

Web: www.shousupeek.com

Address: Building 18, 19 Lanhua Road, Pukou District, Nanjing, Jiangsu, China



SHOU SU

Professional PEEK
extrusion production enterprise



SHOU SU PEEK



PEEK

Profiles and products
Professional manufacturers
Service providers

Superpolymer -PEEK (polyether ether ketone), PI (polyimide) and other special engineering plastics manufacturers and service providers

www.shousupeek.com



Nanjing Shousu Engineering Plastics Co., Ltd.

ABOUT US

Nanjing Shousu Engineering Plastics Co., Ltd. was established in 2008, and its headquarters is located in Building 18, 19 Lanhua Road, Pukou District, Nanjing, Jiangsu, China, covering an area of 10000 square meters. Nanjing Shousu specializes in producing PEEK (polyetheretherketone), PI (polyimide) and other special engineering plastic finished parts and rod/plate/tube/sheet and other profiles. After nearly 17 years of market sharpening and development, it has gradually determined the market development direction, researched and produced a series of fist products of the enterprise, continuously improved the technology and continuously developed new products, and is in the leading position in the field of special plastic products and profiles production in China. Looking forward to the future, the company will open a new page of overall layout and rapid development in by going up one flight of stairs, and write a more brilliant new chapter.

Continuously Improve Technology and Continuously Develop New Products

TABLE OF CONTENTS

● Company Profile	03
● Development History	05
● Business Introduction	07
● Core Advantage	09
● PEEK Rod	11
● PEEK Sheet	13
● PEEK Tube	15
● PEEK sheets and CF/PEEK composite materials	17
● PEEK filaments and capillaries	19
● Specification table for PEEK screws and PEEK balls	23
● PEEK Performance Parameter Table and Application	25
● PI Products and Applications	33
● PI Performance Parameter Table	35
● Other Plastic Products and Parameter Table	39
● Production Equipment and Testing Equipment	41
● Enterprise Qualification and Exhibition Information	43
● Business Distribution and Partners	45

COMPANY PROFILE

Nanjing Shousu Engineering Plastics Co., Ltd. specializes in extrusion, injection molding, molding and machining of special engineering plastic products, especially in PEEK (polyetheretherketone) and PI (polyimide) industries. Specializing in the production of PEEK (polyetheretherketone), PI (polyimide) finished parts and bars/plates/pipes/sheets, etc., it provides integrated solutions for R&D, design and production of special engineering plastic finished parts and semi-finished profiles for different industries.

The company has a continuous extrusion production line for profiles, a large horizontal injection molding machine, several vertical injection molding machine, a large molding machine, a high-precision CNC lathe, a CNC machining center, a CNC engraving machine, a wire cutting machine, an electric spark machine, a rotary cutting machine, other turning, milling, drilling and grinding machines, etc., which are designed and processed according to the customer's drawings or sample requirements, and the injection and molding molds are manufactured until the samples are processed and mass-produced. After years of experience, the company has owned thousands of injection molds and compression molds, which is convenient for customers to select products and produce and process them.

Our company focuses on the design and material selection of special plastic parts such as PI (polyimide), PEEK (polyetheretherketone), PPS (polyphenylene sulfide), PEI (polyetherimide), PES (polyethersulfone), PSU/PSF (polysulfone), etc., and carries out injection molding and machining to form finished parts of various sizes. The company has successively developed dies for hundreds of PI (polyimide) bars, plates and pipes and thousands of PEEK (polyetheretherketone) bars, plates and pipes, and molded various PI (polyimide), PEEK (polyetheretherketone), PAI (polyamideimide), PBI (polybenzimidazole) and other special plastic profiles can meet the different needs of users to the greatest extent.

In addition, the company also specializes in PI (American DuPont VESPEL polyimide), PEEK (polyether ether ketone), PPS (polyphenylene sulfide), PEI (polyetherimide), PES (polyethersulfone), PSU/PSF (polysulfone), PAI (polyamideimide), PBI (polybenzimidazole) and other original imported bars, plates and pipes of special engineering plastics.

Since its establishment, Nanjing Shousu Company has been relying on stable quality, excellent service, good industry channels and technical advantages, strictly adhering to the business philosophy of "quality first, service first and customer first", and has gradually won the satisfaction and trust of users. Looking forward to cooperating with you in the field of special engineering plastics, you are welcome to inquire, visit and guide, study and exchange!

CORPORATE IMAGE



DEVELOPMENT HISTORY

Professional PEEK extrusion production enterprise

2008

In December 2008, Nanjing Shousu Engineering Plastics Co., Ltd. was established and became a production and processing enterprise of special engineering plastic products profiles and products; Introducing molding machines, injection molding machines, etc., molding PEEK pipes with diameters above 800MM, successfully developing fracturing balls for oil downhole tools, breaking the monopoly of this product abroad for many years.

2009

In March 2009, many molding machines, horizontal and vertical injection molding machine, CNC machining center, CNC drilling and milling grinder and other processing equipment were introduced one after another, and the processing technology was improved and thousands of molds were developed. Nanjing Shousu made great strides towards the leading enterprise in special engineering plastics production.

2010

In April, 2010, 600T injection molding machine, 1000T molding machine, multiple production and processing equipment and production lines were introduced, and they have the ability to process various complex PEEK parts and large PEEK products.

2015

In May 2015, the company expanded its production scale and completed the change of registered capital, increasing its capital from 7.5 million Yuan to 12 million Yuan.
In July, 2015, the company introduced several profile extrusion production lines, successfully extruded various specifications of PEEK rods, PEEK sheets and PEEK tubes, with mature technology and excellent product performance, breaking the monopoly of PEEK profiles abroad for many years, and becoming one of the few production enterprises in China that can extrude PEEK profiles.

2019-2025

In December 2019, the company further expanded its production and operation scale, purchased 10000 square meters standardized industrial plants by itself, and moved into Pukou Economic Development Zone in Nanjing, entering a benign development track.

BUSINESS INTRODUCTION

- Focus on the R&D, design, production and composite modification of special engineering plastics such as PEEK, PI, PPS, PEI, PSU and PPSU.
- Have the ability of continuous extrusion molding, injection molding, compression molding, machining molding and other molding processes.
- Design, processing, manufacturing and modification of extrusion mold, compression mold and injection mold.
- PEEK, PI, PPS, PEI and other parts and products are customized according to drawings and samples.
- Continuous extrusion molding of PEEK, PI, PPS and other rods, plates, pipes, sheets, capillary and filament.
- The research and development and production of new products and fields of special engineering plastics will jointly promote the application of PEEK, PI and other special engineering plastics products in various industries.



<p>PEEK (Polyether Ether Ketone)</p> <p>Low creep and high elastic modulus; High temperature resistance, self-lubrication, easy processing and high mechanical strength; Excellent friction performance, especially wear resistance; Corrosion resistance, aging resistance, radiation resistance, melting resistance, hydrolysis resistance, toughness and rigidity.</p>	<p>PI (Polyimide)</p> <p>Super high temperature resistance, high mechanical properties, small creep and abrasion resistance. Other advantages include good dimensional stability, electrical insulation, high purity, low volatile gas and flame retardancy.</p>	<p>PPS (Polyphenylene Sulfide)</p> <p>Good chemical resistance, low creep, low water absorption, wear resistance and high load capacity; Good dimensional stability, high elastic modulus and flame retardancy.</p>
<p>PEI (Polyetherimide)</p> <p>Outstanding thermal power, good toughness and rigidity; Strong hardness; Good wear resistance; Excellent mechanical and electrical properties, flame retardant, meet the requirements of food processing.</p>		<p>PPSU (Polyphenylsulfone)</p> <p>Good impact performance, chemical resistance, hydrolysis resistance and flame retardancy. Meet the requirements of food processing.</p>
<p>PAI (Polyamide Imide)</p> <p>Excellent toughness and impact strength, good electrical insulation, high temperature resistance, good dimensional stability, good machining performance, good wear resistance and low friction coefficient.</p>	<p>PSU/PSF (Polysulfone)</p> <p>Excellent mechanical properties, high strength, high rigidity and hardness, low water absorption, good dimensional stability, good radiation stability and flame retardancy, which meet the requirements of food processing.</p>	<p>PBI (Polybenzimidazole)</p> <p>Ultra-high temperature resistance (high temperature long-term working temperature of 310°C, instantaneous tolerance temperature of 760°C, thermal deformation temperature of 425°C), high wear resistance, high strength, high rigidity and extremely low linear expansion coefficient.</p>

CORE ADVANTAGE



Product Advantage

PEEK rods, sheets, tubes and other profiles are extruded, with comprehensive specifications and large inventory.

PEEK filaments and capillaries of various specifications are extruded.

PEEK profile extrusion can be customized according to customer requirements.

Equipment Advantages

Profile continuous extrusion production line, large injection molding machine, molding machine, five-axis machining center, high-precision CNC lathe and other processing equipment.

3D coordinate projector, friction and wear tester, microcomputer controlled electronic universal tester, surface hardness tester, etc.



Technical Advantages

Seventeen years' production and research experience of PEEK, PI, PPS and other profiles and parts.

Advanced and mature PEEK profile extrusion line.

Apply for many utility model patent certificates.

Has the technical research and development and production capacity of injection molding and machining various specifications of PEEK parts.

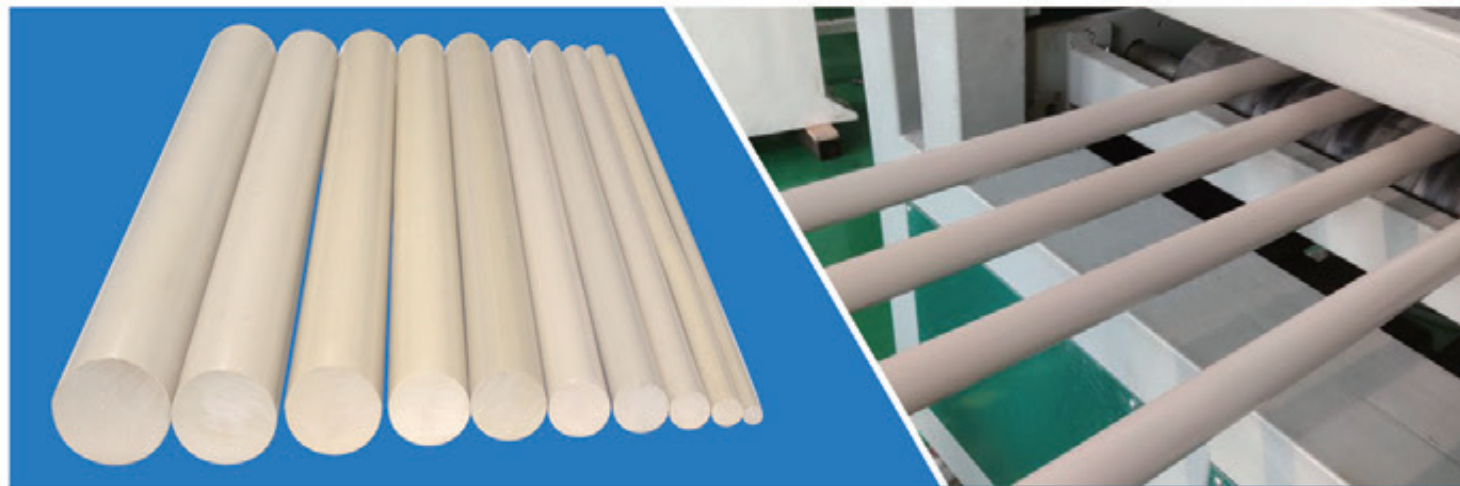


Quality Advantage

Comprehensive analysis of material properties, continuous improvement of formula design and process. Strictly control the enterprise standards and quality inspection process to ensure the ex-factory quality of each product.

With Britain VICTREX PEEK (VICTREX), American DuPont PI (VESPEL), German engineering plastics and other raw material suppliers, we have good cooperative relations for many years, and the raw material sources are stable.

PEEK ROD



PEEK ROD

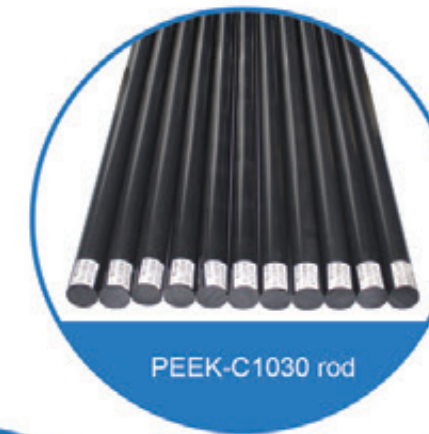
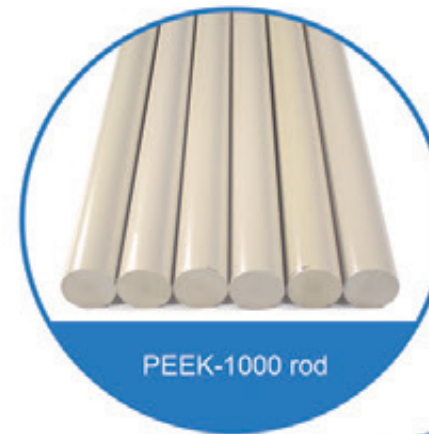
PEEK rod, whose Chinese name is polyetheretherketone rod, is a semi-finished profile extruded from PEEK raw material, which has the characteristics of high temperature resistance, high wear resistance, high tensile strength and good flame retardancy. PEEK rod can be used to process PEEK parts of various specifications, and can manufacture mechanical parts with high requirements, such as gears, bearings, valve seats, sealing rings, pump wear rings, washers, etc. Parts processed with PEEK rods are widely used in key connectors in aerospace, medical, semiconductor, pharmaceutical and food processing industries.

PEEK ROD SPECIFICATION TABLE

Diameter * length(mm)	Weight(kg/m)	Diameter * length(mm)	Weight(kg/m)	Diameter * length(mm)	Weight(kg/m)
Φ4×1000	0.020	Φ30×1000	0.995	Φ100×1000	10.750
Φ5×1000	0.030	Φ32×1000	1.150	Φ110×1000	13.100
Φ6×1000	0.048	Φ35×1000	1.355	Φ120×1000	15.738
Φ7×1000	0.070	Φ40×1000	1.765	Φ130×1000	18.177
Φ8×1000	0.079	Φ45×1000	2.228	Φ140×1000	21.124
Φ10×1000	0.124	Φ50×1000	2.682	Φ150×1000	24.380
Φ12×1000	0.173	Φ55×1000	3.310	Φ160×1000	27.054
Φ15×1000	0.244	Φ60×1000	3.940	Φ170×1000	31.510
Φ16×1000	0.295	Φ65×1000	4.544	Φ180×1000	34.385
Φ18×1000	0.372	Φ70×1000	5.262	Φ190×1000	39.260
Φ20×1000	0.460	Φ75×1000	6.245	Φ200×1000	44.150
Φ22×1000	0.571	Φ80×1000	6.795	Φ220×1000	52.490
Φ25×1000	0.711	Φ85×1000	8.105	Φ250×1000	68.150
Φ28×1000	0.890	Φ90×1000	8.685	Φ300×1000	100.500

Note: This table shows the specifications and weight of PEEK-1000 rod (pure), and the above specifications of PEEK-C1030 rod (carbon fiber), PEEK-G1030 rod (glass fiber), ESD PEEK rod and AST PEEK rod can be produced. The actual weight is subject to weighting.

Material name	PEEK-1000 rod (pure)	PEEK-C1030 rod (carbon fiber)	PEEK-G1030 rod (glass fiber)	ESD PEEK rod	AST PEEK rod
Color	True colors	Black	True colors	Black	Black
Performance introduction	PEEK-1000 rod is extruded from PEEK pure resin, which has good toughness and strong impact resistance.	PEEK-C1030 rod filled with 30% carbon fiber reinforcement has better mechanical properties (higher elastic modulus, mechanical strength and creep) and better wear resistance.	PEEK-G1030 filled with 30% glass fiber reinforced plastic has better rigidity and creep resistance, and better dimensional stability, so it is ideal to manufacture structural parts.	ESD PEEK rod can avoid the harm of voltage discharge to people or objects. Based on static electricity control and permanent dissipation of static charge, this kind of plastic can provide high-level safety for application fields.	AST PEEK rod is based on PEEK raw material, which is mixed with carbon fiber, carbon black, metal fiber, metal powder, permanent antistatic masterbatch, etc., so as to achieve the functions of conductivity and electromagnetic interference shielding.



PEEK SHEET

PEEK sheet, whose Chinese name is polyetheretherketone sheet, is a new engineering plastic sheet extruded from PEEK raw material. PEEK sheet has good toughness and rigidity, it has excellent fatigue resistance, and keeps good toughness and material stability at high temperature. With these excellent comprehensive properties, the parts processed by PEEK plate are widely used in automobile connectors, heat exchange parts, valve bushings and deep-sea oilfield parts, and are widely used in the fields of machinery, petroleum, chemical industry, nuclear power, rail transit, electronics and medicine.

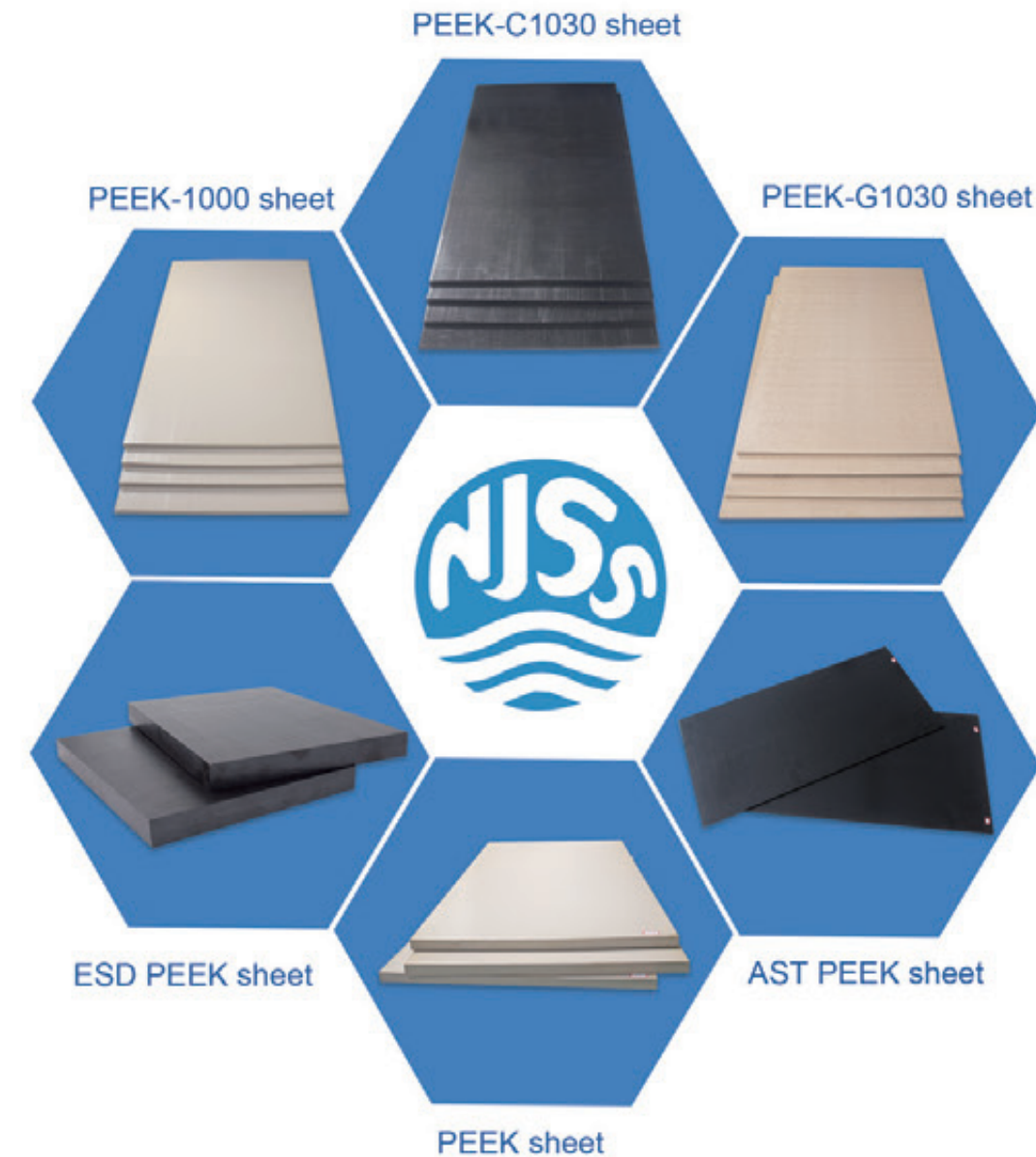


PEEK SHEET SPECIFICATION TABLE

Thickness * width * length(mm)	Weight(kg)	Thickness * width * length(mm)	Weight(kg)
1*610*1220	1.100	25*610*1220	26.330
2*610*1220	2.110	30*610*1220	31.900
3*610*1220	3.720	35*610*1220	38.480
4*610*1220	5.030	40*610*1220	41.500
5*610*1220	5.068	45*610*1220	46.230
6*610*1220	6.654	50*610*1220	53.350
8*610*1220	8.620	60*610*1220	62.300
10*610*1220	10.850	100*610*1220	102.500
12*610*1220	12.550	120*610*1220	122.600
15*610*1220	15.850	150*610*1220	152.710
20*610*1220	21.725		

Note: This table shows the specifications and weight of PEEK-1000 sheet (pure), and the above specifications of PEEK-C1030 sheet (carbon fiber), PEEK-G1030 sheet (glass fiber), ESD PEEK sheet and AST PEEK sheet can be produced. The actual weight is subject to weighting.

Materials	Name	Features	Color
PEEK	PEEK-1000 sheet	Pure material	True colors
	PEEK-C1030 sheet	Add 30% carbon fiber	Black
	PEEK-G1030 sheet	Add 30% glass fiber	True colors
	ESD PEEK sheet	ESD	Black
	AST PEEK sheet	AST	Black



PEEK TUBE



PEEK TUBE

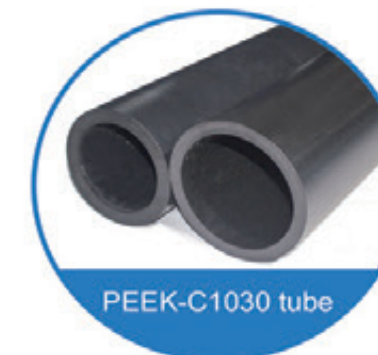
PEEK tube, whose Chinese name is polyetheretherketone tube, PEEK tube not only has better heat resistance than other high temperature resistant plastics, but also has high strength, high modulus, high fracture toughness and excellent dimensional stability. PEEK tubes made of high-performance PEEK materials are widely used in various industries, especially in oil and gas industry and semiconductor industry. PEEK is often the first choice for materials due to the comprehensive requirements of service temperature, chemical resistance, creep resistance, thermal stability and compression resistance.

Nanjing Shousu has been focusing on PEEK production and processing for many years, and has the ability to produce PEEK tubes and PEEK rings of various sizes. We produce PEEK tubes and PEEK rings through extrusion molding, compression molding, injection molding and machining molding, and can customize various sizes according to customers' requirements. We have thousands of molds, and we can stock PEEK tubes of various sizes according to customer orders.

PEEK TUBE SPECIFICATION TABLE

ODxIDxLength(mm)	Actual OD(mm)	Actual ID(mm)	ODxIDxLength(mm)	Actual OD(mm)	Actual ID(mm)
40×20×1000	42.0	18.0	130×100×1000	132.0	98.0
45×20×1000	46.5	18.0	130×110×1000	132.0	108.0
50×25×1000	51.5	23.0	135×90×1000	137.0	88.0
50×30×1000	51.5	28.0	135×95×1000	137.0	93.0
50×35×1000	51.5	33.0	135×100×1000	137.0	98.0
55×35×1000	57.0	33.0	135×105×1000	137.0	103.0
55×40×1000	57.0	38.0	140×115×1000	142.0	113.0
60×40×1000	61.5	38.0	140×120×1000	142.0	118.0
63×43×1000	64.0	44.0	155×125×1000	157.0	123.0
70×45×1000	72.0	43.0	160×140×1000	162.0	138.0
70×50×1000	72.0	48.0	165×125×500	167.0	123.0
80×50×1000	82.0	48.0	165×135×1000	167.0	133.0
85×67×1000	87.0	66.0	175×155×1000	177.4	153.0
90×60×1000	92.0	58.0	180×155×1000	183.0	152.0
90×65×1000	92.0	63.0	190×160×1000	193.0	157.0
100×75×1000	102.0	73.0	200×180×1000	203.0	178.0
100×80×1000	102.0	78.0	220×195×1000	223.0	192.5
110×70×1000	112.0	68.0	260×220×1000	263.0	217.0
120×90×1000	122.0	88.0			

Note: Other specifications can be customized



PEEK SHEET

PEEK sheets have excellent wear resistance, chemical resistance, and thermal aging resistance. It can be used for a long time at a high temperature of 260 degrees, with excellent dimensional processing performance. PEEK sheets are suitable for thin-walled products, conveyor belts, etc. PEEK sheets have good corrosion resistance and can be used in various solvents except for concentrated sulfuric acid.



PEEK SHEET SPECIFICATION TABLE

Serial Number	Size(mm)TxWxL	Weight(kg/m)	Technology
1	0.5*700*1000	0.48	Extrusion
2	1*700*1000	0.95	Extrusion
3	2*700*1000	1.9	Extrusion
4	3*700*1000	2.8	Extrusion
5	4*650*1000	3.4	Extrusion
6	5*650*1000	4.3	Extrusion

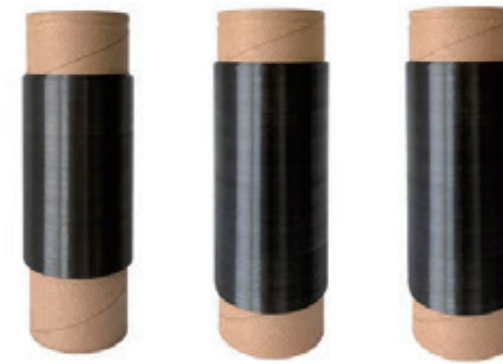
Note: The specific dimensions and weight are subject to actual measurement.

The PEEK sheet processed by continuous extrusion technology has high surface smoothness and good dimensional uniformity. Widely used in fields such as electronics, textile printing and dyeing, and aviation.

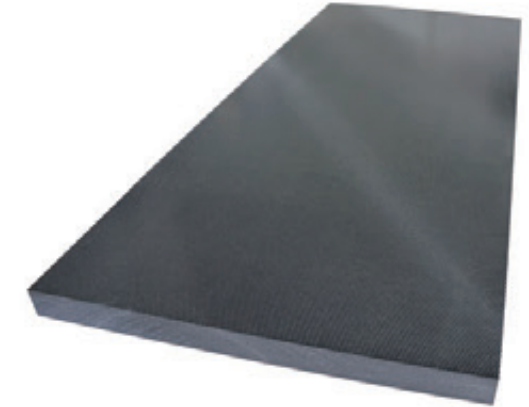


CF/PEEK COMPOSITE MATERIALS

Our company's independently developed continuous carbon fiber reinforced polyether ether ketone (PEEK) high-performance thermoplastic composite material is more resistant to high temperatures (320°C), has higher strength, and is more environmentally friendly than traditional carbon fiber reinforced thermosetting composite materials, and can achieve secondary utilization. The continuous carbon fiber reinforced polyether ether ketone pre impregnated unidirectional strip produced has a smooth surface, uniform melting between carbon fiber and PEEK, and non layered finished products. It is a more ideal and high-performance component raw material for applications in rail transit, high-end medical, and automotive fields.



CF/PEEK Composite Prepreg



CF/PEEK Compound Material Sheet

CHARACTERISTICS OF CF/PEEK COMPOSITE MATERIALS



APPLICATION OF CF/PEEK COMPOSITE MATERIALS



CF/PEEK orthopedic instruments



CF/PEEK Aircraft Parts



CF/PEEK engine bottom guard

PEEK FILAMENT & CAPILLARY

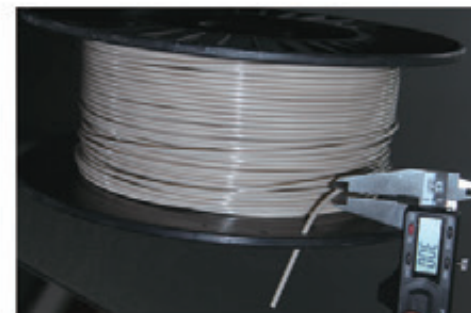


PEEK FILAMENT & CAPILLARY

PEEK filament-capillary, with normal working temperature of 260°C, has corrosion resistance and can be used in solvent for a long time. Because of its hydrolysis resistance, PEEK filament-capillary can be cleaned and disinfected in high temperature steam. PEEK filament-capillary is an environmentally friendly material, which meets the requirements of FDA food hygiene level, and has flame retardancy and wide application range.

PEEK FILAMENT SPECIFICATION TABLE

Product name	Product specifications	
	Φ0.1mm	Φ1mm
PEEK filament	Φ0.15mm	Φ1.5mm
	Φ0.2mm	Φ1.75mm
	Φ0.25mm	Φ2mm
	Φ0.3mm	Φ2.5mm
	Φ0.4mm	Φ3mm
	Φ0.5mm	Φ4mm



PEEK CAPILLARY SPECIFICATION TABLE

OD(mm)	ID(mm)	Tolerances(mm)	
		OD	ID
1.59 (1/16")	0.06 (0.0025")	±0.03	±0.03
1.59 (1/16")	0.10 (0.004")	±0.03	±0.03
1.59 (1/16")	0.13 (0.005")	±0.03	±0.03
1.59 (1/16")	0.18 (0.007")	±0.03	±0.03
1.59 (1/16")	0.25 (0.010")	±0.03	±0.03
1.59 (1/16")	0.33 (0.013")	±0.03	±0.03
1.59 (1/16")	0.38 (0.015")	±0.03	±0.03
1.59 (1/16")	0.51 (0.020")	±0.03	±0.03
1.59 (1/16")	0.76 (0.030")	±0.03	±0.03
1.59 (1/16")	1.02 (0.040")	±0.03	±0.03
0.79 (1/32")	0.06 (0.0025")	±0.03	±0.03
0.79 (1/32")	0.10 (0.004")	±0.03	±0.03
0.79 (1/32")	0.13 (0.005")	±0.03	±0.03
0.79 (1/32")	0.18 (0.007")	±0.03	±0.03
0.79 (1/32")	0.25 (0.010")	±0.03	±0.03
0.79 (1/32")	0.38 (0.015")	±0.03	±0.03
0.79 (1/32")	0.51 (0.020")	±0.03	±0.03
3.175 (1/8")	1.57 (0.062")	±0.03	±0.03
3.175 (1/8")	2.03 (0.080")	±0.03	±0.03

PEEK THIN-WALLED PIPE SPECIFICATION TABLE

Product name	Product specifications	
	OD(mm)	ID(mm)
PEEK thin-walled tube	Φ2.45	Φ2.1
	Φ2.5	Φ1.5
	Φ2.5	Φ1.9
	Φ3.10-Φ3.22	Φ1.00
	Φ3.10-Φ3.22	Φ1.60
	Φ4	Φ3.4
	Φ4.5	Φ2.5
	Φ6	Φ4
	Φ11	Φ7.5
	Φ12	Φ11
	Φ15.25	Φ14.9
	Φ19.8	Φ16.5
	Φ34.5	Φ33.5
	Φ45.9	Φ45.1



PEEK JOINT

PEEK joint can directly replace stainless steel pipe, which is pressure-resistant, bio-compatible, low oxygen penetration, high temperature resistance, melting point up to 350°C, which is convenient to use with hand-tight joint and easier to cut than stainless steel.

PEEK GEAR

Advantages of PEEK gear: noise reduction, low density and light weight; Inertial force distance decreases; Excellent chemical resistance; High wear resistance and longer service life; The technology of combining with metal and other plastics is better; Injection molding can reduce the cost.

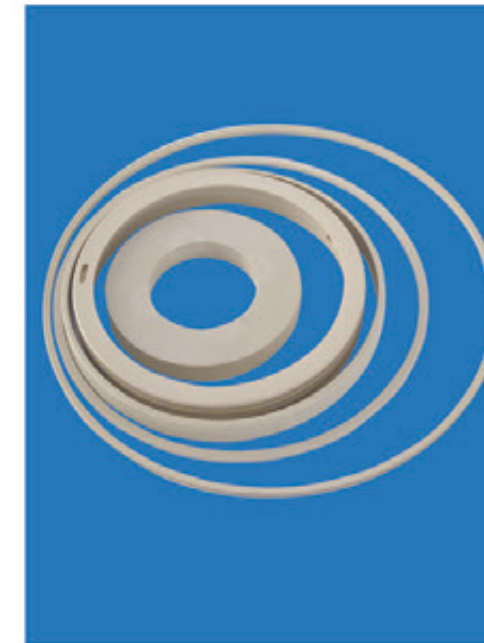
PEEK SCREW

PEEK screws can be molded once by injection process, with low processing cost and price advantage; More corrosion resistant than metal screws; Never rust; Light weight; High temperature resistance; Excellent electrical performance; Radiation resistance.



PEEK BALL

Compared with traditional metal balls and rubber balls, PEEK balls have incomparable advantages: good wear resistance and self-lubrication; High compressive strength; Low creep property; Lighter than metal, convenient for rapid reaction; Has no damage to the metal seat, and is beneficial to protecting parts and prolonging their service life.



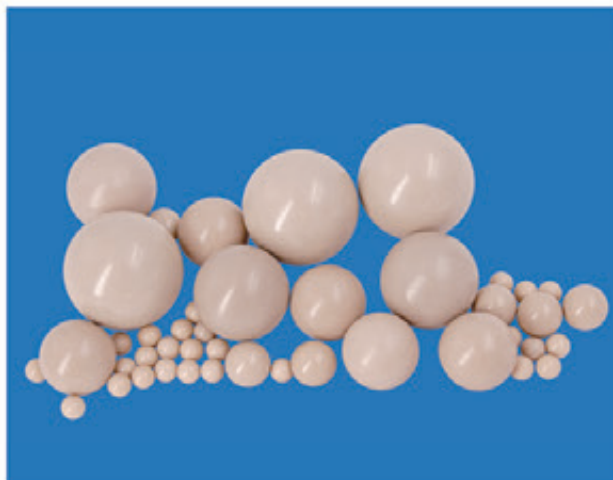
PEEK SEALING RING

PEEK sealing ring has good performance, stable size and customizable specifications; High temperature resistance, wear resistance and strong mechanical properties.



PEEK SLEEVE

PEEK bushing has the advantages of high temperature resistance, wear resistance, corrosion resistance and self-lubrication. Compared with metal materials, it has the advantages of light weight and low noise.



PEEK SCREWS AND BALLS

PEEK screws are made from PEEK as raw material and molded through molds. PEEK screws not only have superior heat resistance compared to other high-temperature resistant plastics, but also have high strength, high modulus, high fracture toughness, and excellent dimensional stability.



PEEK SCREW TYPE



PEEK SCREW SPECIFICATION TABLE

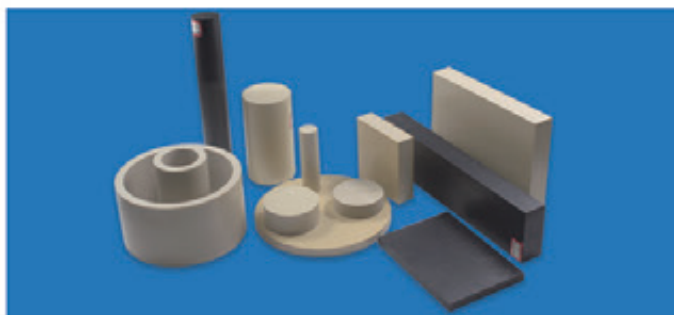
Type	Size(mm)	Type	Size(mm)	Type	Size(mm)	Type	Size(mm)	
Hexagon screw	M4X10	Socket head cap screw	M2X8	Pan head phillips screw	M3X10	Hexagon slotted screw	M4X10	
	M4X15		M3X5		M4X10		M4X15	
	M4X20		M3X20		M4X15		M4X20	M6X10
	M5X8		M4X10		M4X20		M4X30	M6X16
	M5X10		M4X15		M5X8		M4X40	M6X20
	M5X15		M4X20		M5X10		M5X8	M6X25
	M5X20		M5X8		M5X15		M5X10	M6X35
	M5X30		M5X10		M5X20		M5X15	M8X20
	M6X16		M5X15		M5X30		M5X20	M5X8
	M6X20		M5X20		M5X35		M5X30	M5X9
	M6X25		M5X30		M6X10		M5X35	M5X10
	M6X30		M6X10		M6X16		M6X9	M5X15
	M6X35		M6X16		M6X20		M6X10	M5X20
	M6X40		M6X20		M6X25		M6X16	M5X30
	M8X15		M6X25		M6X30		M6X20	M6X10
	M8X20		M6X30		M6X35		M6X25	M6X16
	M8X25		M6X35		M6X40		M6X30	M6X20
	M8X35		M6X40		M6X50		M6X50	M6X25
	M8X40		M6X50		M8X15		M8X15	M6X40
	M8X50		M8X20		M8X25		M8X25	M10X20
	M10X25		M8X30		M8X35		M8X30	M5X8
	M10X30		M8X35		M8X45		M8X35	M6X10
	M10X40		M8X45		M10X25		M8X45	M8X10
	M10X45		M10X25		M10X30		M10X25	M8X15
	M10X50		M10X30		M10X40		M10X30	M8X20
M10X65	M10X40	M10X45	M10X45	M5X8				
M12X25	M10X45	M12X25	M12X25	M5X12				
M12X30	M12X25	M12X30	M12X30	M5X17				
M12X35	M12X30	M12X35	M2.5X8	M5X20				
M12X50	M12X35	M12X50	M2.5X14	M5X22				
M12X60	M12X50	M12X60		M6X50				
M12X65	M12X60	M12X65		M8X50				
M12X110	M12X65	M12X110						

PEEK BALL SPECIFICATION TABLE



Product name	Diameter(mm)		
	PEEK ball	2.000	5.556
3.000		6.000	10.320
3.175		6.350	12.000
4.000		8.000	12.700
4.763		8.371	15.875
5.000		9.525	25.400

INTRODUCTION TO PEEK PERFORMANCE



PEEK is a special engineering plastic with excellent performance, which has more obvious advantages compared with other special engineering plastics, such as high temperature resistance of 260°C, excellent mechanical properties, good self-lubricating, chemical corrosion resistance, flame retardancy, Stripping resistance, wear resistance, strong nitric acid and concentrated sulfuric acid resistance, radiation resistance, super mechanical properties, etc., can be used in high-end machinery, nuclear engineering, petroleum and aviation and other high-tech fields.

PEEK is an aromatic crystalline thermoplastic polymer material with a melting point of 334°C, which has high mechanical strength, high temperature resistance, impact resistance, flame retardancy, acid and alkali resistance, hydrolysis resistance, wear resistance, fatigue resistance, radiation resistance and good electrical properties.

High temperature resistance	PEEK resin has high melting point (334°C) and glass transition temperature (143°C), the continuous service temperature is 260°C, and the load heat deformation temperature of its 30%GF or CF reinforced brand is as high as 316°C.
Mechanical properties	PEEK resin has good toughness and rigidity, and it has excellent fatigue resistance to alternating stress comparable to alloy materials.
Self-lubricity (corrosion resistance)	PEEK resin has excellent sliding characteristics, and is suitable for use under strict requirements on low friction coefficient and wear resistance.
Chemical resistance	Its corrosion resistance is similar to that of nickel steel. PEEK is only dissolved in concentrated sulfuric acid, which has good chemical resistance, especially more acid and alkali resistance than polyimide at high temperature.
Flame retardancy	PEEK resin is a very stable polymer, and the 1.45mm thick sample can reach the highest flame retardant standard without any flame retardant.
Irradiation resistance and peeling resistance	PEEK has good radiation resistance and peeling resistance, so it can be used to make electromagnetic wires for special purposes.
Fatigue resistance	PEEK resin has the best fatigue resistance among all resins.
Hydrolysis resistance	The products made of PEEK resin and its composite materials can still keep good performance when used continuously in high temperature and high pressure water.
Workability	PEEK resin has good fluidity and high thermal decomposition temperature at high temperature, and can be processed by injection molding, compression molding, extrusion molding, blow molding and melt spinning.
Insulation stability	PEEK has good electrical insulation performance and keeps it in a high temperature range. Its dielectric loss is also very small at high frequency.
Wear resistance	PEEK's good wear resistance is equivalent to polyimide.

PEEK PERFORMANCE PARAMETER TABLE

Test items	Test criteria	Test conditions	Units	NJSSPEEK-1000	NJSSPEEK-FC1030	NJSSPEEK-G1030	NJSSPEEK-C1030
				Pure resin	Carbon fiber + graphite + PTFE (10% each)	30% glass fiber	30% carbon fiber
Density	ISO1183	Crystal	g/cm ³	1.3	1.44	1.51	1.4
Water absorption rate (3.2mm thick tensile bar, soaking test)	ISO62-1	24h, 23°C	%	0.07	0.06	0.04	0.04
		Balance, 23°C	%	0.4	0.3	0.4	0.3
Tensile strength	ISO527	Yield, 23°C	MPa	100	140	175	260
Elongation at break	ISO527	Fracture, 23°C	%	20	2.2	2.7	1.7
Bending strength	ISO178	Yield, 23°C	MPa	165	190	265	380
Bending modulus	ISO178	23°C	GPa	4.1	7.8	11.3	23
Compressive strength	ISO604	23°C	MPa	125	155	250	300
Impact strength of simply supported beam	ISO179/1eA	There is a gap	kJ/m ²	7	5	8	7
	ISO179/1U	No gap	kJ/m ²			55	45
Impact strength of cantilever beam	ISO180/A	There is a gap	kJ/m ²	7.5	5	10	9
	ISO180/U	No gap	kJ/m ²	-		60	45
Shore D hardness	ISO868	23°C		85	80	88	88
Melting point	ISO11357	-	°C	343	343	343	343
Glass transition temperature	ISO11357	Start	°C	143	143	143	143
Specific heat capacity	DSC	23°C	kJ/kg°C	2.2	1.7	1.7	1.8
Coefficient of thermalexpansion	ISO11359	Below Tg along the flow direction	ppm/K	45		18	12
		Higher than Tg along the flow direction	ppm/K	120		22	15
Heat distortion temperature	ISO75-f	1.8Mpa	°C	152	300	315	315
Thermal conductivity	ISO22007-4	23°C	W/mK	0.29	0.3	0.3	0.95
Dielectric strength	IEC60243-1	2mm	kV/mm	23		25	-
Dielectric constant	IEC60250	23°C, 1KHz	-	3.1		3.2-3.4	-
		23°C, 50Hz	-	3		-	-
Volume resistivity	IEC60093	23°C, 1V	Ω·cm	10 ¹⁶		10 ¹⁶	10 ⁵
		275°C	Ω·cm	10 ⁹		-	-

PEEK PRODUCT APPLICATION



PEEK has many advantages, so it is widely used in petrochemical industry, electronic and electrical industry, instrumentation, mechanical automobile, Medical and health care, aerospace, military nuclear energy and many other fields have been widely used. Example: At present, the mature applications in China are: Piston ring, thrust ring, choke ring, valve plate, mushroom valve, star wheel, sealing ring, ball valve seat, bearing cage, oil-free lubricated bearing, magnetic pump isolation sleeve, electrode, gear, screw, electromagnetic wire, radiation protection window, microwave digestion tank, wafer carrier, etc.



Automobile manufacturing

PEEK material can replace metal, stainless steel and titanium, and can be used to manufacture engine inner covers, automobile gaskets, bearings, clutch gears, seals and other parts. In addition, PEEK material pages can be used in automobile transmission, brake and air conditioning systems.



PEEK gears for automotive industry



PEEK sealing ring for automobile industry



PEEK shaft sleeve for automobile industry



Military space

PEEK and PI materials are used in fuel filter support seat, bolts, nuts and bobbins and other parts in aviation industry because of their excellent properties, battery slots for rockets and parts of rocket engines.



PEEK products for military use



PEEK products for military use



PEEK products for military use



Textile machinery

PEEK material is commonly used to make bushing, bearing, roller and AM nut for textile and packaging machinery, as well as compressor valve, piston ring, seals and a variety of chemical pump body, valve parts.



PEEK scraper veneer for textile machinery



PEEK scraper for textile machinery



PEEK parts for textile machinery

PEEK PRODUCT APPLICATION



Petrochemical engineering

PEEK materials and special composite materials can be used in digital logging, submarine integrated tube bundles, electrical connectors, ties, seals, support rings, plugs, packers, fracturing balls, centralizers, wires and cables, etc.



General machinery

In the mechanical industry, PEEK material is often used in the manufacture of compressor valves, piston rings, seals, connectors, and various chemical pump bodies, valve parts, as well as the impellers of vortex pumps instead of stainless steel, etc.



PEEK antenna jacket for petrochemical industry



PEEK sealing sleeve for petrochemical industry



PEEK balls for petrochemical industry



PEEK bearing cylinder for ordinary machinery



PEEK pin connectors for general machinery



PEEK valve seat for ordinary machinery



Medical care and health care

PEEK material can be used in precision medical instruments, such as PEEK microwave digestion tank, crankset, artificial bone plate, straight booster.



Instrument and meter

PEEK materials are often used to manufacture chromatograph joints, wafer carriers, electronic insulating films and various connecting devices, and can also manufacture wafer carrier insulating films, connectors, printed circuit boards, high-temperature connectors, suction nozzles, circuit wheels and so on.



PEEK discs for the medical industry



PEEK parts for medical industry



PEEK parts for medical industry



PEEK blade ring for instruments and meters



PEEK pipe joint for instrument



PEEK products for instruments and meters

PEEK PRODUCT APPLICATION



Precision machinery

PEEK material can be used in all kinds of precision machinery parts, such as automobile gear, oil screen, shift starting plate, aircraft engine parts, automatic washing machine wheel, medical equipment parts, etc.



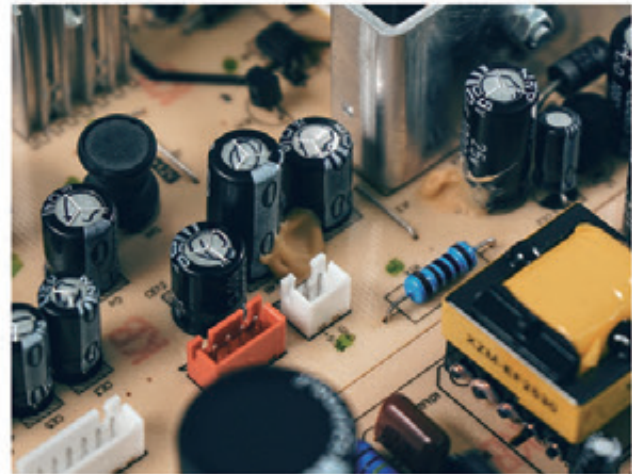
PEEK connectors for electronic appliances



PEEK oil cavity ring for precision machinery



PEEK linear bearings for precision machinery



Electronic semiconductor

PEEK material is commonly used in the manufacture of wafer bearers, electronic insulating membranes and various connecting devices, as well as insulating membranes for wafer bearers, connectors, printed circuit boards, high temperature connectors, etc.



PEEK silicon wafer holder for electronic semiconductors



PEEK wafer fixtures for electronic semiconductors



PEEK crystal round boxes for electronic semiconductors



Electrical and electronic

PEEK can be used in electronic and electrical areas for insert plugs, high reliability connectors, cable plugs, junction boxes, distribution leads, plate cage coils, battery housing, IC packaging, semiconductor industry and other ultrapure industry required ultrapure water system fittings and valves and other components.



PEEK parts for electronic appliances



PEEK terminal blocks for electronic appliances



PEEK connectors for electronic appliances



Industrial energy

PEEK is increasingly used by the energy industry, such as subsea integrated wiring harness pipelines, wires and cables, electrical connectors, downhole sensors, bearings, bushings, gears, support rings and other products. Moreover, it is also used in oil and gas, hydropower, geothermal, wind power, nuclear energy, and solar energy.



PEEK parts for industrial energy

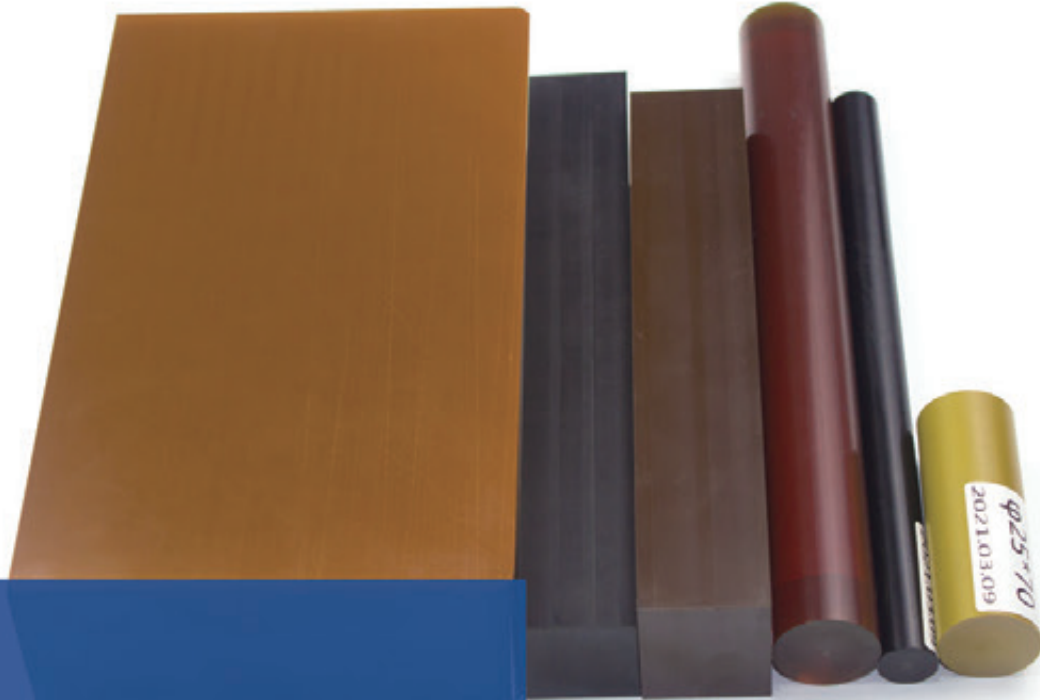


PEEK parts for industrial energy



PEEK parts for industrial energy

PI PRODUCTS AND APPLICATIONS



Polyimide PI has high and low temperature resistance (-269~400°C), high friction resistance, self-lubrication, high strength, high insulation, radiation resistance, corrosion resistance, Low thermal expansion coefficient, organic solvent resistance, self-extinguishing, non-toxic and other comprehensive properties. The long-term working temperature of some types of PI is above 350°C, and the short-term working temperature can reach 450°C. Is the engineering plastic with the best temperature resistance among engineering plastics at present. Its comprehensive performance is unmatched by other special engineering plastics, and it is praised as "an expert in solving problems" by the world. It is widely used in high-tech fields such as aviation, aerospace, machinery, electricity, atomic energy, microelectronics, thin film and liquid crystal display.



After years of market cultivation, polyimide has been used as sealing materials, structural materials, heat insulation materials, friction materials and high-temperature coatings in aerospace, military industry, automobiles, compressors, large motors, pumps, tobacco machinery, textile machinery, Construction machinery, office machinery, electronic products, mold industry, etc. are widely used as high temperature-resistant, wear-resistant, self-lubricating or sealing parts, and have won high praise from users.

Nanjing Shousu Company can provide ultra-high temperature resistant special engineering plastics - polyimide profiles with different temperature resistance levels according to the specific needs of customers, such as bars, plates, pipes, and finished products for injection molding and mechanical processing.



Military industry field



Aerospace field

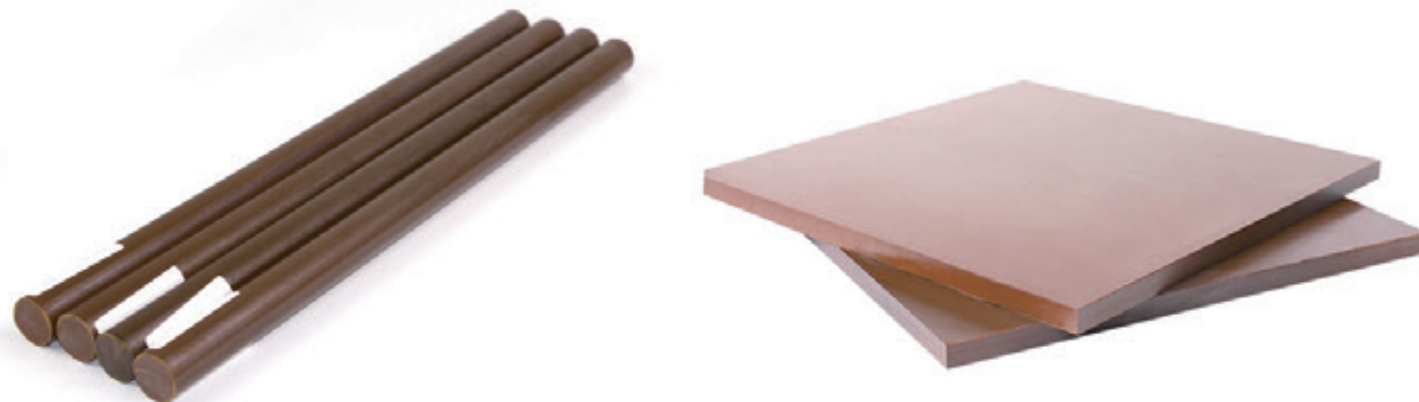


PI-1003 ROD SPECIFICATION TABLE

Serial Number	Dimensions	Serial Number	Dimensions
1	Φ2x305	11	Φ18x305
2	Φ3x305	12	Φ20x305
3	Φ4x305	13	Φ22x305
4	Φ5x305	14	Φ24x305
5	Φ6x305	15	Φ25x305
6	Φ8x305	16	Φ30x305
7	Φ10x305	17	Φ35x305
8	Φ12x305	18	Φ40x305
9	Φ14x305	19	Φ45x305
10	Φ16x305	20	Φ50x305

PI-1003 SHEET SPECIFICATION TABLE

序号 Serial Number	厚度*宽度*长度(mm) Dimensions	序号 Serial Number	厚度*宽度*长度(mm) Dimensions
1	10x310x310	8	45x310x310
2	15x310x310	9	50x310x310
3	20x310x310	10	55x310x310
4	25x310x310	11	60x310x310
5	30x310x310	12	65x310x310
6	35x310x310	13	70x310x310
7	40x310x310	14	



NJSSPI-1003 PARAMETER TABLE

(Benchmarking DuPont VESPEL-SP1 in the United States)

Project	Numerical value	Test method
Density g/cm ³	1.40-1.45	GB/T1033.1
Glass transition temperature (°C) (N2) ≥	330.0	DMA
Thermal expansion coefficient °C-1 (25°C-200°C)	4.0×10 ⁻⁴ -7.0×10 ⁻⁴	TMA
Notched impact strength(KJ/m ²) ≥	50.0	GB/T1043.1
Compression strength (compression rate of 25%) (Mpa) ≥	140.0	GB/T1041
Bending strength (Mpa) ≥	110.0	GB/T9341
Tensile strength (Mpa) ≥	70.0	GB/T1040.1 GB/T1040.2
Shore hardness (HD) ≥	85	GB/T2411
Frictional coefficient	0.25-0.35	GB/T3960
Relative dielectric constant (1MHZ)	3.0-3.4	GB/T1409
Dielectric loss factor (1MHZ)	5.0×10 ⁻³ -2.0×10 ⁻²	GB/T1409
Electric strength KV/mm ≥	22	GB/T1048.1
Volume resistivity Ω.cm ≥	1.0×10 ¹⁶	GB/T1410
Water absorption rate% ≤	0.5	GB/T1034

Note: This data is not a guaranteed value, but a typical value.



NJSSPI-1006 PARAMETER TABLE (Black color with higher performance-price ratio)

Testing items	Testing standards	Unit	Product brand
			NJSSPI-1006
Appearance	-	-	Yellow powder
Resin characteristics	-	-	Amorphous
Real density	GB1033	kg/m ³	1400
Water absorption rate <(25°C, 24Hrs)	GB1034	%	0.6
Tensile strength	GB/T1040.1-2006	Mpa	80
Elongation	GB/T1040.1-2006	%	8
Bending strength	GB9341-2000	Mpa	100
Flexural modulus	GB/T9341-2000	Mpa	2500
Compressive strength	GB/T1041-2008	Mpa	150
Impact strength of simply supported beams (without notches)	GB/T16420-1996	kJ/m ²	80
Hardness	Shore D	-	85
Tg(N ₂ , 10°C/min)	DSC(DSC204/1/F)	°C	250
T ₅ (Air, 10°C/min)	TGA(STA449C/6/F)	°C	510
Tm(N ₂ , 10°C/min)	DSC(DSC204/1/F)	°C	-
Linear expansion coefficient	GB/T2572-2005	°C	4.5x10 ⁻⁶
Maximum use temperature	-	°C	230
Low temperature resistance	-	°C	-248
Dielectric strength	GB1408	kV/mm	180
Surface resistivity	GB1410	Ω	10 ¹⁵
Volume wear rate	GB3960	m ³ /(N·m)	10 ⁻¹⁶
Frictional coefficient	GB3960	-	0.2

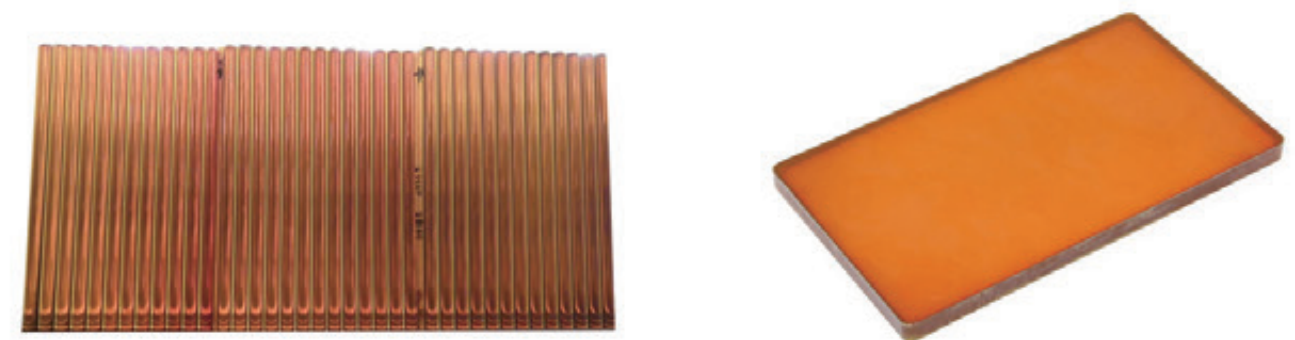
Note: This data is not a guaranteed value, but a typical value.



NJSSPI-1010 PARAMETER TABLE (High impact resistance)

Serial number	Test items	Unit	Result	Experimental methods	
1	Density (23°C)	g/cm ³	1.365	GB/T1033.1-2008	
2	23°C	Tensile strength	MPa	115	GB/T1040.2-2006
		Tensile modulus		3.15*10 ³	
		Tensile fracture strain	%	13	
	Stretch strength (220°C)	MPa	54		
3	23°C	Bending strength	MPa	194	GB/T9431-2008
		Flexural modulus		3.44*10 ³	
	220°C	Bending strength	MPa	80.3	
		Flexural modulus		1.67*10 ³	
4	Compressive stress at 25% strain		MPa	188	GB/T1041-2008
	Compression modulus			2.52*10 ³	
5	Stress intensity (no gap)	KJ/m ²	2.8*10 ³	GB/T1043.1-2008	
6	Ball indentation hardness	N/mm ²	234	GB/T3398.1-2008	
7	Heat deformation temperature (1.8MPa)	°C	257	GB/T1634.2-2004	
8	Frictional coefficient		/	0.29	GB/T3960-2016
	Wear and tear		mg	2.95	GB/T3960-2016
9	Linear expansion coefficient (23-230 °C)	K ⁻¹	52.2*10 ⁻⁶	ISO11359-2:1999	
10	1MHz	Relative permittivity	/	3.3	GB/T1409-2006
		Dielectric loss factor	/	2.6*10 ⁻³	
11	Volume resistivity	Ω.cm	1.31*10 ¹⁶	GB/T1410-2006	
12	Breakdown voltage (sample thickness 2.73mm)	KV	33.59	GB/T1408.1-2016	

Note: This data is not a guaranteed value, but a typical value.



OTHER ENGINEERING PLASTICS



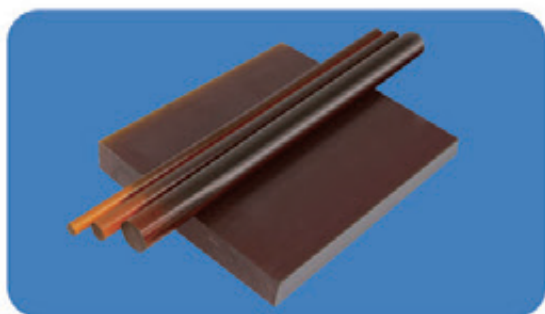
In addition to producing PEEK and PI products, our company also provides other special engineering plastic profiles and products with heat resistance above 200°C. The main varieties are polyphenylene sulfide PPS, polysulfone PSU (PSF), Composite modified materials of polyetherimide PEI, polyethersulfone PES, polyamideimide PAI, polybenzimidazole PBI and special plastics.



PPS



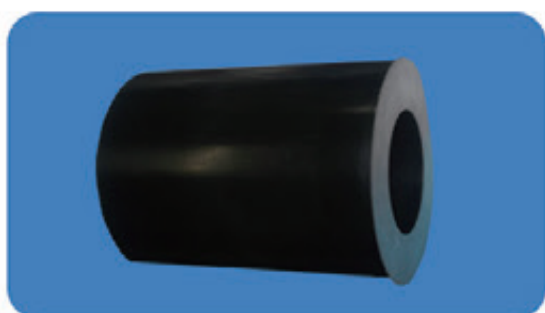
PPS



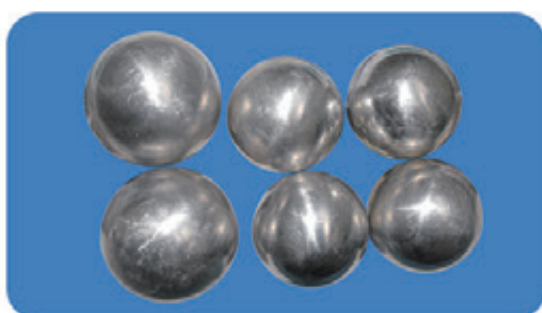
PEI



PSU/PPSU



PBI



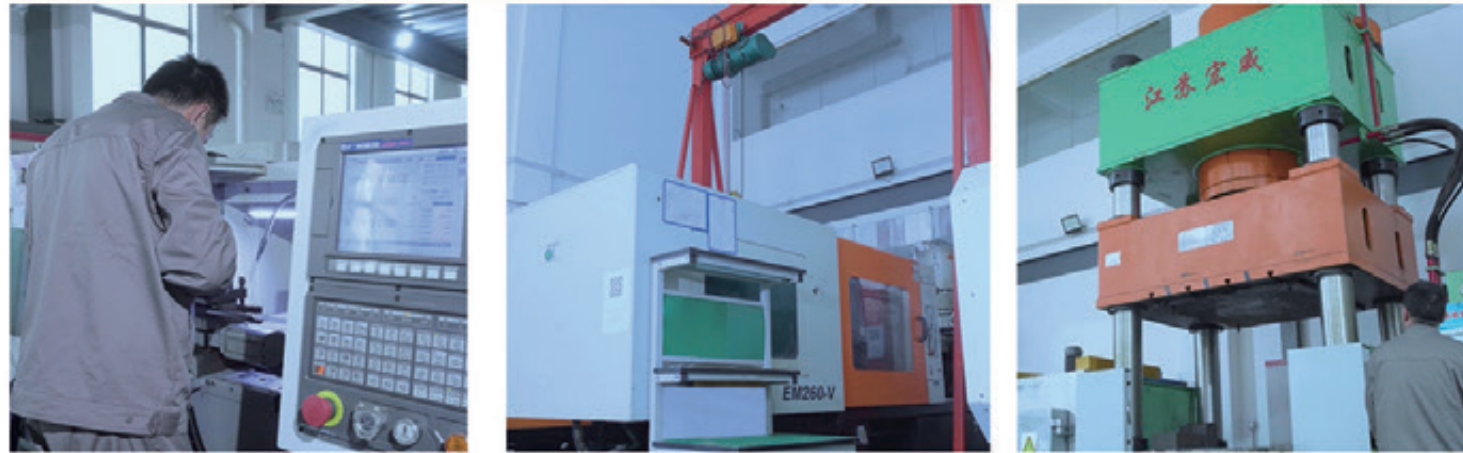
Dissolvable Frac Ball

PARAMETER TABLE OF OTHER ENGINEERING PLASTICS

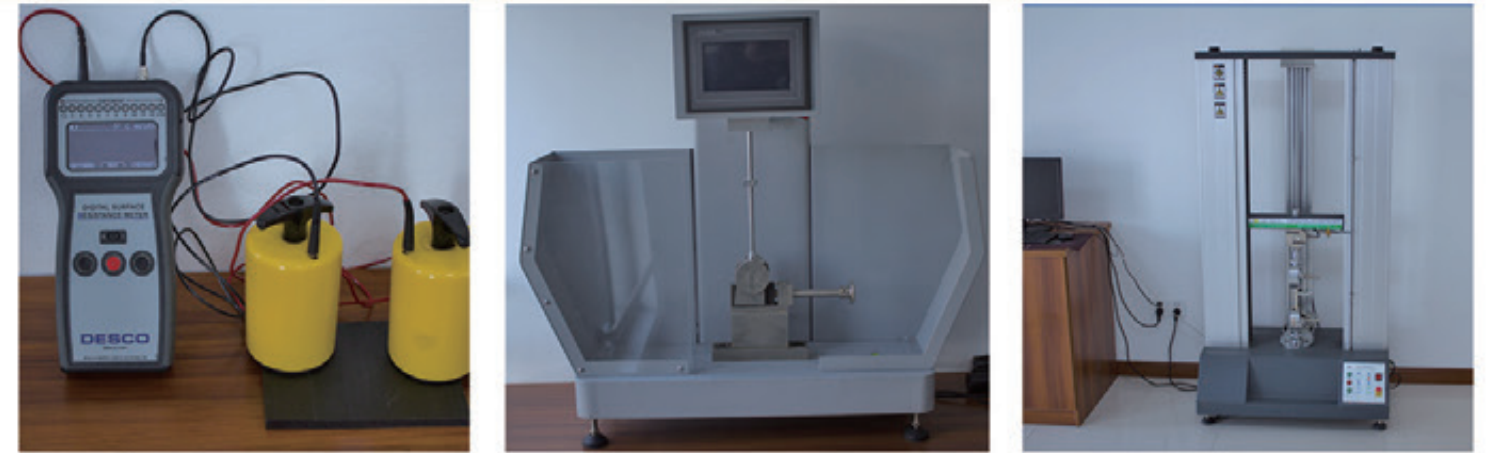
Product name		PPS	PEI	PAI	PSU	PES
Project	Units	Test data				
Density	Kg/m ³	1430	1270	1450	1240	1370
Water absorption:						
Soak in water at 23°C for 24 hours	%	0.01/0.03	0.26/0.54	0.21/-		
In 23°C/50%RH air	%	0.03	0.75	1.9	0.2	0.6
Soak in water at 23°C	%	0.09	1.35	3.5	0.8	2
Thermal performance:						
Melting point	°C	280	NA	NA	NA	NA
Thermal conductivity at 23°C	W/(K.m)	0.3	0.22	0.54	0.25	0.18
Coefficient of thermal expansion of cable:						
Average value between 23-100°C	m/(m.k)	50×10 ⁻⁶	45×10 ⁻⁶	25×10 ⁻⁶	56×10 ⁻⁶	55×10 ⁻⁶
Average value between 23-150°C	m/(m.k)	60×10 ⁻⁶	45×10 ⁻⁶	25×10 ⁻⁶		
Average value above 150°C	m/(m.k)	80×10 ⁻⁶	45×10 ⁻⁶	25×10 ⁻⁶		
Maximum allowable working temperature in air:						
Short time	°C	260	200	270	180	220
Continuous: At least 20,000	°C	220	170	250	160	190
Combustibility: "Oxygen index"						
According to UL94(1.5/3mm thick)	%	47	47	44	V0	V0
Mechanical properties at 23°C:						
Applied experiment:						
Bending tensile stress/breaking tensile stress	MPa	/75	105/-	/80	80	90
Tensile stress at break	%	5	10	5	6.5	50
Tensile modulus of elasticity	MPa	3700	3400	5800	2600	2700
Compression experiment:						
Compressive stress at 1% normal strain	MPa	28	25	31	22	20
Compressive stress at 2% normal strain	MPa	55	49	58		



PRODUCTION EQUIPMENT



TESTING EQUIPMENT



QUALIFICATION AND HONOR



GLOBAL EXHIBITION



BUSINESS DISTRIBUTION



Nanjing Shousu Engineering Plastics Co., Ltd. has been focusing on the special plastic industry for 17 years. Its headquarters is located in Building 18, 19 Lanhua Road, Pukou District, Nanjing, Jiangsu, China. It covers an area of 10000 square meters, has thousands of molds and produces tens of thousands of products.



Domestic Market

It radiates to the whole country from two points in the Yangtze River Delta and the Pearl River Delta. At present, there are nearly 10000 customers in the country.

Overseas Market

Actively explore foreign market sales, and have gradually opened many overseas regions such as Britain, France, Italy, Germany, Sweden, Hungary, Australia, Russia, South Korea, Japan, Pakistan, Vietnam and India.

COOPERATIVE PARTNER

