



PEEKCHINA

ARKPEEK



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Since 2008
Medical PEEK
Engineering Plastic Profiles & Components



ABOUT ARK

PEEKChina is a leading Chinese manufacturer specializing in thermoplastic Polyetheretherketone (PEEK) for over 15 years. Our unwavering focus is solely on PEEK material, allowing us to excel in the production of both semi-finished and finished engineering plastic products.

With our strong commitment to innovation and quality, we have established a fruitful partnership with Jilin University. Together, we have successfully launched 15 lines of profile continuous extrusion production for PEEK semi-finished products. Our extensive range includes PEEK Pipes, PEEK Sheets, PEEK Rods, PEEK Films, and PEEK Parts, which are carefully crafted through precision machining and injection molding processes.

In addition to our collaboration with Jilin University, we are actively engaged in research and development with Xi'an Jiaotong University to explore the realm of PEEK 3D filaments and printers. This ongoing partnership allows us to stay at the forefront of PEEK technology and offer innovative solutions to our customers.

Since 2015, we have ventured into the field of long-term implantable medical PEEK. Our medical-grade PEEK has undergone rigorous testing and certification by esteemed laboratories and colleges. It complies with ASTM F2026 standards and has obtained FDA/SGS certification. As a result, an increasing number of medical device manufacturers and implantable material consumers trust our high-quality products for their critical applications.

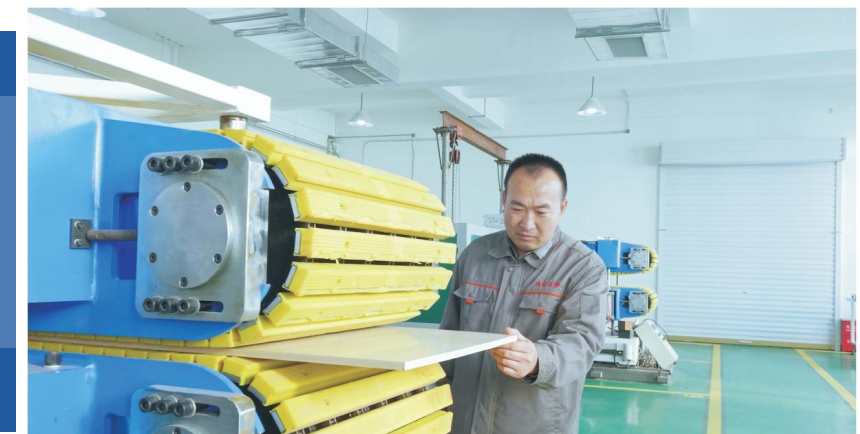
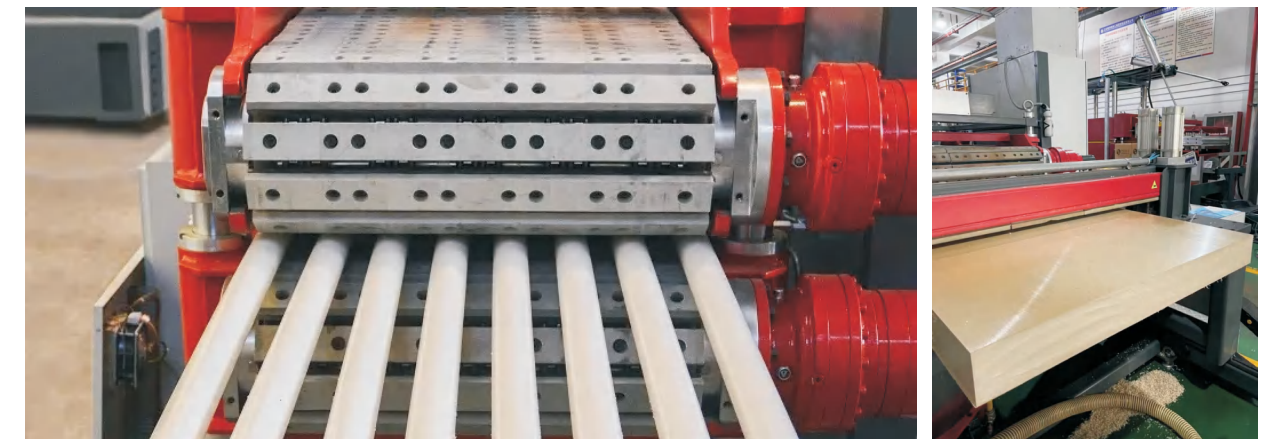
As a pioneering force in the Chinese new materials sector, we allocate a substantial portion of our income towards technical research, dedicating 20% to drive continuous innovation. Our esteemed clientele spans across the United States, Europe, North America, and Korea, attesting to our reputation as a preferred supplier of PEEK materials and products.

At PEEKChina, we combine cutting-edge technology, stringent quality control, and customer-centric focus to deliver exceptional PEEK solutions. Partner with us and experience the reliability and excellence that have made us a trusted name in the industry.

CERTIFICATES

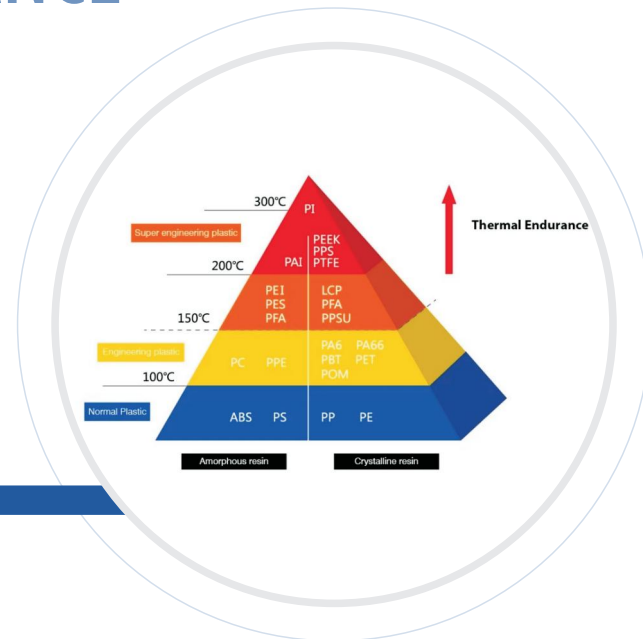


WORKSHOPS



PEEK MATERIAL PERFORMANCE

Polyetheretherketone (PEEK) is a high-performance, engineering thermoplastic characterized by an unusual combination of properties. These properties range from high temperature performance to mechanical strength and excellent chemical resistance.



MATERIAL GRADE

01 ARKPEEK-1000: 100%PEEK

Produced from virgin polyetheretherketone resin and offers the highest toughness and impact resistance of all types.

02 ARKPEEK-CF30: 30% Carbon Fiber + 70% PEEK

Carbon fiber reinforcement lends the material a high level of rigidity and creep strength, high mechanical strength and heat conductivity values.

03 ARKPEEK-GF30: 30% Glass Fiber + 70% PEEK

Glass filled PEEK exhibits increased mechanical strength and high rigidity. Improved creep strength and dimensional stability are achieved by this glass filled PEEK. These properties make this material suitable for use in parts which are exposed to high static loads over long periods in high temperature conditions.

04 ARKPEEK-MOD: 10% Carbon Fiber + 10% PTFE +10% Graphite + 70% PEEK

High performance engineering plastic with product characteristics including excellent sliding and abrasion & wear resistance, high mechanical strength and high dimensional stability. The long term service temperature range of PEEK Rod is from -30°C to 250°C and has a short term maximum service temperature of 310°C.

PEEK MATERIAL PROPERTIES

Mechanical Behavior

Item	Test Standard or Instrument	Unit	ARKPEEK-1000	ARKPEEK-GF30	ARKPEEK-CF30	ARKPEEK-MOD
			100%PEEK	PEEK+30% Glass Fiber	PEEK+30% Carbon Fiber	PEEK+10%Carbon Fiber+10%Graphite +10%PTFE)
Tensile strength(23°C)	ISO527	Mpa	100	155	220	134
Bending strength(23°C)	ISO178	MPa	163	212	298	186
Compressive strength(23°C)	ISO604	MPa	118	215	240	150
Izod impact strength(no gap)	ISO 180/IU	kJ/m ²	No Crack	51	46	32

Thermal Performance

Item	Test Standard or Instrument	Unit	ARKPEEK-1000	ARKPEEK-GF30	ARKPEEK-CF30	ARKPEEK-MOD
			100%PEEK	PEEK+30% Glass Fiber	PEEK+30% Carbon Fiber	PEEK+10%Carbon Fiber+10%Graphite +10%PTFE)
Melting point	DSC 11357	°C	343	343	343	343
Distortion temperature	ISO 75-1/2	°C	163	315	315	263
Continuous using temperature	UL 74685	°C	260	260	260	260
Coefficient of thermal expansion	ASTM D696	10 ⁻⁵ °C	4.7	2.2	1.5	2.2
Flammable level	UL 94	V-0@mm	1.5	1.5	1.5	0.75

Electrical Performance

Item	Test Standard or Instrument	Unit	ARKPEEK-1000	ARKPEEK-GF30	ARKPEEK-CF30	ARKPEEK-MOD
			100%PEEK	PEEK+30% Glass Fiber	PEEK+30% Carbon Fiber	PEEK+10%Carbon Fiber+10%Graphite +10%PTFE)
Dielectric strength	IEC 60243-1	kV/mm	18	19		
Dielectric constant	IEC60250	-	3.2	3.3		
Surface resistivity		Ω	10 ¹⁵	10 ¹⁵	3*10 ⁶	5*10 ⁶

Other Performance

Item	Test Standard or Instrument	Unit	ARKPEEK-1000	ARKPEEK-GF30	ARKPEEK-CF30	ARKPEEK-MOD
			100%PEEK	PEEK+30% Glass Fiber	PEEK+30% Carbon Fiber	PEEK+10%Carbon Fiber+10%Graphite +10%PTFE)
Density	ISO 1138	g/cm ³	1.3±0.01	1.5±0.01	1.4±0.01	1.43±0.01
Rockwell hardness	ISO 2039	HRR	118	119	121	108
Friction coefficient		μ	0.30-0.38	0.38-0.46	0.28	0.18
Water Abs. (25°C.24Hrs)	ISO 62	%	0.5	0.11	0.06	0.06
Mould shrinking percentage	3mm,170°C, Flow direction Perpendicular to flow direction	%	1.2	0.4	0.1	0.3
		%	1.5	0.8	0.5	0.5

PEEK SHEET

■ INTRODUCTION

Introducing our Peek Sheet, a premium-grade thermoplastic sheet that delivers exceptional performance in extreme conditions. Crafted from polyetheretherketone (PEEK), this sheet exhibits remarkable heat resistance, excellent electrical insulation properties, and superb resistance to chemicals and wear.

■ MATERIAL GRADE

ARKPEEK-1000

ARKPEEK-CF30

ARKPEEK-GF30

ARKPEEK-MOD

NO.	Dimension (mm)	Weight (g)	NO.	Dimension (mm)	Weight (g)
1	0.5*700*1000	480	16	Insulation block (with Utype)280x45x1000	15000
2	1*700*1000	950	17	600×6×1000	4680
3	2*700*1000	1900	18	600×8×1000	6240
4	3*700*1000	2800	19	600×9×1000	7020
5	4*650*1000	3400	20	600×15×1000	11700
6	5*650*1000	4300	21	600×20×1000	15600
7	67×31×1000	2700	22	600×25×1000	19500
8	80×15×1000	1560	23	600×30×1000	23400
9	100×25×1000	3100	24	600×35×1000	27300
10	120×38×1000	5500	25	600×40×1000	31200
11	195×33×1000	8365	26	600×45×1000	35100
12	175×162×1000	36855	27	600×50×1000	39000
13	395×12.5×1000	6419	28	600×60×1000	46800
14	422×15×1000	8229	29	800×20×1000	20800
15	422×66×1000	36207	30	800×30×1000	31200



PEEK ROD

■ INTRODUCTION

Peek Rod is a high-performance engineering plastic rod designed for various industrial applications. Made from polyetheretherketone (PEEK) material, it offers exceptional mechanical strength, excellent chemical resistance, and superior dimensional stability. With its versatility and durability, our Peek Rod is an ideal choice for demanding environments and critical applications.

■ MATERIAL GRADE

ARKPEEK-1000

ARKPEEK-CF30

ARKPEEK-GF30

ARKPEEK-MOD

NO.	Rod diameter(mm)	Dimension tolerance mm	NO.	Rod diameter(mm)	Dimension tolerance mm
1	5	0~0.2	22	53	0~1
2	6	0~0.2	23	55	0~1
3	7	0~0.2	24	60	0~1
4	8	0~0.2	25	65	0~1
5	10	0~0.2	26	70	0~2
6	12	0~0.2	27	80	0~2
7	15	0~0.2	28	85	0~2
8	18	0~0.2	29	90	0~2
9	20	0~0.2	30	95	0~2
10	22	0~0.2	31	100	0~2
11	25	0~0.2	32	110	0~2
12	28	0~0.5	33	120	0~2
13	30	0~0.5	34	130	0~2
14	33	0~0.5	35	140	0~3
15	35	0~0.5	36	150	0~3
16	38	0~0.5	37	160	0~3
17	40	0~0.5	38	165	0~3
18	42	0~0.5	39	180	0~3
19	45	0~1	40	200	0~3
20	48	0~1	41	220	0~3
21	50	0~1	42	250	0~3



PEEK TUBE

INTRODUCTION

Discover the reliability and versatility of our Peek Tube, an exceptional solution for fluid handling systems and structural applications. Constructed from polyetheretherketone (PEEK), this high-strength tube offers excellent resistance to corrosive chemicals, elevated temperatures, and mechanical stress.

MATERIAL GRADE

ARKPEEK-1000

ARKPEEK-CF30

ARKPEEK-GF30

ARKPEEK-MOD

NO.	Dimension OD*ID (mm)	Weight (g)	NO.	Dimension OD*ID (mm)	Weight (g)
1	Ø1.6*Ø0.13*1000	2.6	22	Ø110*Ø60*1000	8674.3
2	Ø1.6*Ø0.25*1000	2.5	23	Ø130*Ø60*1000	13572.7
3	Ø1.6*Ø0.5*1000	2.4	24	Ø140*Ø80*1000	13470.6
4	Ø1.6*Ø0.75*1000	2.0	25	Ø160*Ø90*1000	17858.8
5	Ø1.6*Ø1*1000	1.6	26	Ø168*Ø132*1000	11021.0
6	Ø2.33*Ø1.6*1000	2.9	27	Ø180*Ø110*1000	20716.2
7	Ø2.8*Ø2.5*1000	1.6	28	Ø190*Ø130*1000	19593.6
8	Ø3*Ø2.67*1000	1.9	29	Ø190*Ø140*1000	16838.3
9	Ø3.2*Ø1*1000	9.4	30	Ø200*Ø130*1000	23573.6
10	Ø3.2*Ø1.6*1000	7.8	31	Ø220*Ø150*1000	26431.0
11	Ø5*Ø2.5*1000	19.1	32	Ø240*Ø170*1000	29288.4
12	Ø5*Ø4.5*1000	5.8	33	Ø257*Ø230*1000	13418.6
13	Ø7.5*Ø4*1000	42.6	34	Ø250*Ø190*1000	26941.0
14	Ø10.2*Ø8*1000	40.9	35	Ø260*Ø210*1000	23981.8
15	Ø12*Ø4*1000	81.6	36	Ø280*Ø210*1000	35003.2
16	Ø12.45*Ø8.88*1000	77.7	37	Ø280*Ø230*1000	26022.0
17	Ø29*Ø18*1000	527.6	38	Ø300*Ø250*1000	28063.8
18	Ø39*Ø31*1000	571.5	39	Ø320*Ø300*1000	12654.2
19	Ø80*Ø30*1000	5612.8	40	Ø340*Ø250*1000	54188.6
20	Ø90*Ø40*1000	6633.3	41	Ø360*Ø280*1000	52249.6
21	Ø100*Ø50*1000	7653.8	42	Ø580*Ø450*1000	136645.0



PEEK FILM

OVERVIEW

PEEK film offers an outstanding range of physical, thermal, chemical & radiological properties. PEEK is a high performance semi-crystalline thermoplastic. PEEK's characteristics include high temperature performance, excellent wear properties, superior chemical resistance, hydrolytic stability and outstanding toughness and strength.

MATERIAL GRADE

FEATURES, BENEFITS and APPLICATIONS of PEEK Film

Material: Amorphous, Semi-crystalline and Mineral Filled Semi-crystalline.

PEEK (polyetheretherketone) Film Provides:

- High Temperature Performance
- Excellent Tribological Properties
- Broad Chemical Resistance
- High-Strength & Toughness
- Electrical Stability & Radiation Resistance
- Low Smoke & Toxic Gas Emission
- High-Purity, extremely low extractables

Applications:

- Micro speaker diaphragm, dome tweeter.
- Presslire exchanger and senior oliaphragin.
- Aerospace high-speed rail insulation and TAB heat insulation components.
- Thrust washers for micro motors, gaskets for automobiles.
- High-temperature resistant label, pressure sensitive tape substrate.
- Insulation layer of electric vehicle battery.
- Flexible film surface heater.
- Wire, cable, insulation and wrcop sheaths.

Size

Thicknesses between 10µm (0,01 mm) up to 1000µm (1 mm);
Width usually about 420, 650, 1100mm, but customer preferences of special sizes or thicknesses will be provided.



PEEK CUTS

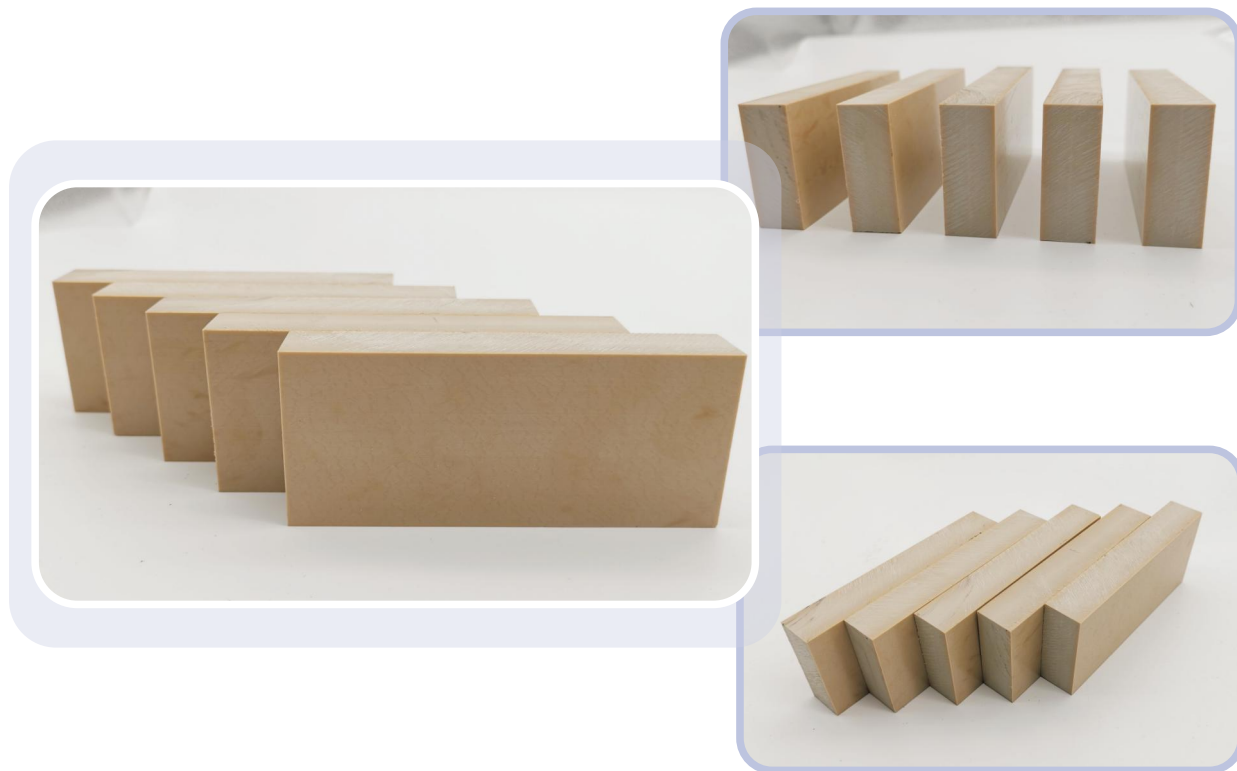
■ PEEK Material Performance

Polyetheretherketone (PEEK) is a high-performance, engineering thermoplastic characterized by an unusual combination of properties. These properties range from high temperature performance to mechanical strength and excellent chemical resistance.



■ MATERIAL GRADE

- ARKPEEK-1000
- ARKPEEK-CF30
- ARKPEEK-GF30
- ARKPEEK-MOD



Peek Capillary Tubing

■ PEEK In Tubing

PEEK is an inert fluoropolymer, with high chemical compatibility and a working temperature range of -50 °C up to +250 °C. This PEEK capillary tubing can be used in a microfluidic system for demanding applications with high pressure or aggressive fluids, but also as a fluidic resistance.

■ MATERIAL GRADE

- ARKPEEK-1000
- ARKPEEK-CF30
- ARKPEEK-GF30
- ARKPEEK-MOD

• Size Table

Product specifications		
Name	OD	ID
PEEK Capillary	1 (±0.05)	0.45 (±0.05)
1/16"PEEK Capillary	Φ1.5-Φ1.60	Φ0.13
1/16"PEEK Capillary	Φ1.5-Φ1.60	Φ0.25
1/16"PEEK Capillary	Φ1.5-Φ1.60	Φ0.50
1/16"PEEK Capillary	Φ1.5-Φ1.60	Φ0.75
1/16"PEEK Capillary	Φ1.5-Φ1.60	Φ1.25
PEEK Capillary	Φ1.7-Φ1.8	Φ0.66-Φ0.8
PEEK Capillary	Φ2.5	Φ1.5
PEEK Capillary	Φ2.5	Φ1.9
PEEK Capillary	Φ2.45	Φ2.1
1/8"PEEK Capillary	Φ3.10-Φ3.22	Φ1.00
1/8"PEEK Capillary	Φ3.10-Φ3.22	Φ1.60
PEEK Capillary	Φ4	Φ3.4
PEEK Capillary	Φ4.5	Φ2.5
PEEK Capillary	Φ20.5	Φ16.5
PEEK Capillary	Φ12	Φ11
PEEK Capillary	Φ11	Φ7.5
PEEK Capillary	Φ6	Φ4
PEEK Capillary	Φ19.8	Φ19.8



PEEK PARTS

■ INTRODUCTION

Precision-engineered from high-quality PEEK material, our parts & components offer exceptional strength, chemical resistance, and dimensional stability. Ideal for demanding industries, these durable solutions ensure reliable performance and optimal functionality in critical applications.

■ MATERIAL GRADE

ARKPEEK-1000

ARKPEEK-CF30

ARKPEEK-GF30

ARKPEEK-MOD



PEEK 3D Printing Filament

■ INTRODUCTION

Unleash the power of innovation with our PEEK 3D Printing Filaments. Crafted from high-performance PEEK material, these filaments enable the creation of robust, precise, and functional 3D-printed parts. With exceptional thermal and chemical resistance, they open up new possibilities in aerospace, automotive, medical, and more.

■ MATERIAL GRADE

ARKPEEK-1000

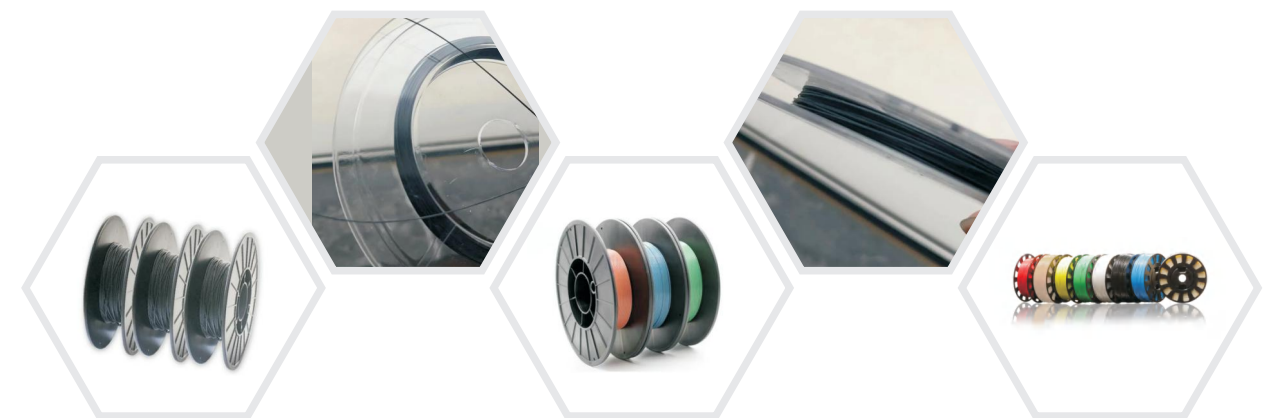
ARKPEEK-CF30

ARKPEEK-GF30

Physical Properties	Standard	Typical value	Unit
Density	ISO1183	1.3	g/cm ³

Mechanical Properties	Standard	Typical value	Unit
Tensile Strength	ISO527	100	Mpa
Tensile Modulus	ISO527	3720	MPa
Flexural Strength	ISO178	128	MPa
Flexural Modulus	ISO178	2700	Mpa

Thermal Properties	Standard	Typical value	Unit
Deflection Temperature (0.45MPa)	ISO75	170	°C
Glass Transition Temperature	DSC	143	°C



Medical Grade Implantable PEEK

Medical-grade, biocompatible PEEK polymer materials

Implantable PEEK have shown remarkable felicities over typical biomedical implants such as metallic alloys, ceramics, and polyethylenes. PEEK is now used to design medical implants in joint replacement systems, spine implants, and cages in vertebral fusion surgeries.

BRAND: ARKMED | ARK-BioPEEK **Products:** Pellet, Filament, Rod, Sheet/Block, Tubing.

BIOMATERIAL PROPERTY

Property	Reference Standard	Test Method	Unit	Specification	Result	
Physical Properties	ASTM F2026	Glass Transition Temperature, T _g	ASTM D3418	°C	125-165	147
		Melt Temperature, T _m	ASTM D3418	°C	320-360	338
		Recrystallization Temperature, T _c	ASTM D3418	°C	260-320	289
		Viscosity	ISO 11443	Pa·s	400-480	437
		Infrared Spectrum	ASTM F1579	/	See Appendix X1	See Appendix X2
		Density	ASTM D1505	kg/m ³	1280-1320	1294
Chemical Properties	ASTM F2026	US Pharmacopeia Test 233	ppm	<100	<10	
Mechanical Properties	ASTM F2026	Tensile Strength at Yield (zero slope), min	ASTM D638, Type IV, 5.08 cm/min	MPa	90	105
		Tensile Strength at Break, min	ASTM D638, Type IV, 5.08 cm/min	MPa	70	80
		Elongation at Break, min	ASTM D638, Type IV, 5.08 cm/min	%	5	18
		Flexural Strength, min	ASTM D790	MPa	110	163
		Flexural Modulus, min	ASTM D790	GPa	3	4
		Impact Strength, Notched Izod, min	ISO 180	kJ/m ²	4	9
Biological Properties	ISO 10993-3	ISO 10993-3	/	Negative	Negative	
	ISO 10993-10	ISO 10993-10	/	≤1	0	
	ISO 10993-10	ISO 10993-10	/	≤1	0	
	ISO 10993-11	ISO 10993-11	/	No Acute Systemic Toxicity	No Acute Systemic Toxicity	
	ISO 10993-11	ISO 10993-11	/	No Subchronic Systemic Toxicity	No Subchronic Systemic Toxicity	
	ISO 10993-6	ISO 10993-6	/	No obvious difference between the test sample and the control sample	No obvious difference between the test sample and the control sample	
	ISO 10993-5	ISO 10993-5	/	≤1	1	
	ISO 10993-4	ISO 10993-4	%	<5	1	
	ISO 10993-11	ISO 10993-11	/	No Pyrogenic Responses	No Pyrogenic Responses	
ISO 10993-18	ISO 10993-18	µg/g	The contents of Phenyl Sulfone≤300	The contents of Phenyl Sulfone<0.09		

APPLICATION



Medical

Oil & Gas

Instrument & Meter



Semiconductor

Electrical & Electronic

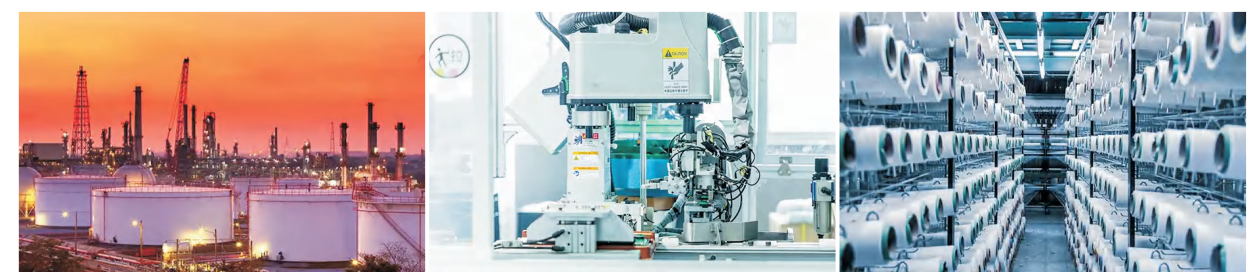
Aerospace



Military

Food & Beverage

Automobile



Energy

Precision Machinery

Textile

