

Product Texts

Ultra-fine polyether ether ketone (PEEK) powder for permanent implants

VESTAKEEP® i2 UFP10 is an unreinforced, medium-viscosity, natural colored polyether ether ketone (PEEK) ultra-fine powder.

VESTAKEEP® i2 UFP10 is especially designed for long term implantable medical devices.

The semi-crystalline polymer is designed for high biocompatibility and superior mechanical, thermal and chemical resistance.

Proven Biocompatibility of VESTAKEEP® i-Grades

The biocompatibility of VESTAKEEP® i2 UFP10 has been tested following ISO 10993 recommendations for permanent tissue/bone contact. The material complies USP Class VI.

VESTAKEEP® i2 UFP10 is compliant with ASTM F2026 “Standard Specification for Polyetheretherketone (PEEK) Polymers for Surgical Implant Applications”.

A summary of biocompatibility tests is available upon request.

Biocompatibility test reports available for i2 UFP10

In addition to the body contact period the suitability of the material depends on further criteria, for example the nature of the contact, the processing, or the surface. In any case the suitability has to be verified for the end product.

Processing of VESTAKEEP® i-Grades

For information about processing of VESTAKEEP® i2 UFP10, please follow the general recommendations in our brochure “High Performance in Powder Form - Polyether Ether Ketone Powders”.

Delivery of VESTAKEEP® i-Grades

VESTAKEEP® i2 UFP10 is supplied as a powder in 15 kg boxes or 5 kg buckets with moisture-proof polyethylene liners.

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

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	70	cm ³ /10min	ISO 1133
Temperature	380	°C	-
Load	5	kg	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3700	MPa	ISO 527
^[C] Yield stress	100	MPa	ISO 527
^[C] Yield strain	5	%	ISO 527
^[C] Nominal strain at break	30	%	ISO 527
^[C] Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	6	kJ/m ²	ISO 179/1eA
^[C] Type of failure	C	-	-
^[C] Charpy notched impact strength, -30°C	6	kJ/m ²	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] Temp. of deflection under load, 1.80 MPa	155	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	205	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	310	°C	ISO 306

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Density	1300	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics

Processing

Coating, Transfer Molding

Delivery form

Powder, Natural Color

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