatiblity was tested following ISO10993-1 recommendations for a surface medical device with up to 30 days body contact.

The material fulfills the requirements of USP<88> class VI.

Tests were performed by independent, certified laboratories.

Biocompatibility tests for VESTAKEEP® Care:

Delivery of VESTAKEEP® Care

VESTAKEEP® Care M40 R rods can be produced in various diameters ranging from 6 mm up to 100 mm. The standard length is 1 m. Other dimensions are also available upon request.

Mechanical properties are evaluated on stock shapes test bars and further values are evaluated on injection molded samples.

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.

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.EVONIK.COM/MEDICAL-TECHNOLOGY

Key Features

Industrial Sector
Medical Devices

Delivery form
Stock shape (rods and plates)

Resistance to
Heat (thermal stability), Hydrolysis / hot water, Wear / abrasion, Fatigue resistance, Oil / fuels

EVONIK Leading Beyond Chemistry

Optics
Opaque

Conformity
Biocompatibility, Medical application

Additives
Unfilled

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	**4050**	MPa	ISO 527
Yield stress	**110**	MPa	ISO 527
Yield strain	**5**	%	ISO 527
Nominal strain at break, tB	**40**	%	ISO 527
Izod Impact unnotched, 23°C	**5.5**	kJ/m²	ISO 180/1U
Flexural modulus, 23°C	**4050**	MPa	ISO 178
Flexural strength, 23°C	**175**	MPa	ISO 178

Thermal properties	dry	Unit	Test Standard
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

Physical properties	dry	Unit	Test Standard
Density	**1300**	kg/m³	ISO 1183
Water absorption	**0.5**	%	Sim. to ISO 62
Shore D hardness	**84**	-	ISO 7619-1
Density	**1300**	kg/m³	ASTM D 792

Burning Behav.	dry	Unit	Test Standard
Burnin behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**3.2**	mm	-

Electrical properties	dry	Unit	Test Standard
Relative permittivity, 1MHz	**2.8**	-	IEC 62631-2-1

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	**11**	cm^3/10min	ISO 1133
Temperature	**380**	°C	-
Load	**5**	kg	-

Characteristics

Special Characteristics
Semi-crystalline

Regulatory
US Pharmacopeia Class VI conformity

Color
Natural color

Delivery form
Rods Ø6-20mm,stan.lengths 3000mm, Rods Ø25-60mm,stan.lengths 2000mm, Rods Ø70-100mm,stan.lengths 1000mm, Discs Ø98,4mm,thickness 12-30mm, Discs Ø99,5mm,thickness 12-30mm, Discs Ø84,5mm,thickness 12-30mm

Chemical Resistance
Acid resistance, Alkali resistance, Solvent resistance, Grease resistance, Hydrolytically stable, Oil resistance, Oxidation resistance, General chemical resistance

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