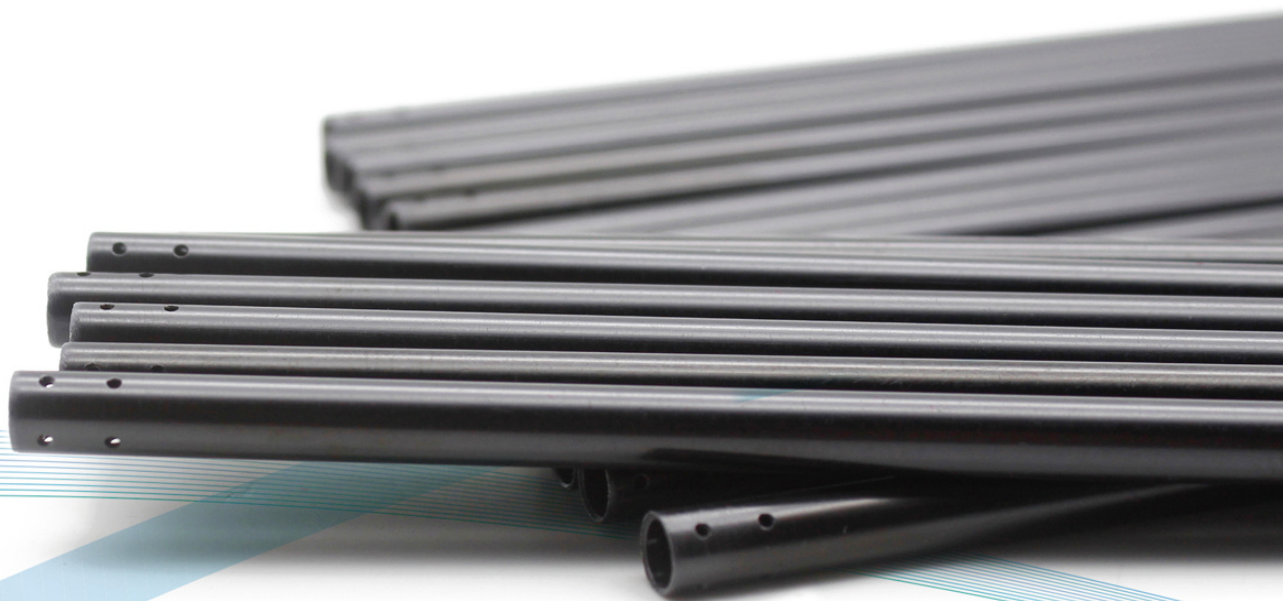


PEEK for Medical Applications

PEEK 医疗导管



ENTERPRISE PROFILE

www.peekmedica.com

JiangSu JunHua HPP Co., Ltd. ("Junhua ChinaPEEK") is a domestic leading comprehensive application solution manufacturer of special engineering plastics. The company was founded in 2007, focusing on the application research, development and production of PEEK, PPSU and other polymer materials. Over decades of development, it has grown into an integrated supplier of PEEK rod, PEEK sheet, PEEK tube and highly precision PEEK parts.

Changzhou Junhua Medical Technology Co., LTD. founded in 2019, is a wholly-owned subsidiary of Junhua ChinaPEEK. Relying on 18 years of R&D and production experience of the parent company in PEEK, PPSU and other polymer materials, Junhua Medical dedicates to PEEK, PPSU and other medical polymer materials in the medical industry application solutions.

PEEK Advantages



High Purity



Disinfectant
Resistance



Stable Dimension



Light Weight



X-ray Transparency



Good Biocompatibility



High Strength



Fatigue Resistance



Excellent Insulation



High-Temperature
Resistance



Food and
Agent Grade



Ideal Fatigue Resistance

WHY?

CHOOSE US

Why Junhua ChinaPEEK

- > 18 years of production and development of polymer PEEK materials And industry application development experience;
- > Tens of millions of imported profile extrusion equipment;
- > 5000 square standardized plant, 10,000 and 100,000 clean workshop;
- > SGS:ISO13485 quality management system assurance;
- > FDA certification, ROHS certification and ISO10993 certification;
- > Domestic PEEK industry chain company to provide one-stop service.



- ▲ Junhua ChinaPEEK sets up medical grade clean workshop to ensure the cleanliness of PEEK extrusion equipment and maximize the dust-free environment of the workshop, and control the internal cleanliness of products from details Degree, to meet the harsh standards of the medical industry.
- ◀ The columnar stiffness and small bending radius of the thin wall of the medical catheter help to manipulate the catheter's tortuous path through the body. The material can be sterilized using γ , ethylene oxide (EO or EtO), electron beam, or autoclave.

Customized After Processing

1. Professional customization of PEEK medical catheter, capillary tube, multi-cavity tube with different mechanical properties to meet customers' diverse customization needs;
2. Advanced ring printing equipment, professional ring printing technicians, can achieve all kinds of ring printing and dot printing requirements, ribbon level, clear writing, medical ink does not fall off;
3. Independently designed PEEK capillary flanging tool, can be customized according to customer requirements. Medical punching equipment, high precision drive control, automatic chip removal;
4. Customized mould of PEEK capillary with high-temperature melting, precise size;
5. PEEK capillaries do not rebound after high temperature and fixed bending cooling, the bending is smooth and without creases, which can meet customers' needs in high standard.



End Forming



Tube Printing



Punching and Flanging



Tube Bending

▼ PEEK Mechanical Properties and other Performance Test Data

Mechanical Performance	Test Standard	Test Value
Tensile Strength(23°C) MPa	ISO527	90
Bending Strength(23°C) MPa	ISO 178	150
Compression Strength(23°C) MPa	ISO 604	118
Lzod Impact Strength kJ/m ²	ISO 180/IU	No Break

Electrical Performance	Test Standard	Test Value
Dielectric Strength kV/mm	IEC 60243-1	19
Dielectric Constant	IEC 60250	3.3
Surface Resistivity Ω	IEC 90093	10 ¹⁵

Thermal Performance	Test Standard	Test Value
Melting Point°C	ISO 11357	343
Distortion Temperature°C	ISO 75-f	163
Continuous Using Temperature°C	UL 74685	260
Coefficient of Thermal Expansion10 ⁻⁵ /°C	ASTM D696	4.7
Flammable Level V-0@mm	UL 94	1.5

Other Performance	Test Standard	Test Value
Density g/cm ³	ISO 1183	1.3±0.02
Rockwell Hardness HRR	ISO 2039	118
Fiction Coefficient	ASTM D3702	0.30-0.38
Water Absorb (25°C.24Hrs) %	ISO 62	0.05
Mould Shrinking Percentage (25-24°C)	3mm thickness, flow direction under the condition of 170°C	1.2

▼ PEEK Biocompatibility Test Outcome

Test NO.	Test Name	Test Method	Test Sample	Test Outcome
ISO10993-5	Cytotoxicity test	MTT method	PEEK5600G	✓
ISO10993-11	Acute toxicity	0.9% sodium chloride solution to extract the tail vein injection	PEEK5600G	✓
ISO10993-11	Acute toxicity	Sesame oil extract intraperitoneal injection	PEEK5600G	✓
ISO10993-10	Skin sensitization	Guinea pig maximum method 0.9% sodium chloride extraction	PEEK5600G	✓
ISO10993-10	Skin sensitization	Guinea pig maximum sesame oil extraction	PEEK5600G	✓
ISO10993-10	Intradermal reaction	0.9% sodium chloride and sesame oil	PEEK5600G	✓
ISO10993-11	Pyrogen reaction	Rabbit extraction by 0.9% sodium chloride injection	PEEK5600G	✓

▼ PEEK Capillary Tubing Product List

NO.	OD	ID
1	Φ0.5	Φ0.3 Φ0.4
2	Φ0.8	Φ0.3 Φ0.4 Φ0.5 Φ0.6
3	Φ1.0	Φ0.4 Φ0.6 Φ0.8 Φ0.9
4	Φ1.2	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1
5	Φ1.4	Φ0.4 Φ0.6 Φ0.8 Φ1.0 Φ1.2
6	Φ1.5	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1 Φ1.3
7	Φ1.6	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1 Φ1.3 Φ1.5
8	Φ1.8	Φ0.4 Φ0.6 Φ0.8 Φ1.0 Φ1.2 Φ1.4 Φ1.5 Φ1.6 Φ1.7
9	Φ2.0	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.0 Φ1.2 Φ1.4 Φ1.6 Φ1.7 Φ1.8
10	Φ2.2	Φ0.4 Φ0.6 Φ0.8 Φ1.0 Φ1.2 Φ1.4 Φ1.6 Φ1.8 Φ2.0 Φ2.1
11	Φ2.4	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1 Φ1.3 Φ1.5 Φ1.7 Φ1.9 Φ2.1 Φ2.3
12	Φ2.6	Φ0.4 Φ0.6 Φ0.8 Φ1.0 Φ1.2 Φ1.4 Φ1.6 Φ1.8 Φ2.0 Φ2.2 Φ2.4 Φ2.5
13	Φ2.8	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1 Φ1.3 Φ1.5 Φ1.7 Φ1.9 Φ2.1 Φ2.3 Φ2.5 Φ2.7
14	Φ3.0	Φ0.4 Φ0.6 Φ0.8 Φ1.0 Φ1.2 Φ1.4 Φ1.6 Φ1.8 Φ2.0 Φ2.2 Φ2.4 Φ2.6 Φ2.8 Φ2.9
15	Φ3.2	Φ0.3 Φ0.5 Φ0.7 Φ0.9 Φ1.1 Φ1.3 Φ1.5 Φ1.7 Φ1.9 Φ2.1 Φ2.3 Φ2.5 Φ2.7 Φ2.9 Φ3.0
16	Φ4.95	Φ4.15 Φ4.25 Φ4.35 Φ4.55
17	Φ10	Φ8.7
18	Φ12	Φ10 Φ11
19	1/32"	Φ0.25 Φ0.5
20	1/16"	Φ0.1 Φ0.13 Φ0.25 Φ0.38 Φ0.5 Φ0.75 Φ1.0 Φ1.2
21	1/18"	Φ0.5 Φ0.75 Φ1.0 Φ1.2 Φ2.0 Φ2.2



Complete specifications, sufficient inventory all around the year, customized requirement.



Thermoplastic PI Tube

Multifunctional Polymer Having a wide range of desirable properties

Thermoplastic polyimide (TPI) is a kind of polymer material with excellent properties, which is widely used in medical field because of its high temperature resistance, low temperature resistance, solvent resistance and radiation resistance.

The utility model is suitable for various medical catheters, including nerve catheters, implantable catheters, cardiac catheters, etc. Because of its better mechanical properties and chemical stability, it is suitable for more complex therapeutic procedures, such as long-term indwelling catheter in the body.



▼ PI Capillary Tubing Characteristic Advantages

- > Good dimensional stability, accuracy can be stabilized at $\pm 0.02\text{mm}$
- > Good thermal insulation, 250 for a long time
- > Good insulation, dielectric strength is not less than 300kV/mm
- > Good chemical resistance, tolerance to most reagents except strong acid and base solutions
- > Good sterilization, can withstand ethylene oxide, high temperature and pressure, irradiation and other sterilization
- > Strong adhesion, material surface treatment can have excellent bonding strength with metal and other materials

▼ PI Performance Test Data

Test items	Test Standard	Unit	JSJHTPI-01	JSJHTPI-02
Density	ISO 1183	g/cm^3	1.32	1.36
Tensile Strength	ISO 527	MPa	90	97
Elongation at Break	ISO 527	%	8	8
Bending Strength	ISO 178	MPa	130	138
Compression Strength	ISO 604	MPa	140	148
Charpy Impact Strength	ISO 180/U	KJ/m^2	100	130 (No break)
Heat Distortion Temperature	ISO 75-f	$^{\circ}\text{C}$	230	250
Continuous Using Temperature	-	$^{\circ}\text{C}$	250	250

▼ PI Capillary Tubing Product List

NO.	OD	ID
1	$\phi 0.5$	$\phi 0.3$ $\phi 0.4$
2	$\phi 0.8$	$\phi 0.3$ $\phi 0.4$ $\phi 0.5$ $\phi 0.6$
3	$\phi 1.0$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 0.9$
4	$\phi 1.2$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$
5	$\phi 1.4$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 1.0$ $\phi 1.2$
6	$\phi 1.5$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$ $\phi 1.3$
7	$\phi 1.6$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$ $\phi 1.3$ $\phi 1.5$
8	$\phi 1.8$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.5$ $\phi 1.6$ $\phi 1.7$
9	$\phi 2.0$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.6$ $\phi 1.7$ $\phi 1.8$
10	$\phi 2.2$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.6$ $\phi 1.8$ $\phi 2.0$ $\phi 2.1$
11	$\phi 2.4$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$ $\phi 1.3$ $\phi 1.5$ $\phi 1.7$ $\phi 1.9$ $\phi 2.1$ $\phi 2.3$
12	$\phi 2.6$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.6$ $\phi 1.8$ $\phi 2.0$ $\phi 2.2$ $\phi 2.4$ $\phi 2.5$
13	$\phi 2.8$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$ $\phi 1.3$ $\phi 1.5$ $\phi 1.7$ $\phi 1.9$ $\phi 2.1$ $\phi 2.3$ $\phi 2.5$ $\phi 2.7$
14	$\phi 3.0$	$\phi 0.4$ $\phi 0.6$ $\phi 0.8$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.6$ $\phi 1.8$ $\phi 2.0$ $\phi 2.2$ $\phi 2.4$ $\phi 2.6$ $\phi 2.8$ $\phi 2.9$
15	$\phi 3.2$	$\phi 0.3$ $\phi 0.5$ $\phi 0.7$ $\phi 0.9$ $\phi 1.1$ $\phi 1.3$ $\phi 1.5$ $\phi 1.7$ $\phi 1.9$ $\phi 2.1$ $\phi 2.3$ $\phi 2.5$ $\phi 2.7$ $\phi 2.9$ $\phi 3.0$
16	$\phi 4.95$	$\phi 4.15$ $\phi 4.25$ $\phi 4.35$ $\phi 4.55$
17	$\phi 10$	$\phi 8.7$
18	$\phi 12$	$\phi 10$ $\phi 11$
19	1/32"	$\phi 0.25$ $\phi 0.5$
20	1/16"	$\phi 0.1$ $\phi 0.13$ $\phi 0.25$ $\phi 0.38$ $\phi 0.5$ $\phi 0.75$ $\phi 1.0$ $\phi 1.2$
21	1/18"	$\phi 0.5$ $\phi 0.75$ $\phi 1.0$ $\phi 1.2$ $\phi 2.0$ $\phi 2.2$

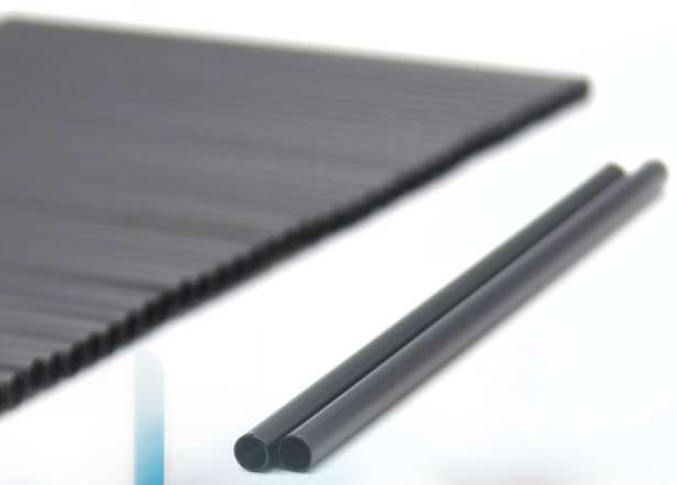
Complete specifications, sufficient inventory all around the year, customized requirement.



High-Temperature Resistance PEEK Medical Catheter

Widely used in interventional and minimally invasive surgical instruments

Intravenous radiofrequency ablation catheter, cardiac radiofrequency ablation catheter,
abdominal surgical instruments, endoscope




PEEK medical catheter is different from traditional medical catheter, the biggest characteristic is not only good toughness, but also fixed rigidity. PEEK tubing has excellent fatigue resistance and good insulation among all materials at present. The insulation strength can reach 5KV with 0.2mm on one side.

Meanwhile, high-temperature resistant PEEK medical catheter can keep excellent mechanical properties under 160°C for a long time, good dimensional stability, high strength, wear resistance, excellent chemical resistance, good impact resistance and flame retardant, in humid environment or high temperature cooking will not affect its insulation strength. It can adapt to all the disinfection methods in medical treatment at present.

PEEK medical catheter produced by our company has been widely used in minimally invasive interventional therapy.

Product Application



The application of guide wire protective sleeve and all kinds of bushing in medical instrument with high temperature or insulation performance requirement.

★ The thinnest wall thickness can be controlled at 0.1mm.



www.peekmedica.com

Dedicated to Developing PEEK Medical Catheter Production and Industrial Application

JiangSu JunHua HPP Co., Ltd.

Tel: +86 519 8622 8816 +86 13915088386

Mail: chinaPEEK@chinaPEEK.com

Web: www.junhuaPEEK.com

Add: No. 11, Wujin District Innovation Industrial Park, No. 377 Wuyinan Road, Wujin high-tech Zone,
Changzhou City, Jiangsu province, China

Changzhou Junhua Medical Technology Co., Ltd.

Tel: +86 519 8622 8879

Add: 8A, Gongyanhui Science and Technology Industrial Park, Wujin High-tech Zone,
Changzhou City, Jiangsu Province, China