

**Product Texts**

**Tooth-colored polyether ether ketone for dental applications**

VESTAKEEP® DC4450 R is a tooth-colored polyether ether ketone (PEEK) grade that is especially designed for removable and fixed dentures, crowns and bridges.

**Biocompatibility of VESTAKEEP® Dental**

For VESTAKEEP® DC4450 R, biocompatibility has been tested following ISO 10993-1 recommendations for permanent mucous membrane contact.

The compound composition is optimised for high biocompatibility and superior mechanical, thermal and chemical resistance.

**Biocompatibility test reports available for VESTAKEEP® DC4450 R**

Standard	Description
ISO 10993-03	Genotoxicity: Salmonella Typhimurium Reverse Mutation Test (Ames Test)
ISO 10993-05	Cytotoxicity: Quantitative Growth Inhibition Test
ISO 10993-10	Irritation: Intracutaneous Reactivity
ISO 10993-10	Sensitization: Local Lymph Node Assay
ISO 10993-11	Acute Systemic Toxicity
ISO 10993-11	Subacute / Subchronic Toxicity 14 days
ISO 10993-18	Extraction Tests
USP Class VI	Acute Systemic Toxicity Intracutaneous Reactivity Muscle Implantation

**Delivery of VESTAKEEP® Dental**

VESTAKEEP® DC4450 R rods are available in different diameters and lengths.

**Dimensions of VESTAKEEP® DC4450 R**

Diameter	Standard length
6 and 8 mm	3000 mm
100 mm	1000 mm

Other custom dimensions are available on request.

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](mailto:EVONIK-HP@EVONIK.COM)  
OR VISIT OUR PRODUCT AT [WWW.EVONIK.COM/MEDICAL-TECHNOLOGY](http://WWW.EVONIK.COM/MEDICAL-TECHNOLOGY)

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>4800</b>	MPa	ISO 527
<sup>[C]</sup> Yield stress	<b>110</b>	MPa	ISO 527
<sup>[C]</sup> Yield strain	<b>4.2</b>	%	ISO 527
<sup>[C]</sup> Nominal strain at break	<b>10</b>	%	ISO 527

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>155</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>210</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	<b>305</b>	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	<b>45</b>	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
<sup>[C]</sup> Water absorption	<b>0.4</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1520</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics**

**Delivery form**

Semifinished product

**Features**

Thermal Stability

**Chemical Resistance**

General Chemical Resistance

**Certifications**

Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

**Applications**

Medical

**Regional Availability**

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