

**Product Texts**

**Implantable grade polyether ether ketone rod stock for permanent implants**

VESTAKEEP® i4 R is a rod stock based on implantable grade neat polyether ether ketone resin VESTAKEEP® i4 G.

**Proven Biocompatibility of VESTAKEEP® i-Grades**

The extra high purity and extended quality measures make VESTAKEEP® i-grade materials an excellent choice for permanent implants.

The biocompatibility of VESTAKEEP® i4 R has been tested following ISO 10993-1 recommendations for permanent tissue/bone contact and USP Class VI.

VESTAKEEP® i4 R complies to ASTM F2026 “Standard Specification for Polyetheretherketone (PEEK) Polymers for Surgical Implant Applications”.

A summary of biocompatibility test results is available upon request.

**Biocompatibility tests available for i4 R**

**Delivery of VESTAKEEP® i-Grades**

VESTAKEEP® i4 R rods are available in different diameters and lengths.

**Dimensions of VESTAKEEP® i4 R**

Diameter	Standard length*
6 to 20 mm	3000 mm
25 to 60 mm	2000 mm
70 to 100 mm	1000 mm

\* Custom lengths are also available

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>4000</b>	MPa	ISO 527
<sup>[C]</sup> Yield stress	<b>109</b>	MPa	ISO 527
<sup>[C]</sup> Yield strain	<b>4.8</b>	%	ISO 527
<sup>[C]</sup> Nominal strain at break	<b>&gt;50</b>	%	ISO 527

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	<b>340</b>	°C	ISO 11357-1/-3
<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>205</b>	°C	ISO 75-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 1MHz	<b>2.8</b>	-	IEC 62631-2-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
<sup>[C]</sup> Water absorption	<b>0.4</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.12</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1300</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics**

**Delivery form**

Semifinished product

**Applications**

Medical

**Certifications**

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

**Regional Availability**

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