




HITEX


CARBON FIBER


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ABOUT HITEX

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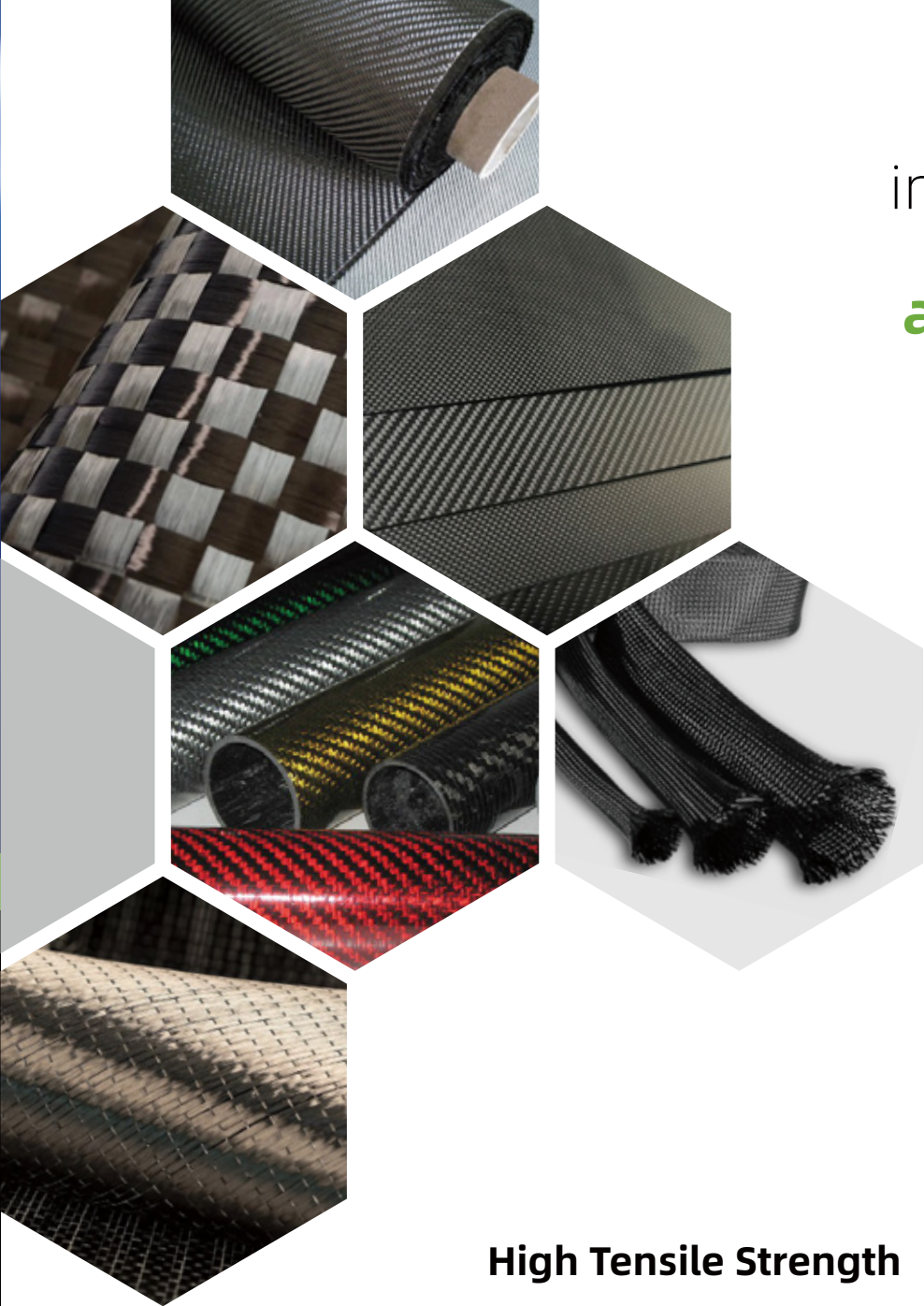
In addition to our manufacturing capabilities, we offer fast turnaround times and flexible production schedules to accommodate the needs of our customers. Whether you need

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We believe that customer satisfaction is key to our success, and we go above and beyond to ensure that our clients receive the best possible service. Our team of experienced professionals is dedicated to providing personalized solutions tailored to your specific needs, and we work closely with you to ensure that your project is completed on time and within budget.

Whether you are looking for custom composite materials, high-quality composite products, or expert advice on composite design and engineering, Hitex Composites is your trusted partner. We are committed to providing you with the perfect service, high quality, and professionalism you deserve. Contact us today to learn more about our services and how we can help you take your project to the next level.

MAIN APPLICATION AREAS
OF CARBON FIBER



Here is an introduction to **the characteristics and applications of carbon fiber** products:

High Tensile Strength

Carbon fiber has a tensile strength of about 2,500-6,000 MPa, making it one of the strongest fibers, particularly when aligned in the same direction.

High-Temperature Tolerance

Carbon fiber retains its properties up to about 2,500° C in non-oxidizing environments, far surpassing many other fibers in terms of thermal stability.

Low Weight

The density of carbon fiber is around 1.5-2.0 g/cm³, significantly lighter than steel (7.85 g/cm³), contributing to its high strength-to-weight ratio.

High Stiffness

Carbon fibers exhibit high modulus, i.e., stiffness, typically 200-700 GPa, which means they deform very little under load, ideal for aerospace, sports equipment, and automotive industries.

Carbon Fiber Roving

Carbon fiber roving refers to a bundle of continuous carbon fiber strands, typically wound onto a spool. It's a basic form of raw carbon fiber material, used in composite manufacturing due to its high strength-to-weight ratio, stiffness, and fatigue resistance. Carbon fiber roving is often impregnated with resin to create carbon fiber reinforced plastic (CFRP) composites, applied in industries like aerospace, automotive, and construction for lightweight yet durable components.

Code	Spec	Strength(Mpa)	Modulus(Gpa)	Elongation(%)	Linear Density(g/km)	Density(g/cm³)	Diameter(μm)
KF301/45	3K	4000	230	1.8	198	1.80	7
	12K	4200	230	1.8	800		
	24K	4200	230	1.9	1600		
	48K	4200	240	1.8	3200		
KF301/45S	12K	4500	230	1.9	800	1.80	7
	24K	4500	230	1.9	1600		
	48K	4500	240	1.8	3200		
KF301/45T	12K	4500	210	2.1	800	1.80	7
KF301/49S	12K	4900	240	2.0	800	1.80	7
	24K	4900	240	2.0	1600		
	24K(NEW)	5500	255	2.1	1600		
	48K	4900	240	2.0	3200		
KF301/49T	12K	4900	210	2.3	800	1.80	7
KF301/50S	36K	6000	265	2.2	1800	1.80	7
KF301/55S	12K	5900	295	2.0	450	1.79	5
	24K	5900	295	2.0	900	1.79	5
KF301/55G	12K	5900	295	2.0	450	1.79	5
	24K	5900	295	2.0	900	1.79	5

Chopped Carbon Fiber

Chopped carbon fiber consists of short lengths of carbon fiber strands, offering strength and lightweight properties. It is used as a reinforcement additive in materials like plastics and resins, enhancing strength and stiffness. By blending it with a matrix material, chopped carbon fiber improves the mechanical properties of the resulting composite, making it ideal for industries like aerospace and automotive.

Code	Diameter of Fiber(μm)	Carbon Content(%)	Standard Length(mm)	Tensile Strength(GPa)	Tensile Moduous(GPa)
KF301CS	7-10	≥ 95	1-100	3.6-3.8	220-240

Carbon Fiber Woven Fabric

Carbon Fiber Woven Fabric is made from 1K, 3K, 6K, 12K, 24K carbon fibers with weave patterns like plain, twill, and satin. It finds applications in aerospace for making aircraft parts to enhance strength and reduce weight, in automotive manufacturing for vehicle structures and suspension systems to boost performance and fuel efficiency, and in sports equipment like golf club shafts and bicycle frames.

Code	Yarn	Weave	Weight(g/m²)	W(mm)*L(m)
KF305P/1K-120	1K	Plain	120	1000*100
KF305T/1K-120	1K	Twill	120	1000*100
KF305P/3K-200	3K	Plain	200	1000*100
KF305T/3K-200	3K	Twill	200	1000*100
KF305P/3K-240	3K	Plain	240	1000*100
KF305T/3K-240	3K	Twill	240	1000*100
KF305P/6K-320	6K	Plain	320	1000*100
KF305T/6K-320	6K	Twill	320	1000*100
KF305P/6K-360	6K	Plain	360	1000*100
KF305T/6K-360	6K	Twill	360	1000*100
KF305P/12K-400	12K	Plain	400	1000*50
KF305T/12K-400	12K	Twill	400	1000*50
KF305P/12K-480	12K	Plain	480	1000*50
KF305T/12K-480	12K	Twill	480	1000*50

Carbon-Aramid Hybrid Fabric

Carbon-Aramid Hybrid Fabric merges the high strength and stiffness of carbon fiber with the impact resistance and durability of aramid, creating a material less brittle and more resilient than solely carbon fiber fabric. This makes it ideal for applications requiring both strength and toughness, such as protective gear and high-impact sports equipment, while still maintaining a lightweight profile.

Code	Weave	Weight(g/m²)	Thickness(mm)	W(mm)*L(m)
KA305/100P-YB	Plain	100	0.11	1000*100
KA305/190P-YB	Plain	190	0.27	
KA305/190T-YB	Twill	190	0.27	
KA305/190P-BRO	Plain	190	0.27	
KA305/190T-BRO	Twill	190	0.27	
KA305/190I-YB	“I” WEAVE	190	0.28	

Carbon Fiber Unidirectional Fabric

Unidirectional carbon fiber fabric is a high-strength, lightweight material with all fibers aligned in one direction. Its exceptional load-bearing qualities in the fiber direction make it a popular choice for reinforcing structures in construction, allowing for enhanced durability without adding significant weight.

Code	Yarn	Weight(g/m²)	Thickness(mm)	W(mm)*L(m)
KF305UD/12K-200	12K	200	0.111	500*100
KF305UD/12K-200	12K	300	0.167	1000*100
KF305UD/24K-200	24k	300	0.167	1000*100
KF305UD/12K-400	12K	400	0.2	1000*50
KF305UD/24K-400	24k	400	0.2	1000*50
KF305UD/24K-600	24k	600	0.44	500*50

Carbon Fiber Multi-Axial Fabric

Carbon fiber multi-axial fabric is a high-strength material made up of carbon fibers arranged in several directions, bonded together to provide enhanced structural integrity in various applications. It's commonly utilized in industries where lightweight and durable components are required, such as aerospace, automotive, and marine sectors.

Code	Yarn	Direction	Weight(g/m²)	W(mm)*L(m)
KF305/CBX200	12K/25K	+45/-45	200	1270*50
KF305/CLT200	12K/25K	0/90	200	
KF305/CBX400	25K	+45/-45	400	
KF305/CLT400	25K	0/90	400	
KF305/CBX600	50K	+45/-45	600	
KF305/CLT600	50K	0/90	600	
KF305/CTX600	50K	0/+45/-45 or +45/-45/90	600	
KF305/CTX800	50K	0/+45/-45 or +45/-45/90	600	
KF305/QX380	12K	0/90/+45/-45	380	
KF305/QX800	25K/50K	0/90/+45/-45	800	

Spread Tow Carbon Fiber Fabric

Carbon fiber spread woven fabric features finely dispersed tows for a tighter, smoother weave, providing enhanced strength and reduced weight compared to normal carbon fiber woven fabric, which has a bulkier appearance and may be heavier due to more resin use. Spread woven fabric is ideal for performance-critical applications like aerospace and automotive.

Code	Density(g/m²)	Weave	Width(mm)	Thickness(mm)	Fibers
KF305ST/65*	65*	Plain/ Twill	25	0.07	T700-12K Tensile Strength: 4900Mpa Tensile Modulus: 230Gpa
KF305ST/80*	80*		20	0.08	
KF305ST/88*	88*		18	0.09	
KF305ST/100*	100*		16/20	0.10	
KF305ST/160	160		10	0.16	
KF305ST/200	200		8	0.20	
KF305ST/132	132		25	0.13	T700-24K Tensile Strength: 4900Mpa Tensile Modulus: 230Gpa
KF305ST/165	165		20	0.16	
KF305ST/183	183		18	0.18	
KF305ST/206	206		16	0.21	
KF305ST/61*	61*		25	0.06	
KF305ST/76*	76*		20	0.08	M30 Tensile Strength: 5490Mpa Tensile Modulus: 294Gpa
KF305ST/84*	84*		18	0.08	
KF305ST/95*	95*		16	0.10	
KF305ST/152	152		10	0.15	
KF305ST/83*	83*		25	0.08	
KF305ST/103	103		20	0.10	T800-24K Tensile Strength: 5880Mpa Tensile Modulus: 294Gpa
KF305ST/114	114		18	0.11	
KF305ST/130	130		16	0.13	
KF305ST/206	206		10	0.21	
KF305ST/100*	100*		10	0.10	T800-12K Tensile Strength: 6000Mpa Tensile Modulus: 294Gpa

Annotation: 65 80* 88* 100* 61* 76* 84* 95* 83* 100*: Ultra-thin featured products

Carbon Fiber Tape

Carbon fiber tape is a strong yet lightweight reinforcement material ideally suited for structural enhancement in aerospace, automotive, and marine sectors. Non-adhesive and easy to handle, it bonds well with resins, offering heat resistance and durability, with uses extending to sports equipment and decorative applications.

Code	Yarn	Thickness(mm)	Width(mm)	Weight(g/m²)	L(m)
KF306/240	3K Carbon fiber	0.32	15-180	240	100
KF306/280	3K Carbon fiber	0.35	15-180	280	
KF306/320	3K Carbon fiber	0.4	15-180	320	
KF306UD/200	3K UD Carbon fiber	0.25	30-130	200	

Carbon Fiber Sleeve

Carbon fiber braided sleeves, lightweight and strong with tensile strengths over 3500 MPa, provide protection for wires and cables against high temperatures and environmental damage in automotive, aerospace, and other industries. They are flexible, fireproof, and resistant to extremes, with diameters ranging from 8mm to 80mm, and can endure up to 650°C .

Code	Weave	Dry weight(g/m²)	Resin Content(%)	L(m)
KF307/08-12	8-12	10	0.8-0.9	50-100
KF307/20-40	20-40	20	0.8-0.9	
KF307/15-25	15-25	20	1.3-1.5	
KF307/30-50	30-50	40	1.3-1.5	
KF307/20-35	20-35	40	1.8-1.9	
KF307/40-70	40-70	80	1.8-1.9	
KF307/20-30	20-30	18	1.3-1.5	
KF307/50-80	50-80	29	0.8-0.9	

Carbon Fiber Sheet

Carbon Fiber Sheets are high-strength, lightweight panels with a sophisticated glossy or matte finish. Ideal for designing and fabricating durable structures and parts, they are extensively utilized in aerospace, unmanned aerial vehicles, RC models, sports equipment, and high-end electronics. These sheets are perfect for applications where strength, weight, and aesthetics are critical.

Code	Weave	Surface	Thickness(mm)	Type
KF309/400-500	Plain/ Twill	Glossy/Matte	0.5-10	Content of carbon: 100%
KF309/500-600				
KF309/500-1000				
KF309/1000-1000				
KF309/1000-1600				
KF309/1200-1600				

Carbon Fiber Veil

The Carbon Fiber Veil is a non-woven material made of randomly oriented carbon fibers, used to reinforce composites, improve surface finish, and prevent cracking. It also offers electrical conductivity and resistance to fire, corrosion, and fatigue, making it versatile for high-performance applications.

Code	Area Weight (g/m²)	Surface Resistance(Ω)	Binder Content(%)	Moisture Content(%)	Tensil Strength (N/50mm)	Thickness (mm)	L(m)
KF310/005	5	/	10±2	≤ 0.3	/	0.05±0.01	500
KF310/006	6	/			≥ 5	0.06±0.01	500
KF310/008	8	/			≥ 7	0.08±0.01	200
KF310/010	10	≤ 15			≥ 11	0.09±0.01	200
KF310/015	15	≤ 8			≥ 16	0.15±0.02	300
KF310/020	30	≤ 6			≥ 21	0.20±0.03	300
KF310/030	50	≤ 4			≥ 31	0.30±0.03	200
KF310/050	60	≤ 3			≥ 40	0.50±0.04	160

Carbon Fiber Strip

Carbon fiber Strip combine high-strength carbon fibers with special resin to create lightweight, corrosion-resistant material with excellent anti-fatigue properties. Ideal for concrete structure repair and earthquake reinforcement, their easy handling and ability to overlap make them a practical choice for durable construction upgrades.

Type	Code	Thickness (mm)	Width (mm)	Length (m)	Tensile Strength (MPa)	Elastic Modulus (GPa)	Elongation (%)
HS Series	KF309HS/1.2-100	1.2	100	50/100	≥ 2800	≥ 160	≥ 1.6
	KF309HS/1.4-50	1.4	50/100				
	KF309HS/1.4-100						
	KF309HS/2.0-50	2.0	50/100				
	KF309HS/2.0-100						
KF309HS/3.0-50	3.0	50					
HM Series	KF309HS/1.2-100	1.2	100	50/100	≥ 2800	≥ 200	≥ 1.3
	KF309HM/1.4-50	1.4	50/100				
	KF309HM/1.4-100						
	KF309HM/2.0-50	2.0	50/100				
	KF309HM/2.0-100						
KF309HM/3.0-50	3.0	50					

Customized Production Available

Carbon Fiber Tube

Carbon fiber tubes offer high strength and lightweight advantages over traditional materials like steel or aluminum. They are commonly used in industrial machinery, sports equipment, aviation models, and recreational items such as tent poles, delivering enhanced performance and durability across a wide range of applications.

Code	Length(mm)	Surface	Weave
KF312/3K-8x10	10-2400	Glossy/Matte	Plain/ Twill/ Uni-direction
KF312/3K-10x14			
KF312/3K-12x14			
KF312/3K-14x16			
KF312/3K-16x18			
KF312/3K-18x20			
KF312/3K-20x24			
KF312/3K-22x25			
KF312/3K-24x26			
KF312/3K-26x28			
KF312/3K-28x30			
KF312/3K-31x35			
KF312/3K-34x38			
KF312/3K-52x56			

Carbon Fiber Fabric Prepregs

Carbon Fiber Fabric Prepreg, acclaimed for its advanced, lightweight, and high-strength qualities, is a top-tier reinforcement widely employed in sectors such as aerospace, transportation, and sports. It is essential in producing a range of products from aircraft and engines to sports accessories.

Code	Weave	Dry weight(g/m²)	Resin Content(%)	W(mm)*L(m)
CP1120	Plain	120	40	1000*100
CT1120	Twill	120		1000*100
CP3200	Plain	200		1000*100
CT3200	Twill	200		1000*100
CS3240	Satin	240		1000*100
CP6320	Plain	320		1000*100
CT6320	Twill	320		1000*100
CS6400	Satin	400		1000*50
CP12400	Plain	400		1000*50
CT12480	Twill	480		1000*50

Carbon Fiber Unidirectional Prepregs

Carbon Fiber Unidirectional Prepreg is a state-of-the-art reinforcement material renowned for its lightweight properties and exceptional strength. Its versatility makes it suitable for a multitude of applications ranging from aerospace components like fuselages and rocket shells to sports gear including fishing rods and baseball bats, as well as industrial uses in engine parts and structural reinforcements.

Code	Dry Weight(g/m²)	Resin Content(%)	Total Weight(g/m²)	W(mm)*L(m)
USN03000	30	55	76	1000*100
USN05000	50	45	91	
USN07500	75	38	121	
USN10000	100	33	150	
USN12500	125	33	187	
USN15000	150	33	224	
USN17500	175	33	261	
USN20000	200	33	298	
USN22500	225	33	337	
USN25000	250	33	374	

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At Hitex Composites, we specialize in the design, development, and manufacture of advanced composites for a wide range of industries, including aerospace, automotive, marine, and construction. We take advantage of our location in China to provide our customers with a competitive edge in terms of pricing, quality, and lead times. We have extensive experience in sourcing the highest quality raw materials from trusted suppliers, ensuring that we can offer our products at a competitive price without sacrificing quality.

Moreover, our state-of-the-art manufacturing facilities are equipped with the latest technology and staffed by skilled workers who are dedicated to producing the highest quality composite materials and products. This enables us to deliver products that meet or exceed the expectations of our customers.

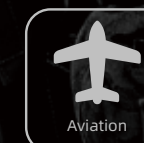
In addition to our manufacturing capabilities, we offer fast turnaround times and flexible production schedules to accommodate the needs of our customers. Whether you need

a small batch of custom products or a large-scale production run, we can deliver your order quickly and efficiently.

We believe that customer satisfaction is key to our success, and we go above and beyond to ensure that our clients receive the best possible service. Our team of experienced professionals is dedicated to providing personalized solutions tailored to your specific needs, and we work closely with you to ensure that your project is completed on time and within budget.

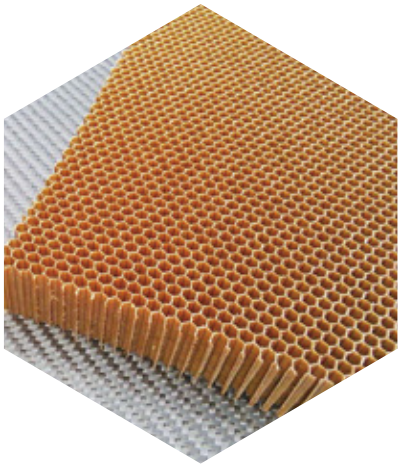
Whether you are looking for custom composite materials, high-quality composite products, or expert advice on composite design and engineering, Hitex Composites is your trusted partner. We are committed to providing you with the perfect service, high quality, and professionalism you deserve. Contact us today to learn more about our services and how we can help you take your project to the next level.

MAIN APPLICATION AREAS OF ARAMID FIBER





Here is an introduction to **the characteristics and applications of aramid fiber** products:



Tensile Strength

Aramid fibers, such as Kevlar, typically have a tensile strength of around 2,600–4,300 MPa, significantly higher than fiberglass (2,000–3,500 MPa) and carbon fiber (2,500–6,000 MPa). However, carbon fiber can exceed aramid in some forms. The specific tensile strength can be up to five times greater than that of steel, making aramid fibers ideal for ballistic protection and armor applications.

Thermal Stability and Heat Resistance

Aramid fibers demonstrate thermal stability and retain their mechanical properties at temperatures up to around 500° C (~932° F). In contrast, materials like nylon and polyester begin to degrade at much lower temperatures. They do not melt but will begin to decompose at approximately 500° C, while carbon fibers maintain strength up to 2,500° C in inert environments.

Chemical Resistance

Aramid materials, including Nomex and Kevlar, have excellent resistance to a wide range of corrosive substances. They perform better than nylon and polyesters when exposed to harsh chemicals. They are, however, sensitive to strong acids and some solvents. This is in contrast to PTFE fibers like Teflon, which have an almost universal chemical resistance.

Strength-to-Weight Ratio

The density of aramid fiber like Kevlar is typically around 1.44 g/cm³, which is lighter than carbon fiber (around 1.5–2.0 g/cm³) and fiberglass (about 2.5g/cm³). Aramid’s high strength-to-weight ratio makes it particularly useful for applications where maximizing strength and minimizing weight is essential, such as in body armor, aerospace structures, and sports equipment.

Para Aramid Pulp

Para-aramid pulp is a strong, heat and abrasion-resistant material from poly(para-phenylene terephthalamide) yarn, designed to reinforce and control viscosity in friction and sealing contexts, like gaskets, brake pads, and wear-resistant parts.

Code	C.S.F.(ml)	Specific Surface Area(m²/g)	Moisture Content (%)	Average Length (mm)	Thermal Decomposition Temperature(° C)
AF200/220	220-350	9-14	4-7	0.8-1.4	540
AF200/230	320-450	7-12	4-7	0.7-1.3	
AF200/240	400-550	6-10	4-7	0.5-1.2	
AF200/260	500-670	5-9	4-7	0.5-1.2	
AF200/270	300-650	5-14	4-7	0.5-1.4	
AF200/280	200-350	10-15	55-75	0.7-1.3	

Aramid Fiber Filament Yarn

Aramid fiber filament are versatile, heat-resistant synthetic fibers known for their strength. They find applications in safety protection, industrial manufacturing, outdoor sports, and communication cables. From bulletproof vests and industrial gaskets to tennis rackets and communication cables, aramid fibers are used in a variety of products for their durability and resilience.

Item	ST				HS		HM
	AF201/529S		AF201/529R		AF201/629	AF201/629T	AF201/539
	<600D	600D-3000D	600D-840D	1000D-1500D	840D-1500D	840D-1500D	1000D-3000D
Breaking tenacity (cN/dtex) ≥	18.0	18.0	20.5	20.5	22.5	23.5	18.0
Elongation at break (%)	3.5±1.0	3.5±1.0	≥ 3.3	≥ 3.5	≥ 3.0	≥ 3.0	≤ 3.0
Modulus (GPa)	90±20	90±20	90±15	85±15	95±15	95±15	≥ 110

Aramid Fiber Chopped

Aramid fiber chopped is a short cut fiber derived from continuous aramid fiber. It can be added to resin or rubber to create reinforced compounds. This fiber is commonly used in various applications such as engineering plastics, conveyor belts, rubber parts, concrete projects, FRP parts, and aramid paper.

Code	Filament (μm)	Density(g/cm³)	Fiber Length(mm)	Weight(kg/bag)
AF201CS-3	12	1.44	3	20
AF201CS-6			6	
AF201CS-9			9	
AF201CS-12			12	

Para Aramid Staple Fiber

Para aramid staple fiber is highly resistant to heat and flame, while also providing excellent strength. It can withstand temperatures of up to 220° C for more than 10 years and up to 240° C for 1000 hours. Available in different lengths and densities, it is suitable for spinning and non-woven processes. Its applications include engineering plastics, friction materials, reinforcing materials, and lightweight composite materials for various industries.

Code	Density(g/cm³)	Color	Fiber Length(mm)	Tensile strength(cN/dtex)	Weight(kg/bag)
AF201ST-38	1.47	Yellow/Black	38	19.4-21	100
AF201ST-51			51		
AF201ST-76			76		

Aramid Fiber Fabric

Aramid fiber fabric, woven primarily from various denier para-aramid fibers (200D to 3000D) in patterns like plain, twill, and satin, is widely used in aerospace, personal armor like bulletproof vests, electromechanical systems, construction reinforcement, and automotive and sports gear.

Code	Yarn	Structure	Weight(g/m²)	W(mm)*L(m)
AF205P-50	200D	Plain	50	1000*200
AF205P-80	400D	Plain	80	1000*200
AF205P-100	600D	Plain	100	1000*100
AF205P-115	800D	Plain	115	1000*100
AF205P-140	1000D	Plain	140	1000*100
AF205P-160	1000D	Plain	160	1000*100
AF205T-160	1000D	Twill	160	1000*100
AF205P-200	1000D	Plain	200	1000*100
AF205T-200	1000D	Twill	200	1000*100
AF205P-170	1500D	Plain	170	1000*100
AF205P-200	1500D	Plain	200	1000*100
AF205T-220	1500D	Twill	220	1000*100
AF205P-300	3000D	Plain	300	1000*50
AF205P-450	3000D	Plain	450	1000*50

Unidirectional Aramid Fiber Fabric

Unidirectional Aramid Fiber Fabric consists of aramid fibers aligned in a single direction, offering exceptional strength and durability. It is commonly used as building insulation reinforcement in subways, tunnels, and railway electrification. Additionally, it is employed for structural reinforcement in locations where strict impact requirements are imposed, like harbors.

Code	Yarn	Weight(g/m²)	Thickness(mm)	W(mm)*L(m)
AF205UD-280	3000D	280	0.193	1000*50
AF205UD-350	3000D	350	0.258	
AF205UD-415	3000D	415	0.286	

Aramid Fiber Tape

Aramid fiber tape, made from strong and lightweight aramid fibers, is known for its exceptional tensile strength, heat resistance, and chemical resistance. Widely used in aerospace for structural reinforcements and repairs, automotive for enhancing vehicle components, sports equipment for improving performance, and industrial applications for insulation and sealing in high-temperature environments, aramid fiber tape is a versatile material that provides durability and strength in various high-performance applications.

Code	Yarn	Thickness(mm)	Width(mm)	Length(m)
AF206-0.5	400D	0.5	10-100	30/50/100
AF206-0.8	600D/800D	0.8		
AF206-1.0	1000D/1500D	1		
AF206-2.0	1000D/1500D	2		
AF206-3.0	1000D/1500D	3		
AF206-4.0	1000D/1500D	4		

Aramid Fiber Sleeve

Aramid fiber sleeve is a highly durable and heat-resistant protective covering made from aramid fibers. This type of sleeve is commonly used in various applications such as automotive, aerospace, and industrial sectors to provide protection against high temperatures, abrasion, and chemical exposure. Its exceptional properties make it ideal for use in cable harnesses, hose assemblies, and other components where reliable insulation and mechanical protection are crucial.

Code	Yarn	Inner Dia.(mm)	Length(m)
AF207	1000D/1500D/3000D	8-100	30/50/100

Meta Aramid Honeycomb

Meta-aramid honeycomb is a lightweight, high-strength, heat and flame-resistant material used in aerospace and automotive sectors, particularly for fire-safe cabin panels, flooring, and vehicle interiors to improve safety and fuel efficiency.

Code	Cell size		Density(kg/m³)	W(mm)*L(m)
	Dia (mm)	L (mm)		
AF209M-3.2	3.2	1.83	32/48/64	1220×2440 1300×2600 1600×3200
AF209M-4.8	4.8	2.29	32/48/64	
AF209M-6.4	6.4	2.75	40	
AF209M-9.5	9.5	3.67	40	
		4.5		
		5.5		

Para Aramid Honeycomb

Para-aramid honeycomb, made from fibers like Kevlar, has a high strength-to-weight ratio and is impact-resistant. It's stronger and stiffer than meta-aramid honeycomb (e.g., Nomex) but is also typically more costly. Both types are heat and flame resistant, but para-aramid is preferred for high-stress applications, while meta-aramid is chosen for its flexibility and insulation properties.

Code	Cell size		Density(kg/m³)	W(mm)*L(m)
	Dia (mm)	L (mm)		
AF209P-3.2	3.2	1.83	32	1220×2440 1300×2600 1600×3200
AF209P-4.8	4.8	2.29	40	
		2.75	48	
		3.67	64	
AF209P-6.4	6.4	4.5	80	
AF209P-9.5	9.5	5.5	96	
			128	
			144	




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Here is an
introduction to **the
characteristics
and applications
of glass fiber**
products:

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a small batch of custom products or a large-scale production run, we can deliver your order quickly and efficiently.

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MAIN APPLICATION AREAS OF GLASS FIBER



Construction



Aviation



Wind
Energy



Automobile



Sports

High Strength

Glass fiber has a high tensile strength, meaning it can withstand significant pulling or stretching forces without breaking. This property makes it suitable for applications where strength is crucial, such as in construction, aerospace, and automotive industries.

Lightweight

Despite its high strength, glass fiber is relatively lightweight. This characteristic allows for the production of lightweight and durable materials, reducing the overall weight of structures or products without compromising their strength or performance.

Chemical Resistance

Glass fiber exhibits excellent resistance to many chemicals, including acids, alkalis, and solvents. This chemical resistance property makes it suitable for use in corrosive environments or applications where exposure to chemicals is expected.

Thermal Insulation

Glass fiber has excellent thermal insulation properties. It has a low thermal conductivity, meaning it is effective in preventing the transfer of heat. This characteristic makes it widely used as an insulating material in industries such as construction, HVAC, and energy.

Direct Roving

Direct roving is an E-glass roving without twist, coated with silane-based size for reinforcing polyester, epoxy, and other resins. It is used in making GRP FRP pipes, pressure vessels, and more, offering rapid wet out, low resin demand, and high mechanical properties in composite applications.

Code	Tex	Filament Diameter(m)	Applicable Process	Roll Weight(Kgs)
EDR120-S501	1200	17	Pultrusion	16
EDR240-S501	2400	24	Pultrusion	
EDR440-S501	4400	23	Pultrusion	
EDR489-S501	4800	24	Pultrusion	
EDR120-S500	1200	17	Filament winding	
EDR240-S500	2400	24	Filament winding	
EDR440-S500	4400	23	Filament winding	
EDR480-S500	4800	24	Filament winding	
EDR115-S502	1150	17	Weaving	

Fiberglass Yarn

Fiberglass yarn exhibits electrical resistance, high tensile strength, excellent dimensional stability, corrosion resistance, and heat resistance. Our range encompasses yarn styles like G37 1/0, G75 1/0, G150 1/0, as well as plied and twisted yarns like G37 1/2, G75 1/3, G150 1/2, and more. Commonly utilized in fabric, tape, rope, and textile manufacturing, fiberglass yarn is also an essential component in composite materials for reinforcement and increased strength.

Single Yarn

Code	Density(Tex)	Net Weight (Kg/Bobbin)
EC DE150 1/0 0.7Z	34	3.62
EC DE75 1/0 0.7Z	68	3.62/4.5/7.4
EC DE37 1/0 0.7Z	136	3.52
EC E110 1/0 1.0Z	45	7.27
EC G150 1/0 0.7Z(0.5Z)	34	3.62
EC G75 1/0 0.7Z(0.5Z)	68	8.6/3.6/4.09
EC G67 1/0 0.7Z	74	8.1
EC G37 1/0 0.7Z(0.5Z)	136	8.6
EC G25 1/0 0.7Z	204	7.5
EC H37 1/0 0.7Z	136	8.49
EC H25 1/0 0.7Z	204	7.5
EC H12 1/0 0.7Z	408	7.5
EC K37 1/0 0.7Z	136	8.6
EC K18 1/0 0.7Z	272	8.6

Plied Yarn

Code	Density(Tex)	Net Weight (Kg/Bobbin)
EC 4 34X1X3 S150(S120)	101.1	3.6
EC 4 34x1x6 S150(S120)	202.2	3.6
EC 5 11x1x2 S180	22.4	1.81
EC 5 11X1X3 S180	33.6	2.01
EC 6 34X1X2 S100	68	3.6
EC 6 34X1X4 S100	136	3.6
EC 6 68X1X2 S112(S152)	136	3.6
EC 6 136X1X2 S112(S152)	272	3.6
EC 6 136X1X3 S112(S152)	408	3.6
EC 6 136X1X4 S112(S152)	544	3.6
EC 7 22X1X3 S100(S152)	67.5	3.6
EC 9 34X1X3 S100(S112)(S152)	102	3.6
EC 9 68X1X2 S100(S112)(S152)	136	3.6
EC 9 68X1X3 S100(S112)(S152)	206	3.6

Fiberglass Woven Fabric

Fiberglass woven fabric is a shuttle-woven material known for its high performance and attractive appearance, widely used in various industries such as aircraft, space flight, shipbuilding, chemicals, medicine, military, and sports equipment. It is commonly employed in the manufacturing of FRP fishing poles, golf clubs, baseball bats, surfboards, skis, and ice hockey sticks.

Code	Weave	Weight(g/m²)	Yarn Count(ends/cm)		Length(m)
			Warp	Weft	
EW30	Plain	23±2	20±2	18±2	50-200
EW60	Plain	48±4	20±2	20±2	
EW80	Plain	80±8	12±1	12±1	
EWT80	Twill	80±8	12±2	12±2	
EW100/EWT100	Plain/Twill	110±10	16±1	15±1	
EW130	Plain	130±10	10±1	10±1	
EW160/EWT160	Plain/Twill	160±12	12±1	12±1	
EW200/EWT200	Plain/Twill	198±14	8±0.5	7±0.5	
EW200/EWT200	Plain/Twill	200±20	16±1	13±1	
EW300/EWT300	Plain/Twill	300±24	8±0.5	7±0.5	
EW400/EWT400	Plain/Twill	400±32	8±0.5	7±0.5	
EW400/EWT400	Plain/Twill	400±32	6±0.5	6±0.5	

Woven Roving

Woven roving is a plain pattern fabric made from direct rovings. It ensures controlled wet-out and high-quality laminate properties. It is commonly used in boat building, storage tanks, swimming pools, and various other applications. Woven roving is compatible with polyester, vinyl, and epoxy resins and suitable for hand lay-up, filament winding, and mold press processes.

Code	Weave	Weight(g/m²)	Resin Compatibility	Roll Width(mm)
EW R200	Plain	200	UP, VE, EP	20-3000
EW R270		270		
EW R300		300		
EW R360		360		
EW R400		400		
EW R450		450		
EW R500		500		
EW R600		600		
EW R720		720		
EW R800		800		
EW R860		860		
EW R1000		1000		
EW R1200		1200		
EW R1500		1500		
EW R1600		1600		

Fiberglass Multiaxial Fabrics

Fiberglass multiaxial fabrics is a kind of multi-axis and multi-layered reinforcements. layer count, orientation, weight and fiber content of the layers vary based on product line and application via polyester yarn. Fabrics can be produced using multiple axis(0° , 90° , +45° , -45°), or combined with chopped mat layer. Mainly used for Pultrusion, Hand lay-up, Filament Winding and RTM process, applied to wind energy, marine/ship building, recreation/leisure products, automotive, aerospace & defense etc.

Code	Total Weight(gsm)	0° (g/m²)	90° (g/m²)	+45° (g/m²)	-45° (g/m²)	CSM(g/m²)	Stitching Yarn(g/m²)
UDL550	550	420	120	-	-	-	10
UDTM200/225	435	-	200	-	-	225	10
EBX400	407	-	-	200	200	-	7
EBX600	609	-	-	301	301	-	7
BXM600/225	832	-	-	300	300	225	7
LTM600/300	910	336	264	-	-	300	10
LTM800/300	1110	420	380	-	-	300	10
LTM1200/300	1510	672	528	-	-	300	10
TLX1200	1214	567	-	320	320	-	7
QX800	808	283	118	200	200	-	7
QX1200	1207	576	124	250	250	-	7

Fiberglass Tape

Fiberglass tape is made using direct roving, known for its wet-out ability, high strength, and good laminate transparency. It is primarily used for hand lay-up of large, high-strength FRP products, including boats, automotive parts, storage tanks, furniture.

Code	Weave	Weight(g/m²)	Ends Per(cm)	Pics Per(cm)	Length(m)
ET200-25	Plain	200	8±0.5	7±0.5	50 or 100
ET200-50					
ET200-75					
ET200-100					
ET200-150					
ET200-200					
ET200-300					
ET300-25	Plain/Twill	300			
ET300-50					
ET300-75					
ET300-100					
ET300-150					
ET300-200					
ET300-300					

Chopped Strand Mat

Fiberglass Chopped Strand Mat is a durable reinforcement material made from randomly distributed short strands of fiberglass bonded with a binder. Ideal for various FRP processes such as hand lay-up and molding, this mat is employed in making boats, vehicle parts, and building structures due to its consistent density and excellent moldability. Its key advantages include a quick resin absorption rate, efficient air release for cost-effectiveness, and strong mechanical properties resulting in strong, transparent end products.

Code	Weight(g/m ²)	Loss on ignition(%)	Breaking Strength(N)	Moisture Content(%)	Resin Compatibility
EMC100P/E	100	12±3	≥ 50	≤ 0.2	UP,VE,EP
EMC150P/E	150	8±2	≥ 70		
EMC180P/E	180	5±1	≥ 80		
EMC225P/E	225	4.7±1	≥ 90		
EMC300P/E	300	4.5±1	≥ 110		
EMC450P/E	450	4±1	≥ 130		
EMC600P/E	600	3.5±1	≥ 180		

Fiberglass Stitched Mat

Fiberglass stitched mat is made of chopped fiberglass strands randomly dispersed and laid on the forming belt, stitched together by a polyester yarn. Mainly used for Pultrusion, Filament Winding, Hand Lay-up and RTM molding process, appllied to FRP pipe and Storage Tank, etc.

Code	Total Weight(g/m ²)	Deviation(%)	CSM(g/m ²)	Stitching Yarn(g/m ²)
EMK200	210	±7	200	10
EMK300	310		300	
EMK380	390		380	
EMK450	460		450	
EMK900	910		900	

Woven Roving Combo Mat

Woven roving combo mat is a composite material that combines woven roving fiberglass fabric with chopped strand mat for a balance of high strength, stiffness, molding capability, and surface finish. It is commonly used in the construction of boats, automotive parts, and large FRP components like wind turbine blades, offering excellent mechanical properties for applications requiring strength, impact resistance, and versatility.

Code	Total Weight(g/m ²)	Deviation(%)	Woven Roving(g/m ²)	CSM(g/m ²)	Stitching Yarn(g/m ²)
WRM300/300	610	±7	300	300	10
WRM500/300	810		500	300	
WRM620/260	890		620	260	
WRM600/300	910		600	300	
WRM600/450	1060		600	450	
WRM800/300	1110		800	300	

Fiberglass Core Mat

Fiberglass core mat is a new material, consisting of a synthetic non-woven core, sandwiched between two layers of chopped glass fibers or one layer of chopped glass fibers and the other on layer of multiaxial fabric/woven roving. Mainly used for RTM, Vacuum Forming, Molding, Injection Molding and SRIM Molding Process, Applied to FRP boat, Automobile, Aeroplane, Panel, etc.

Code	Total Weight(g/m ²)	Deviation(%)	0°(g/m ²)	90°(g/m ²)	CSM(g/m ²)	Core(g/m ²)	CSM(g/m ²)	Stitching Yarn(g/m ²)
CF150/130/150	440	±7	-	-	150	130	150	10
CF300/180/300	790		-	-	300	180	300	
CF450/180/450	1090		-	-	450	180	450	
CF600/250/600	1460		-	-	600	250	600	
CF1100/200/1100	2410		-	-	1100	200	1100	
300/XT1/300	710		-	-	300	100	300	
450/XT1/450	1010		-	-	450	100	450	
600/XT2/600	1410		-	-	600	200	600	
LTNM600/180/300	1090		336	264	-	180	600	
LTNM600/180/600	1390		336	264	-	180	600	

Surface Veil Stitched Combo Mat

Surface veil stitched combo mat is one layer of surface veil (fiberglass veil or polyester veil) combined with various of fiberglass fabrics, multiaxials and chopped roving layer by stitching them together. The base material can be only one layer or several layers of different combinations. It can be mainly applied in pultrusion, resin resin transfer molding, continuous board making and other forming processes.

Code	Total Weight(g/m ²)	Base Fabrics	Base Fabric(g/m ²)	Surface Mat Type	Surface Mat(g/m ²)	Stitching Yarn(g/m ²)
EMK300/P60	370	EMK	300	Polyester Veil	60	10
EMK450/F45	495	EMK	450	Fiberglass Veil	45	
LT1440/P45	1495	LT	1440	Polyester Veil	45	
WR600/P45	655	WR	600	Polyester Vei	45	
CF450/180/450/P40	1130	CF	1080	Polyester Vei	40	

Surfacing Mat

Fiberglass surfacing mat are essential for the outer layers of FRP products, offering a smooth, uniform fiber-dispersed surface and quick resin impregnation. It is ideal for intricate molds, ensuring a high-gloss finish that conceals textures of underlying layers, and enhances strength and corrosion resistance.

Code	Gum Content(%)	Weight(g/m ²)	Roll Width(mm)	Longitudinal Tensile Strength(N)	Moisture Content(%)
S-BM(W)-30	7	30	Normal: 1000 Range: 50-3000	≥ 30	≤ 0.5
S-BM(W)-50	7	50		≥ 50	
S-BM(W)-30	6	30		≥ 25	
S-BM(W)-50	6	50		≥ 40	
S-BM(W)-90	8	90		≥ 200	

Chopped Strands

Chopped Strands are short E-glass fibers coated with silane-based sizing. They reinforce various plastics, offering strong strands with high density and minimal fuzz. They are easy to control in dry applications and exhibit good wet dispersion and flow, enabling effortless impregnation with resin. Chopped Strands enhance mechanical properties and surface quality.

Resin Matrix	Filament Diameter(μm)	Chopped Length(mm)	Weight(kg/bag)
PA/PBT/PET/PC/PP/ABS/AS PC/PEEK/PPS/LCP/LCP/PPO/POM	10, 11, 13	3.0, 4.5	20

Surfboard Fiberglass Fabric

Surfboard fiberglass fabrics are materials made from woven glass fibers, commonly used in the construction of surfboards to reinforce the foam core and enhance durability. These fabrics vary in weight, which influences the board's strength and flexibility, with common options being 40Z and 60Z. Once layered over the surfboard's core, the fabric is secured with resin through a process called glassing, resulting in a composite that is lightweight yet strong, capable of withstanding oceanic forces while providing smooth performance. The choice of fiberglass fabric, including its weight and weave, is crucial in determining the surfboard's final attributes and is tailored to fit different surfing styles and board designs.

Code	Weight	Width	Thickness(mm)	Weight(g/m ²)
SFF40Z/635	40Z	25” (635mm)	0.11	120
SFF60Z/635	60Z	25” (635mm)	0.19	195
SFF40Z/685	40Z	27” (685mm)	0.11	120
SFF60Z/685	60Z	27” (685mm)	0.19	195
SFF40Z/700	40Z	27.6” (700mm)	0.11	120
SFF60Z/700	60Z	27.6” (700mm)	0.19	195
SFF40Z/760	40Z	30” (760mm)	0.11	120
SFF60Z/760	60Z	30” (760mm)	0.19	195
SFF40Z/800	40Z	31.5” (800mm)	0.11	120
SFF60Z/800	60Z	31.5” (800mm)	0.19	195
SFF40Z/1000	40Z	39.4” (1000mm)	0.11	120
SFF60Z/1000	60Z	39.4” (1000mm)	0.19	195
SFF40Z/1270	40Z	50” (1270mm)	0.11	120
SFF60Z/1270	60Z	50” (1270mm)	0.19	195
SFF40Z/1066	40Z	42” (1066mm)	0.11	120
SFF60Z/1066	60Z	42” (1066mm)	0.19	195




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MAIN APPLICATION AREAS OF BASALT FIBER



Here is an introduction to **the characteristics and applications of basalt fiber** products:



High Temperature Resistance

Basalt fiber has a higher melting point than glass fiber, making it more resistant to high temperatures. Basalt fiber can withstand temperatures up to 1000° C, while glass fiber typically has a lower temperature resistance of around 450-500° C. This makes basalt fiber ideal for applications where high-temperature resistance is critical, such as in the automotive and aerospace industries.

Strength and Stiffness

Basalt fiber is known for its excellent strength and stiffness properties, which are comparable to or even superior to those of glass fiber. Basalt fibers have a high tensile strength and modulus of elasticity, making them suitable for structural applications where high strength-to-weight ratio is important.

Chemical Resistance

Basalt fiber exhibits better resistance to acidic and alkaline environments compared to glass fiber. This characteristic makes basalt fiber suitable for applications where exposure to harsh chemicals is a concern, such as in marine and chemical processing industries.

Environmental Sustainability

Basalt fiber is considered a more environmentally friendly alternative to glass fiber. The production of basalt fiber requires less energy and resources compared to glass fiber manufacturing. Additionally, basalt fiber is non-toxic and recyclable, contributing to its eco-friendly profile.

Basalt Fiber Roving

Basalt fiber roving is comprised of strong, heat-resistant basalt filaments, offering durability even in harsh environments and outperforming E-glass. Its cost-effectiveness and comparable performance to carbon fiber make it suitable for large-scale composite material production. Basalt fiber roving is versatile in applications such as fabricating unidirectional cloths for construction, wrapping pipes and cylinders, crafting textiles and geotextiles, building repairs, and as a strengthening material in various composite matrices.

Code	Fiber Diameter (μm)	Linear Density (tex)	Sizing Type
BF601/9	9	300 ~ 1200	Silane Vinylester Phenolic PP PE PA
BF601/11	11	200 ~ 4800	
BF601/13	13	396 ~ 4800	
BF601/14	14	264 ~ 4400	
BF601/16	16	400 ~ 4800	
BF601/19	19	600 ~ 4800	
BF601/24	24	1000 ~ 4800	

Texturized Basalt Yarn

Texturized Basalt Fiber Yarn is a durable, texturized material with high temperature resistance, flame retardancy, and low moisture absorption. It excels in applications requiring strength and thermal stability, like the manufacture of basalt textiles including ropes and fabrics, and can substitute for carbon or aramid fibers in some uses.

Code	Fiber Diameter (μm)	Linear Density (tex)	Sizing Type
BF601T/9	9	66 - 1200	Silane Vinylester Phenolic PP PE PA
BF601T/11	11	100 - 4800	
BF601T/13	13	132 - 4800	
BF601T/16	16	200 - 4800	
BF601T/19	19	292-4800	
BF601T/24	24	480 - 4800	

Basalt Fiber Twisted Yarn

Basalt twisted yarn, made from 6μm to 13μm filaments and twisted 60-100 times per meter, is used for heat (650-980°C) and radiation-resistant fabrics with superb electrical insulation, tensile strength, and high-temperature endurance.

Code	Fiber Diameter (μm)	Linear Density (tex)	TPM (Twists Per Meter)
BF601C/6	6	16.5 / 33 / 50 / 66 ~ 200	20 ~ 300
BF601C/7	7	11 / 22 / 44 / 66 / 88 ~ 600	
BF601C/9	9	33 / 66 / 100 ~ 600	
BF601C/11	11	100 / 200 / 300 ~ 600	
BF601C/13	13	132 / 264 / 396 ~ 660	

Basalt Fiber Chopped Strands

Basalt fiber chopped strands are cut continuous filaments with diameters ranging from 5.5μm to 25μm and lengths from 3mm to 100mm. Coated with various coupling agents for different applications, they offer excellent dispersion and properties including high temperature stability, low temperature cracking resistance, fatigue resistance, and antistatic properties. These chopped strands find versatile applications such as enhancing asphalt in high-grade highways, reinforcing cement concrete structures and roads, serving as reinforced materials in resin composites, and creating high temperature corrosion-resistant filter media.

Code	Chopped Length (mm)	Water Content (%)	Sizing Content (10%)
BF601CS/3	3	≤ 0.10	≤ 0.40
BF601CS/4.5	4.5	≤ 0.10	≤ 0.40
BF601CS/6	6	≤ 0.10	≤ 0.40
BF601CS/12	12	≤ 0.10	≤ 0.40
BF601CS/18	18	≤ 0.10	≤ 0.10
BF601CS/25	25	≤ 0.10	≤ 0.85
BF601CS/30	30	≤ 0.10	≤ 0.40
BF601CS/150	50	≤ 0.10	≤ 0.40
BF601CS/63	63	≤ 0.10 - 8.00	≤ 0.40
BF601CS/90	90	≤ 0.10	≤ 0.35

Basalt Fiber Fabric

Basalt fiber fabric, with various weaves, is stronger than fiberglass and more cost-effective and sustainable than carbon fiber. It excels in heat resistance and is versatile for use in composites, shipbuilding, aerospace, construction, and automotive industries, especially for high-temperature and reinforcement applications.

Code	Structure	Weight (g/m²)	Thickness (mm)	Width (mm)
BF605P/100	Plain	100	0.15	100-2000
BF605P/200	Plain	200	0.22	
BF605P/350	Plain	350	0.34	
BF605P/650	Plain	650	0.55	
BF605T/200	Twill	200	0.28	
BF605T/300	Twill	350	0.32	
BF605T/640	Twill	600	0.50	
BF605T/900	Twill	900	0.65	
BF605S/320	Satin	320	0.26	

Basalt Fiber UD Fabric

Basalt UD fabrics serve as a cost-effective alternative to Carbon fiber unidirectional fabrics, offering a similar performance in reinforcing structures by bolstering the flexural and shear strength of concrete, masonry, or wood, while providing a more economical solution.

Code	Structure	Weight (g/m²)	Thickness (mm)	Width (mm)
BF605UD/350	UD	350	0.33	100-1500
BF605UD/450		450	0.36	
BF605UD/650		650	0.55	

Basalt Fiber Multi-Axial Fabric

Basalt fiber multi-axial fabric is made from strong and durable basalt rock fibers, offering better heat and chemical resistance than fiberglass multi-axial fabric yet more cost-effective compared to the high-strength and lightweight carbon fiber multi-axial fabric. While not as strong or stiff as carbon fiber, basalt fiber is a suitable intermediate composite material for various industry applications.

Code	Structure	Weight (g/m²)	Direction (g/m²)				Width (mm)
			0	90	+45	-45	
BF605BAX/450	BI-AXIAL	450	220	220	/	/	1270
BF605BAX/450	BI-AXIAL	450	/	/	220	220	1270
BF605BAX/650	BI-AXIAL	650	338	311	/	/	1270 2540
BF605TAX/980	Tri-AXIAL	980	520	/	220	220	1270 2540

Basalt Mesh and Geo-Grid

Basalt mesh and geo-grid are robust, lightweight alternatives to metal reinforcement for construction, offering enhanced efficiency and durability. Ideal for reinforcing walls, roads, and repairing transportation infrastructures like airports, runways, and highways, they simplify installation due to being 2.6 times lighter than metal. With superior longevity compared to metallic and glass-fiber options, basalt mesh and geo-grid are also eco-friendly building solutions.

Code	Weight (g/m²)	Mesh Size (mm)	Thickness (mm)	Width (mm)
BF605MG/160	160	5x5	/	1000 - 4000
BF605MG/220	220	5x5	/	
BF605MG/110	110	10x10	0.3 ~ 0.4	
BF605MG/370	370	25x25	0.8 ~ 0.9	
BF605MG/370	370	50x50	0.8 ~ 1.0	

Basalt Fiber Tape

Basalt fiber tape is a resilient material resistant to heat, aging, chemicals, and moisture, intended to substitute carbon and aramid fibers in some applications. Ideal for thermal insulation, it safeguards automotive components by managing heat in engines and exhaust systems, suitable for a wide range of vehicles and machinery.

Code	Width (mm)	Weight (g/m²)	Roll length (m)
BF606-25	25	200-2000	30/50/100
BF606-50	50		
BF606-75	75		
BF606-100	100		

Basalt Fiber Knitted Sleeve

Basalt Fiber Knitted Sleeve, composed of high-quality fibers, can endure continuous temperatures up to 760°C . It offers stellar heat resistance, chemical stability, and strength, providing thermal protection for various exhaust systems in automotive, maritime, and heavy machinery. Its flexible and adaptable nature facilitates easy installation over irregular surfaces, while its knitted design enhances fray resistance and manageability, ensuring protection for hoses, tubes, pipes, and cables against extreme heat and fire hazards.

Code	Inner Dia (mm)	Type	Inner Dia (mm)	Roll length (m)
BF607K025	25	BF607K070	70	30/50/100
BF607K032	32	BF607K076	76	
BF607K035	35	BF607K083	83	
BF607K038	38	BF607K089	89	
BF607K044	44	BF607K095	95	
BF607K048	48	BF607K102	102	
BF607K051	51	BF607K114	114	
BF607K057	57	BF607K127	127	
BF607K064	64	BF607K152	152	

Basalt Fiber Braided Sleeve

Basalt Fiber Braided Sleeve, woven from high-quality basalt yarns, offers superior electric insulation, resistance to high temperatures, chemicals, and wear. It's an optimal solution for hose, tube, pipe, and cable protection in harsh conditions within metallurgy, chemical, automotive, and aerospace industries, safeguarding against extreme heat and fire risks.

Code	Inner Dia (mm)	Wall Thickness (mm)	Roll length (m)
BF607B010	10	0.6	50
BF607B012	12	0.6	
BF607B015	15	0.6	
BF607B020	20	0.7	
BF607B025	25	0.7	
BF607B030	30	0.8	
BF607B035	35	0.8	
BF607B040	40	0.8	
BF607B045	45	0.9	
BF607B050	50	0.9	
BF607B055	55	0.9	25
BF607B060	60	0.9	
BF607B065	65	1	
BF607B070	70	1	
BF607B075	75	1.1	
BF607B080	80	1.1	
BF607B090	90	1.2	
BF607B100	100	1.2	

Basalt Chopped Strands Mat

Basalt fiber chopped strand mat (CSM) is a non-woven material comprised of basalt fibers bonded with an organic binder. It exhibits better mechanical properties, higher temperature tolerance, and greater chemical stability compared to fiberglass CSM. Eco-friendly and more durable, basalt CSM is ideal for high-performance applications in automotive, construction, and marine sectors. Its resistance to corrosion makes it superior to fiberglass mats in highly corrosive environments.

Code	Weight (g/m²)	Width (mm)	Thickness (mm)	Roll Length(m)
BF608CS/350	350	1040	0.25	Polyester Powder or PVAC Emulsion
BF608CS/450	450		0.40	
BF608CS/650	650		0.65	

Basalt Fiber Needle Felt

Basalt fiber needle felt is a heat-resistant and flexible insulator with low thermal conductivity. It can endure temperatures from -260° C up to 900° C. It can easily mold to complex shapes and is chemically stable and durable. It is great for sound insulation, thermal preservation, fireproofing, filtration, and exhaust systems. It is noncombustible and suitable for fire-resistant insulation in electrical and underground applications.

Code	Thickness (mm)	Density (kg/m³)	Width (mm)	Roll Length (m±5%)
BF608N/4	4	100 - 180	1000/1500	50
BF608N/6	6			40
BF608N/8	8			30
BF608N/10	10			30
BF608N/12	12			20
BF608N/15	15			20
BF608N/20	20			15
BF608N/25	25			10

Basalt Fiber Veil

Basalt Fiber Veil, crafted using wet-laid basalt chopped fibers, is a versatile material tailored for enhancing surfaces in GRP pipe production, storage tank fabrication, hand lay-up, and compression molding processes, offering improved FRP finishes.

Code	Weight (g/m²)	Thickness (mm)	Width (mm)	Roll Length (m)
BF610V/20	20	0.16	300-4000	100 - 500
BF610V/30	30	0.18		
BF610V/40	40	0.20		
BF610V/60	60	0.25		
BF610V/80	80	0.26		
BF610V/100	100	0.55		

Basalt Fiber Rebar

Basalt fiber rebar is a non-conductive, non-magnetic reinforcement material with excellent electrical insulation, ideal for protecting sensitive electronic equipment and ensuring uninterrupted accuracy. It's suitable for MRI rooms, seismic stations, and electromagnetic interference-sensitive applications, like military and communication facilities. This rebar is chemically inert, ensuring compatibility with concrete without bending deformation, enhancing safety by preventing electrical accidents and fires in buildings.

Code	Nominal Diameter (mm)	Nominal Cross section Section Area(mm²)	Weight (g/m)	Roll Length (m)
BF611R/4	4	12.57	25	100 ~ 500
BF611R/6	6	28.27	56	
BF611R/8	8	50.27	100	
BF611R/10	10	78.54	158	
BF611R/12	12	113.10	227	
BF611R/16	16	201.10	405	
BF611R/19	19	295.50	592	According to customers’ requested
BF611R/22	22	382.73	768	
BF611R/25	25	537.90	1076	

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MAIN APPLICATION AREAS OF HIGH SILICA GLASS



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Here is an introduction to the characteristics and applications of high silica glass products:

High Silica Glass Fiber

High silica glass fiber is a special fiber with SiO₂ content of more than 96%, which can be used at 1000° C for a long time and the instantaneous temperature can exceed 1450° C. It has excellent thermal resistance, ablation resistance, high dielectric strength, acid resistance and other properties. Widely used in the fields of fire extinguishing and rescue, new energy applications, high-temperature insulation, metal melt filtration, and other fields, especially in the military, national defense, aviation, and aerospace industries, quality can reach international advanced levels stably.

Thermal Resistance

High silica glass fiber has outstanding thermal resistance. It can withstand extremely high temperatures, often exceeding 1000° C (1832° F) without significant degradation. This makes it ideal for applications where exposure to high heat is common, such as in fire protection, insulation, and aerospace industries.

Ablation Resistance

This property of ablation resistance arises from its high silica content, typically exceeding 96%. This robust resistance to heat erosion makes it an ideal choice for applications where exposure to intense heat or flames is prevalent. Industries such as aerospace, automotive, construction, and manufacturing utilize high silica glass fiber in environments where thermal erosion is a concern, ensuring longevity and safety in various operational conditions.

High Dielectric Strength

The structure of High Silica Glass Fiber enables it to have a high dielectric strength, which is the maximum electric field that a material can withstand without experiencing electrical breakdown. This property allows it to effectively resist the flow of electrical current, making it suitable for use in high voltage applications.

Acid Resistance

High silica glass fiber demonstrates exceptional resistance to acidic environments due to high silica content, which shields the fiber from the corrosive effects of most acids. It finds extensive use in chemical processing plants, laboratories, and industrial manufacturing facilities where acids are prevalent either as part of processes or within the environment.

High Silica Continuous Yarn

High silica continuous yarn is meticulously processed from acid-treated and heat-treated glass fiber yarn. This specialized yarn finds versatile applications in weaving, sewing, bundling, and wrapping within high-temperature textiles. Renowned for its exceptional durability and thermal protection, it serves as a vital component in insulation, sealing, and industrial settings. From sleeves to sewing threads and electronic cigarette cores, this yarn offers reliability in demanding environments, providing effective heat resistance and insulation. It is mainly used in weaving, sewing, bundling, winding heating wires and heating elements, thermal insulation materials, seals, etc., such as casing, sewing thread, electronic cigarette cores.

Code	Linear Density (tex)	Tensile Strength (N)	SiO ₂ (%)	LOI (%)	TMP	Working Temperture (°C)
BC9-66	66±3.3	≥16.5	≥96	≤10	110±10%	1000
BC9-132	132±6.6	≥33				
BC9-198	198±9.9	≥49.5				
BC-9-264	264±13.2	≥66				
BC9-330	330±16.5	≥82.5				

High Silica Texturized Yarn

High silica texturized yarn is a specialized material crafted for superior heat resistance and durability in demanding industrial applications. Composed of high-quality silica fibers, this yarn is engineered to withstand extreme temperatures, reaching up to 1000° C (1832° F) continuously. Its unique texturized design enhances flexibility and thermal insulation properties, making it ideal for use in high-temperature environments such as foundries, steel mills, and glass manufacturing facilities. The texturized structure of the yarn promotes enhanced surface area coverage, facilitating efficient heat dispersion and providing optimal protection against thermal radiation and molten metal splash. With its exceptional heat resistance and versatility, high silica texturized yarn is a reliable choice for applications requiring reliable thermal insulation and protection against intense heat exposure.

Code	Linear Density (tex)	Tensile Strength (N)	SiO ₂ (%)	LOI (%)	Working Temperture (°C)
BC9-600T	600±30	≥ 54	≥ 96	≤10	1000
BC9-1200T	1200±60	≥ 108			
BC9-2400T	2400±120	≥ 216			

High Silica Ropes

High silica ropes, including braided round and square ropes, as well as twisted ropes, are engineered for optimal performance in extreme heat environments. These ropes are crafted from high-purity silica fibers that can endure continuous temperatures up to 1000° C (1832° F), making them ideal for thermal insulation and sealing applications in industries such as aerospace, metalworking, and energy. The variety in design—braided for enhanced strength and flexibility, and twisted for compressibility and fit—allows these ropes to adapt to various sealing and gasket needs. Their exceptional heat resistance combined with their durable construction ensures long-lasting reliability and protection in settings exposed to high temperatures and aggressive thermal cycles. High silica ropes provide an essential solution for heat management challenges in critical industrial operations.

Code	Sizes (mm)	Length (m)	Thermal Conductivity (w/mk@800°C)	Working Temperture (°C)
HSF902T(Twisted)	6/8/10/12/16/19/22/25	100/50/25	<0.14	1000
HSF902(Round)				
HSF903(Square)				

High Silica Tape

High Silica Tape is woven from high silica glass fibers, designed for high-temperature insulation, sealing, reinforcement, and insulation applications. Its production involves weaving high silica glass fibers into a durable tape form. With its exceptional heat resistance and insulation properties, the High Silica Tape offers a dependable solution for demanding conditions and primarily used for bundling and wrapping in high-temperature and insulation scenarios.Whether for thermal insulation in machinery or sealing applications.

Code	Thickness (mm)	Width (cm)	Weight/Meter (g/m²)	Length (m)	SiO ₂ (%)	Working Temperture (°C)
HSF906-0.65	0.65±0.06	25/50/75/100	650±65	30~50	≥96	1000
HSF906-1.0	1.0±0.1		1000±100			
HSF906-1.6	1.6±0.16		1600±160			
HSF906-3.0	3.0±0.3		2500±250			

High Silica Fabrics

High Silica Fabrics is a kind of heat-resistant,insulating and soft special fiberglass fabric with easy processing ,versatility, heat resistance, insulation, softness and can be used as high temperature resistant, ablation resistant, heat insulation and heat preservation material. Additionally,it could withstand temperatures exceeding 1000° C (1832° F) without significant degradation and the instantaneous heat resistance temperature can reach 1450° C. Our High Silica Fabrics is widely for heat preservation and protection, sealing, fireproof materials, such as welding curtains, fire shutters, fire blankets, fireproof clothing, heat insulation curtains, steam pipeline heat insulation, metallurgical casting insulation protection, kiln and high temperature industrial furnace protective cover, wire and cable fire insulation, etc.

Code	Area Weight (g/m²)	Density(ends/25mm)		Thickness (mm)	Tensile Strength(N/25mm)		SiO ₂ (%)	LOI (%)
		Warp	Weft		Warp	Weft		
HSF300	300±30	37±3	30±3	0.32±0.03	≥1000	≥800	≥96	≤10
HSF400	420±50	32±3	28±3	0.40±0.04	≥1200	≥1000	≥96	≤10
HSF600	600±50	50±3	35±3	0.58±0.06	≥1700	≥1200	≥96	≤10
HSF900	900±100	37±3	30±3	0.82±0.08	≥2400	≥2000	≥96	≤10
HSF1000	1000±100	40±3	33±3	0.95±0.10	≥2700	≥2000	≥96	≤10
HSF1100	1100±100	48±3	32±3	1.00±0.10	≥3000	≥2400	≥96	≤10
HSF1350	1350±100	40±3	33±3	1.20±0.12	≥3200	≥2500	≥96	≤10
HSF260S	240±20	35±2.5	35±2.5	0.26±0.026	≥260	≥190	≥96	≤2
HSF400S	420±50	33±3	29±3	0.45±0.05	≥350	≥300	≥96	≤2
HSF600S	600±50	52±3	36±3	0.65±0.10	≥400	≥300	≥96	≤2
HSF1100S	1100±100	50±3	32±3	1.05±0.10	≥700	≥400	≥96	≤2
HSF1350S	1350±100	52±3	28±3	1.20±0.12	≥750	≥400	≥96	≤2
HSF600HT	600±50	52±3	36±3	0.65±0.10	≥800	≥600	≥96	≤5
HSF1100HT	1100±100	50±3	32±3	1.05±0.10	≥900	≥700	≥96	≤5

High Silica Coating Fabrics

High silica coating fabrics, derived from high silica fabrics, incorporates silicone rubber, aluminum foil, vermiculite, or other materials through coating or lamination processes. This high-performance, versatile composite material finds wide applications in aerospace, chemical, petroleum, large-scale power generation, mechanical, metallurgical, electrical insulation, construction, and transportation industries. Crafted with precision, it boasts exceptional thermal insulation, durability, and resistance to various environments. It serves as a vital solution in diverse industrial settings and used for spacecraft, chemical processing equipment, power generation turbines, machinery components, metallurgical furnaces, electrical insulation systems, building infrastructure, and transportation components.

Code	Area Weight (g/m²)	Thickness (mm)	Tensile Strength(N/25mm)		SiO ₂ (%)	LOI (%)	Coating/Lamination
			Warp	Weft			
HSF400-**	420±50	0.40±0.04	≥1200	≥1000	≥96	≤10	Vermulite (V) Aluminum (AL) Silicone Rubber (LSR) Polyurethane resin(PU) Acrylic resin (AC) Adhesive Backing(AD)
HSF600-**	600±50	0.58±0.06	≥1700	≥1200	≥96	≤10	
HSF1100-**	1100±100	1.00±0.10	≥3000	≥2400	≥96	≤10	
HSF400S-**	420±50	0.45±0.05	≥350	≥300	≥96	≤2	
HSF600S-**	600±50	0.65±0.10	≥400	≥300	≥96	≤2	
HSF1100S-**	1100±100	1.05±0.10	≥700	≥400	≥96	≤2	
HSF600HT-**	600±50	0.65±0.10	≥800	≥600	≥96	≤5	Adhesive Backing(AD)
HSF1100HT-**	1100±100	1.05±0.10	≥900	≥700	≥96	≤5	

High Silica Texturized Fabrics

High Silica Texturized Fabrics is a fire-resistant fabric woven from high silica bulk yarn. It boasts advantages over traditional high silica fabrics, such as increased thickness, lightweight, and outstanding insulation properties. With a thickness of up to 4mm, it's primarily used for external insulation and thermal protection of various machinery and pipelines. It can be processed into welding blankets, fire curtains, firefighting suits, gloves, shoe covers, insulation jackets, and blankets. This innovative product provides superior heat insulation, making it essential for industrial applications requiring fire protection and thermal insulation, processing welding cloth, fire curtain, fire-proof clothing, fire-proof gloves, fire-proof shoe covers, heat-proof covers, heat-proof quilts, etc.

Code	Thickness (mm)	Mass (g/m²)	Width (cm)	Density(ends/25mm)		SiO ₂ (%)	LOI (%)	Working Temperture (°C)
				Warp	Weft			
HST1300	2.0±0.8	1300±130	100	14.0±1.0	7.0±1.0	≥96	≤10/3	1000
HST1800	3.0±1.0	1800±180	100	11.0±1.0	5.0±1.0			

Medium Silica Fabric

Medium silica fabric is an advanced textile material engineered for robust performance in challenging industrial environments. Composed of silica fibers with a silica content typically 70%, this fabric is designed to offer superior heat resistance and durability compared to standard fiberglass materials. It effectively operates at continuous service temperatures up to 800°C, making it an excellent choice for thermal insulation and protective covering applications.

The medium silica fabric is notable for its enhanced flexibility and strength, which allow it to be easily fabricated and applied to a variety of shapes and surfaces. This versatility makes it ideal for use in industries such as automotive, aerospace, and industrial manufacturing, where it serves as a critical component in fire barriers, welding curtains, and heat shield components. The fabric's inherent properties ensure it remains effective against thermal shocks and most chemical corrosions, providing a reliable solution for high-performance insulation needs.

Code	Standard Width (cm)	Working Temperature (°C)	Weight (g/m²)	SiO ₂ (%)	Thickness (mm)
MSF400-100	100	800	600	70±5	0.4
MSF450-100	100		600		0.5
MSF400-152	152		400		0.4
MSF600-92	92		600		0.7
MSF600-100	100		700		0.7
MSF600-152	152		700		0.7
MSF1100-92	92		1100		1.3
MSF1100-100	100		1200		1 3
MSF1100-152	152		1200		1.3

High Silica Mesh

High silica mesh is a special lass fiber mesh fabric with heat resistance, insulation, softness and good adsorption. The mesh size is 1.5-2.5mm, The performance of resistance to metal melt erosion, low gas generation, good residue filter effect, easy to use and so on. It can be used in a 1000C environment for a long time, and the instantaneous heat resistance temperature can reach 1450° C. It is mainly used to make high temperature resistant casting filter mesh, casting filter specia-shaped mesh, and can also be used as a composite substrate for high temperature resistant materials.

Code	Mass (g/m²)	Density(ends/25mm)		Mesh Size (mm)	Width (cm)	Tensile Strength(N/25mm)		SiO ₂ (%)	LOI (%)
		Warp	Weft			Warp	Weft		
HSF7×7	135±10	8.0±0.6	8.0±0.6	2.5±0.2	45-150	≥70	≥80	≥96	≤2
HSF8×8	160±10	9.0±0.6	9.0±0.6	2.0±0.2	45-150	≥70	≥80		
HSF10×10	160±10	10.0±0.5	10.5±0.5	1.5±0.3	45-150	≥70	≥80		
HSF2.5	410±20	6.0±0.6	6.0±0.6	2.5±0.2	45-150	≥100	≥100		
HSF2.0	460±20	6.5±0.6	6.5±0.6	2.0±0.2	45-150	≥100	≥100		
HSF1.5	490±20	7.0±0.7	7.0±0.7	1.5±0.3	45-150	≥100	≥100		

High Silica Sleeve

The High Silica Sleeve is woven from high silica fibers, offering smoothness, flexibility, high temperature resistance, fire resistance, and insulation. It sustains operations in 1000° C environments and protects pipelines like oil tubes, cables, and pipes in bare-fire conditions. Crafted for durability and reliability, it's indispensable in industries requiring high-temperature insulation and protection.Crafted for durability and reliability, it's indispensable in industries requiring high-temperature insulation and protection and applications include metal filtration, high-temperature gas dust collection, liquid filtration, high-temperature combustion materials, insulation sealing, welding heat protection, automotive mufflers, and thermal and gas filtration.

Code	Internal Diameter (mm)	Wall Thickness (mm)	Weight (g/m)	Roll Length (mtr)
HSF907-005	5.0±1.0	0.7±0.2	12±5	30
HSF907-008	8±1.6	1.6±0.2	18±5	
HSF907-010	10.0±2.0	1.6±0.2	50±5	
HSF907-015	15.0±3.0	1.6±0.2	65±10	
HSF907-020	20.0±4.0	1.6±0.2	85±10	
HSF907-025	25.0±5.0	1.6±0.2	90±10	
HSF907-030	30.0±6.0	1.6±0.2	125±13	
HSF907-035	35±7.0	1.6±0.2	140±14	
HSF907-040	40.0±10.0	1.6±0.2	170±17	
HSF907-050	50.0±10.0	1.6±0.2	180±20	
HSF907-064	64.0±10.0	1.6±0.2	255±26	
HSF907-076	76.0±10.0	1.6±0.2	305±31	
HSF907-080	80.0±10.0	1.6±0.2	320±32	
HSF907-086	86.0±10.0	1.6±0.2	345±35	
HSF907-090	90.0±10.0	1.6±0.2	360±36	
HSF907-096	96.0±10.0	1.6±0.2	380±38	
HSF907-120	120.0±10.0	1.6±0.2	480±48	

High Silica Needle Felt

High silica needle felt is a premium grade material designed for exceptional thermal insulation and protective applications, particularly in environments demanding high-temperature resistance. This material is composed of high silica fibers, capable of withstanding continuous temperatures up to 1000° C (1832° F), making it ideal for use in industries like aerospace, automotive, and heavy machinery. The needle-felt construction enhances its density and structural integrity, allowing for effective heat barrier properties and durability against thermal shock. Its inherent non-combustible nature and excellent thermal insulation capabilities ensure safety and efficiency in various high-heat settings. High silica needle felt is also customizable in terms of thickness and density, catering to specific industrial requirements and providing versatility for thermal management solutions in high-stress environments.

Code	Size (mm)			Thermal Conductivity (w/mk@800°C)	Working Temperture(°C)	Density (kg/m³)	Weight (g/m²)
	Thickness	Wdith	Length				
HSF908	5/10/12/15/20/25	1000/1520	10/20/30/50	<0.14	1000	130~180	650~4500

High Silica Sewing Thread

High silica sewing thread is a specialized industrial product crafted from high-strength, high silica twisted yarn, which is treated with PTFE (polytetrafluoroethylene) dispersion to enhance its performance and durability. This thread is designed to retain its integrity in extreme conditions, with a silica content typically above 96%, allowing it to withstand continuous temperatures up to 1000° C and short-term exposure up to 1650° C. The PTFE coating not only improves the thread's chemical resistance, particularly against acids and alkalis, but also enhances its lubricity, making it easier to sew and less prone to breaking under tension. Ideal for high-temperature industrial applications, high silica sewing thread is used extensively in the manufacturing of fireproof garments, heat-resistant fabrics, and aerospace and automotive components, where reliability and resistance to harsh environments are paramount.

Code	Diameter (mm)	Linear Density (tex)	Tensile Strength (N)	SiO ₂ (%)	Moisture Content (%)	LOI (%)	Working Temperture (°C)
HCT9-200SB	0.45±0.05	200+20	≥40	≥96	≤3	18.0±2.0	1000
HCT7-216SB	0.45±0.05	216+20	≥54				

High Silica Vehicle Fire Blanket

The Vehicle Fire Blanket is a high-performance safety tool designed for extinguishing vehicle fires, including those in cars, SUVs, Land Cruisers, and particularly in electric vehicles and vehicles with solar panels. This blanket is made from a robust, high-tensile, and tear-resistant fabric, which is lightweight at 400gsm and coated with silicone on both sides to enhance its resistance to high temperatures and flames. Engineered to control and contain electric car fires effectively, it deprives oxygen, mitigates smoke and toxic fumes, and contains fires quickly to prevent further damage.

Key features include its ability to withstand temperatures up to 1200° C/2200° F for over 50 hours, compliance with ISO EN 13501-1 & ASTM D6413 standards, and reusability with easy cleaning for prolonged use. The blanket's simple deployment, facilitated by color-coded loops for quick identification, makes it a vital safety tool that not only safeguards vehicles but also prevents secondary damage to the surroundings. Available in customizable sizes, it suits various vehicle types, from small cars to large pick-ups and even includes options for light electric vehicles like e-scooters and e-bikes.

Code	Size (m)	Thickness (mm)	Weight (Kg)	Working Temperture (°C)
VFB1100-3X4	3×4	0.55±0.05	6.6±0.6	1100
VFB1100-6X8	6×8	0.55±0.05	26.5±2.5	
VFB1100-6X9	6×9	0.55±0.05	30±3	
VFB1100-10X10	10×10	0.55±0.05	55±5	

High Silica Chopped Strands

High silica chopped strands is cut and processed by high-silicon glass fiber yarn, known for its high temperature resistance, ablation resistance and corrosion resistance. It has gradually substitute for asbestos and ceramic fibers and becomes the main thermal insulation material. These chopped strands are composed primarily of silica and offer remarkable resistance to extreme temperatures, making them invaluable across various industries. High silica chopped strand can be directly used as insulation filling material, to produce high-silica needled felt and high-silica wet-laid felt and as a reinforcing material mixed with organic resin to make ablation resistant bodies, such as missile heat insulation cover etc.

Code	Filament Diameter (μm)	Length(mm)	Moisture Content (%)	LOI (%)	SiO ₂ (%)	Working Temperture (°C)
BCT7-18-3/9	7.0±1.1	3-9	≤1	≤3	≥96	1000
BCT9-18-3/9	9.0±2.0	3-9	≤1	≤3		
BC9-66-50/100	9.0±3.0	50-100	≤7	≤10		




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MAIN APPLICATION AREAS
OF QUARTZ FIBER



Here is an introduction to **the characteristics and applications of quartz fiber** products:

High Temperature Resistance

Quartz fiber has exceptional heat resistance and can withstand temperatures up to 1100° C (2012° F) without significant loss in mechanical properties. This makes it suitable for applications in high-temperature environments, such as furnace insulation and aerospace components.

Excellent Chemical Stability

Quartz fiber exhibits excellent resistance to a wide range of chemicals, including acids, alkalis, and organic solvents. It is unaffected by most corrosive substances, making it a reliable choice for applications in chemical processing, laboratory equipment, and harsh industrial environments.

Low Thermal Expansion

Quartz fiber has a very low coefficient of thermal expansion, meaning it expands and contracts minimally with temperature changes. This characteristic makes it dimensionally stable even in extreme temperature variations, making it useful for applications where thermal stability is essential, such as optical fiber communication systems and precision instruments.

Good Electrical Insulation Properties

Quartz fiber is a non-conductive material, providing excellent electrical insulation properties. It has low dielectric constant and loss tangents, making it suitable for high-frequency applications, such as telecom cables, electric insulation, and electronic components.

Quartz Fiber Wool

Quartz fiber wool is a high-purity, high-temperature insulating material distinguished by its ability to withstand continuous exposure to temperatures up to 1000° C, excellent thermal insulation with low thermal conductivity, and significant chemical and thermal shock resistance. Compared to other high-temperature fiber wools, it demonstrates superior chemical stability, high tensile strength, and outstanding electrical insulating properties, albeit at a higher cost. It is often chosen for applications that require exceptional performance in extreme conditions, balancing its premium attributes against other fibers like ceramic or alumina-based products, which may be more cost-effective but with lower temperature resistance and possibly higher bio-solubility concerns.

Code	Fiber Diameter(μm)	SiO2 Content(%)	Packing(g/bag)	Slag ball content(%)
QZ100/3	1-3	99.95	10/50/100/250	≤ 1.0
QZ100/5	3-5			≤ 1.0
QZ100/9	5-9			≤ 4.0
QZ100/14	9-14			≤ 4.0

Quartz Fiber Twisted Yarn

Quartz Fiber Twisted Yarn is crafted from continuous high-purity quartz filaments (SiO₂ content ≥ 99.95%) with a filament diameter of 7-9μm, assembled into strands and processed with varying levels of twist and ply. This material boasts superb properties including high temperature resistance, ablation resistance, low heat conduction, anti-thermal shock capability, excellent dielectric properties, and chemical stability. It finds applications in industrial furnace linings, high temperature seals, cables, filtration in aggressive environments, thermocouple insulation, satellite thermal protection, automotive exhaust insulation, radomes, electromagnetic windows, and stealth materials for aerospace and defense usage.

Code	Process Parameters	Linear Desnsity(Tex)	Twist(T/M)	Fiber Diameter(μm)
QZ101T/51	25*2	51	70/140	(7.5-13.0) ±1.0
QZ101T/67	33*2	67		
QZ101T/95	32*3	95		
QZ101T/133	33*4	133		
QZ101T/190	33*6	190		
QZ101T/220	55*4	220		
QZ101T/267	33*8	267		

Hollow Quartz Fiber Yarn

Hollow Quartz Fiber Yarn is same as same as quartz fiber yarn except its hollow filaments. With the hollow filaments, quartz fiber yarn g ains much better properties in lower density, higher electrical conductivity, better wave permeability, more excellent dieletrical property and heat insulation.

Code	Process Parameters	Linear Desnsity(Tex)	LOI(%)	Fiber Diameter(μm)
QZ101H/95	33*3	95	1.0±0.2	9-12
QZ101H/195	33*6	195		
QZ101H/495	165*3	495		

Quartz Fiber Twistless Roving

Quartz fiber roving is a collection of continuous quartz filaments, gathered into a bundle, known for its remarkable high-temperature resistance, chemical stability, and excellent dielectric properties compared to other fiber materials. Quartz fiber roving possesses a unique combination of high tensile strength and low density, making it significantly lighter than glass fiber and more thermally stable than carbon fiber over a broader temperature range. With a silica (SiO₂) content typically above 99.9%, it outperforms most other fibers in terms of thermal and chemical inertness. This makes quartz fiber roving especially suited for applications requiring durability in extreme conditions, such as aerospace, defense, and high-performance industrial uses.

Code	Process Parameters	Linear Desnsity(Tex)	Fiber Diameter(μm)
QZ101R/267	267	33*8	(7.5-13.0)±1.0
QZ101R/400	400	33*12	
QZ101R/667	667	33*20	
QZ101R/640	640	80*8	
QZ101R/960	960	80*12	
QZ101R/1600	1600	80*20	

Quartz Fiber Chopped Strands

Quartz fiber chopped strands are short, cut lengths of quartz fibers that exhibit superior thermal resistance, chemical inertness, and excellent electrical insulating properties when compared with other fiber materials. With high silica content, they maintain structural integrity at temperatures where glass fibers would soften and carbon fibers may lose their mechanical properties. Quartz chopped strands are typically used to reinforce composites for high-temperature applications in industries like aerospace, electronics, and specialized manufacturing, offering a unique balance of lightweight, high-strength, and long-term performance under challenging conditions.

Code	Length(mm)	Linear Desnsity(Tex)	Fiber Diameter(μm)
QZ101CS/3	3	33/80	7.5±1.0
QZ101CS/6	6		
QZ101CS/12	12		

Quartz Fiber Sewing Thread

Quartz fiber sewing thread is known for its exceptional high-temperature resistance, enduring up to 1050° C without significant degradation, surpassing other high-temp threads like aramid, fiberglass, or ceramic. It's ideal for aerospace, automotive, and industrial applications requiring extreme heat resistance, such as insulation blankets and protective clothing. Additionally, quartz thread maintains tensile strength at high temperatures and offers excellent electrical insulation properties.

Code	Diameter(mm)	Linear Desnsity(Tex)	Breaking Strength(daN)	Binder Content(%)
QZ101ST/12	0.36	133(33*2*2 Z160)	8	0.5
QZ101ST/18	0.43	205(33*2*2 Z160)	13	
QZ101ST/24	0.51	272(33*2*4 Z160)	18	
QZ101ST/12	0.36	168(33*2*2 Z160)	6.8	PTFE: 20%
QZ101ST/18	0.43	250(33*2*3 Z160)	11.2	
QZ101ST/24	0.51	340(33*2*4 Z160)	15.6	

Quartz Fiber Fabric

Quartz fiber fabric, woven from high-purity quartz fibers, offers exceptional heat resistance, chemical stability, and mechanical strength. It finds diverse applications in aerospace, shipbuilding, and chemical industries for insulation, soundproofing, and corrosion resistance. In aerospace, it plays a vital role in thermal shielding systems and heat-resistant components, while in chemical industries, it serves as a reliable corrosion-resistant material for equipment and pipelines.

Code	Thickness(mm)	Weave	Warp x Weft(count/cm)	Weight(g/m²)	W(mm)*L(m)
QZ105/100-100	0.10	Plain	18*18	110	1000*100
QZ105/120-100	0.12	2/2Twill	12*12	128	1000*100
QZ105/140-100	0.14	Plain/Twill	16*14	165	1000*100
QZ105/200-100	0.20	Plain	12*10	210	1000*100
QZ105/220-100	0.22	8Satin	16*16	240	1000*50
QZ105/280-100	0.28	8Satin	36*20	280	1000*50
QZ105/500-100	0.50	Plain	10*10	350	1000*50

Quartz Fiber Tape

Quartz fiber tape is made by quartz fiber yarn woven into a tape with woven structure of plain. It offers excellent thermal insulation, high temperature resistance, and mechanical strength. Commonly used for wrapping, insulating, and reinforcing applications in industries such as aerospace, automotive, and electrical. It provides insulation against heat, fire, and chemicals while enhancing structural integrity. Quartz fiber tape is utilized for thermal barrier coatings, electrical insulation, and reinforcement of composite materials, contributing to the performance and reliability of various components and systems in demanding environments.

Code	Thickness(mm)	Weaving	Weight(g/m²)	Width(mm)
QZ106/110-5	0.11	Plain	3.8	10-100
QZ106/140-5	0.14		7.86	
QZ106/200-5	0.20		4.15	
QZ106/280-5	0.28		13.5	
QZ106/500-5	0.50		23.3	

Quartz Fiber Sleeve

Quartz fiber sleeve is braided by Quartz fiber, SiO2 ≥ 99.9%. It offers exceptional thermal insulation, high temperature resistance, and chemical inertness. Commonly used as a protective covering for wires, cables, hoses, and pipes in high-temperature environments. It provides insulation against heat, flame, and abrasion while maintaining flexibility and durability.

Code	Inner Dia.(mm)	Weight(g/m)	Roll Length(m)
QZ107/0.5	0.5	0.85	50-100
QZ107/1	1	1.7	
QZ107/3	3	3.4	
QZ107/5	5	5.2	
QZ107/8	8	7.09	
QZ107/10	10	10.7	
QZ107/15	15	20.5	
QZ107/20	20	30	
QZ107/22	22	35	
QZ107/25	25	40.5	
QZ107/30	30	46.3	
QZ107/35	35	53	
QZ107/40	40	59.7	30-50
QZ107/45	45	66.5	
QZ107/50	50	74	
QZ107/55	55	83	
QZ107/60	60	90.5	
QZ107/65	65	110	
QZ107/70	70	132	

Quartz Fiber Needle Mat

Quartz fiber needle mat is a high-temperature resistant, interlocked non-woven insulation material made from quartz fibers without the need for binders, through mechanical needling. It can withstand continuous temperatures up to 1000° C, and due to its higher purity, it offers superior thermal stability and electrical insulation compared to high silica needle mats. While both are suitable for high-temperature insulation applications, the exceptional purity and structural integrity of QUARTZ FIBER needle mats may offer advantages in extreme conditions.

Code	Thickness(mm)	Density(kg/m³)	Fiber Diameter(μm)	Length x width(m x mm)
QZ108	2-25	100-180	7-9	25/50/100x1050

Quartz Fiber Felt

Quartz fiber felt is produced from 3-5 or 9-14 microns quartz fiber wool that is impregnated with an organic binder. It offers excellent thermal insulation, high temperature resistance, and chemical inertness. Commonly used as insulation material in high-temperature applications such as furnaces, kilns, and industrial equipment. It effectively retains heat, reduces energy loss, and maintains stable operating temperatures in various industrial processes. Quartz fiber felt is also utilized in aerospace, automotive, and construction industries for its lightweight and durable insulation properties, contributing to energy efficiency and safety in diverse applications.

Code	Thickness(mm)	Density(kg/m³)	Fiber Diameter(μm)	Dimension(mm)
QZ110/2	2	10-20	3-5 9-14	300*300
QZ110/4	4			450*450
QZ110/6	6			600*600
QZ110/8	8			500*1000
QZ110/10	10			

Quartz Fiber Wet-Laid Mat

Quartz fiber wet-laid mats exhibit superior thermal resistance up to 1000° C, outperforming fiberglass mats which typically withstand around 500° C-600° C. With higher chemical stability and better dielectric properties due to purer quartz fibers, these mats provide excellent electrical insulation. The production process yields a smooth and consistent mat, offering advantages in high-precision applications, and in uses requiring high-performance insulation and superior laminate surface quality.

Code	Area Weight(g/m²)	Thickness(mm)	Tensile Strength(N/50mm)	Wetting Out(s)	Width(mm)
QZ110WL/30	30	0.03	≥ 20	≤ 10	50-2500
QZ110WL/50	50	0.05	≥ 30	≤ 20	
QZ110WL/30	30	0.03	≥ 25	≤ 10	
QZ110WL/50	50	0.05	≥ 40	≤ 16	
QZ110WL/90	90	0.09	≥ 100	/	
QZ110WL/105	105	0.11	≥ 110	/	

Quartz Fiber Filter

Quartz fiber filter is composed of high-purity quartz fibers formed into a porous structure. They exhibit excellent chemical resistance, thermal stability, and mechanical strength. Commonly used in air and liquid filtration applications where high purity and durability are required, such as pharmaceutical manufacturing, environmental monitoring, and semiconductor production. Quartz fiber filters efficiently capture particles, contaminants, and impurities while maintaining consistent flow rates and minimal pressure drop. Their superior performance and reliability make them essential for critical filtration processes in various industries.

Code	Dimension(mm)	Shape	Package(p/box)	Thermal Resistance
QZ113/25	Φ: 25	Round	25/100	500-900
QZ113/47	Φ: 47			
QZ113/90	Φ: 90			
QZ113/102	Φ: 102			
QZ113/110	Φ: 110			
QZ113/150	Φ: 150			
QZ113/250*200	250*200	Rectangle		
QZ113/400*300	400*300			

Quartz Fiber Filter Cartridge

Quartz fiber filter cartridge is composed of high-purity quartz fibers arranged densely to form a filtration medium. They boast exceptional chemical resistance, thermal stability, and mechanical strength. Commonly used for liquid filtration applications in industries such as pharmaceuticals, electronics, and food and beverage. Quartz fiber filter cartridges effectively remove particles, contaminants, and impurities from liquids while maintaining high flow rates and low pressure drop. Their superior performance and durability make them ideal for critical filtration processes where purity and reliability are paramount.

Type	H/ QFCΦ32X120mm		H/ QFCΦ25X90mm		
Weight	2.0±0.2g		1.2±0.1g		
Background Values	SiO ₂	Fe ₂ O ₃	Al ₂ O ₃	CaO	MgO
	57.12	0.36	14.66	16.53	3.36
Drag force (air flow rate: 20L/nin)	14-16mmHg		16-18mmHg		
RWL	The ratio of weight loss is not more than 0.2%, baking from 60 minutes to 120 minutes at the actual temperature				
Collection efficiency	(Oil Mist: to0.3μm Oil Mist Particle)				

Quartz Fiber Textile & Combination Products

Quartz fiber textile & combination products are composed of high-purity quartz fibers woven, knitted, or combined with other materials. They exhibit exceptional heat resistance, chemical inertness, and mechanical strength. Commonly used in high-temperature applications such as thermal insulation, fire protection, and reinforcement in industries like aerospace, automotive, and construction. These products offer superior thermal and chemical stability, making them suitable for demanding environments where conventional materials may degrade.

Type	Fiber Volume Fraction	Combination Textile Density	Normal Spacing	Thread Count(cm)
3D Orthogonlity Textile	45%(Adjustable)	1.60-1.75g/cm³	4-5mm	8-15(Adjustable)
Sultured Multilayered Textile	45%(Adjustable)	1.60-1.75g/cm³	4-5mm	Same as the original fabric

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MAIN APPLICATION AREAS
OF S-GLASS



Here is an introduction to **the characteristics and applications of s-glass** products:

Tensile Strength

S-glass fibers possess a higher tensile strength than E-glass fibers. The tensile strength of S-glass is typically about 4,500 MPa (650 ksi), which is approximately 40% higher than that of E-glass, which has a tensile strength of about 3,450 MPa (500 ksi). This makes S-glass fibers more suitable for applications where high strength is critical.

Modulus of Elasticity (Stiffness)

S-glass has a higher modulus of elasticity compared to E-glass, indicating that S-glass is stiffer. S-glass’s modulus is typically around 87Gpa(12.6Msi), while E-glass has a modulus of about 72 GPa (10.5 Msi). The higher modulus means that S-glass fibers are less likely to deform under load, making them ideal for high-performance applications.

Temperature Resistance

S-glass fibers retain their high strength and modulus at higher temperatures compared to E-glass. S-glass can be used at temperatures up to about 1000° F (540°C), significantly higher than E-glass, which starts to lose its mechanical properties above 600°F (315°C). This makes S-glass a better option for applications involving high thermal loads.

Impact Resistance

S-glass has better impact resistance due to its high-energy absorption capability. This means that structures made with S-glass composites can withstand more impact before failure, which is crucial for applications such as military vehicles, aerospace, and sporting goods.

Items	Virgin Fiber Tensile Strength(MPa)	Impregnated Strand Tensile Strength(MPa)	Modulus of Elasticity (GPa)	Elongation at Break (%)
HS2	4200	3000-3400	87-91	5.3
HS4	4600	3200-3600	90-94	5.3
HS6	4800	3600-4000	92-96	5.7

S-glass Yarn

S-glass yarns offer superior performance compared to E Glass fibers. These fibers provide 30-40% higher tensile strength, 16-20% higher modulus of elasticity, 10 times better fatigue resistance, and can endure temperatures up to 100-150 degrees higher than E Glass fiber. Additionally, they boast excellent impact resistance, high ageing and corrosion resistance, and quick resin wet-out properties. With features like high tensile strength, superior temperature endurance, enhanced fatigue resistance, excellent impact resistance, and quick resin wet-out properties, In aerospace, they are used in lightweight fuselages, space structures, and rotor blades. In the marine sector, they enhance boat hulls, mast components, and underwater structures. For defense applications, S-GLASS fibers provide unmatched protection in armored vehicle panels, body armor, and military vehicle components.

Code	Tex	Twist(t/m)	Breaking Strength(N)
SC8-12×1	12	55	>7.2
SC8-24×1	24	55	>14.4
SC8-24×1×2	48	55	>28.8
SC8-24×1×3	72	55	>43.2
SC8-28×1×4	112	100	>67.2
SC9-33×1×2	66	55	>39.6
SC9-66×1	66	55	>39.6

S-glass Roving

S-glass roving, a high-performance reinforcement material made of untwisted continuous glass filaments, boasts superior tensile strength and modulus compared to E-glass. Widely applied in aerospace, automotive, marine, and sports equipment industries, it enhances the strength and durability of components such as aircraft parts, automotive body panels, boat structures, and sports gear like tennis rackets. Its versatility makes S-glass roving a key player in creating advanced composite structures across various sectors.

Tex	240	400	480	600	660	735	800	1200	1980	2400
Yield	2067	1250	1034	827	750	675	606	423	250	206

S-glass Fabric

S-glass fabrics are made of direct-sized yarns which can be compatible with epoxy or vinyl ester with out heat-cleaning process. This versatile fabric finds extensive applications in industries such as aerospace, automotive, marine, and sports equipment. Specifically engineered for use in prepreg manufacturing, laminating processes, and vacuum infusion techniques, S-glass fabric enhances the structural integrity and durability of composite components. Its compatibility with various production methods makes it an ideal choice for creating advanced composite structures with superior mechanical properties and enhanced

Code	Thickness(mm)	Count(ends/cm)		Breaking Strength(N/25mm)		Weight(g/m²)	Compatible Resin	Weaving Pattern
		Warp	Weft	Warp	Weft			
SE60A-100a	0.06	12	12	500	500	60	Epoxy	Plain
SW80B-90b	0.08	16	16	500	500	80	Vinyl	Twill
SW80B-90a	0.08	16	16	500	500	80	Epoxy	Twill
SW100A-100a	0.10	20	20	550	550	100	Epoxy	Plain
SW110C-100a	0.11	22	22	600	600	110	Epoxy	4HS
SW140B-90a	0.14	14	14	900	900	140	Epoxy	Twill
SW160C-100a	0.16	18	12	2000	400	160	Epoxy	4HS
SW180D-100a	0.18	18	18	1200	1200	180	Epoxy	5HS
SW210B-100a	0.21	16	12	1600	1350	200	Epoxy	Twill
SW210A-92a	0.21	16	12	1600	1350	200	Epoxy	Plain
SW220B-90a	0.22	18	14	1900	1600	240	Epoxy	Twill
SW220B-90b	0.21	18	14	1900	1600	240	Vinyl	Twill
SW220C-90a	0.22	18	14	2000	1600	240	Epoxy	4HS
SW220D-90a	0.22	18	14	2000	1600	240	Epoxy	5HS
SW220C-100a	0.21	18	14	1900	1600	240	Vinyl	4HS
SW280F-100a	0.25	20	18	2000	1700	280	Epoxy	8HS
SW600B-105a	0.60	14	11	3500	3000	600	Epoxy	Twill

S-glass Woven Roving

S-glass fiber woven roving is a premium composite fabric known for its elevated mechanical properties when compared to standard E-glass woven roving. With its higher tensile strength and stiffness, S-glass provides an enhanced structural performance, making it a go-to choice for industries where superior strength and reduced weight are critical. Unlike the more commonly utilized E-glass, which is sufficient for general-purpose applications, S-glass is sought after for advanced applications in aerospace, defense, marine, and high-performance sporting equipment where the demands on material durability and resistance to stress are greater. The use of S-glass woven roving facilitates the creation of components that not only bear heavier loads but also withstand harsher conditions, solidifying its role in the production of high-end, resilient composite structures.

Code	Warp and Weft	Count(ends/cm)		Weight(g/m²)	Breaking Strength(N/25mm)
SWR400	660	W3.0	F3.0	400	W2700 F2700
SWR800	1980	W2.0	F2.0	810	W4950 F4950

Multi-Axial S-glass Fiber Fabric

These fabrics are made from S-glass, which is a high-strength and high-modulus glass fiber. It is superior to E-glass, which is the most common glass fiber, in terms of tensile strength, modulus, and temperature resistance. Multi-Axial S-glass fabrics have multiple layers of fibers oriented at different angles, which are stitched or bonded together. This multi-directional reinforcement provides enhanced strength and stiffness in various directions, making it ideal for applications requiring improved impact resistance and durability.

Usages:

- High-performance sporting goods (surfboards, hockey sticks, racing shells)
- Military and defense applications (ballistic armor, helmets)
- Aerospace components (aircraft structural parts, panels)
- Marine applications (boat hulls, masts where high strength and impact resistance are critical)

Unidirectional Fabrics

Code	Warp Tex	Weft Tex	Count(ends/cm)		Weight(g/m²)	Thickness(mm)
SUDL414	660	Heat Set Yarn	W6.1	F1.6	414	0.34
SUDL173	400	Heat Set Yarn	W3.9	F1.6	173	0.14

Stitched Fabrics

Code	0°	90°	-45°	45°	Weight(g/m²)
SLT350	175	175	-	-	350
SBX600	-	-	300	300	600

Satin Weave Fiberglass Fabrics

Satin weave fiberglass fabrics are used in aerospace for their combination of high strength and smooth finishing. The unique weave pattern allows the fabric to conform to complex shapes, making it ideal for creating precise aircraft parts. This fabric provides a superior surface finishing, which is essential for aerodynamic efficiency and reduces preparation time for painting or coatings. Its excellent strength-to-weight ratio contributes to the structural integrity of the aircraft while maintaining a lightweight design crucial for high-performance aviation applications.

Code	Weaving Yarn	Count(ends/cm)	Weaving Patten	Strength (N/25mm)	Weight(g/m²)	Thickness (mm)
EW301F(7781)	EC6-68×1	22×21.5	8HS	1500×1500	295±10	0.275±0.025
EW105C(220)	EC7-22.5×1	24×24	4HS	500×450	105±5	0.090±0.009
EW150C1(120)	EC5-11×1×2	24×24	4HS	500×450	105±5	0.090±0.009
SW301F(6781)	SC9-68×1	22×21.5	8HS	1900×1800	295±10	0.275±0.025
S6W250F(6581HT)	S6C9-34×1×2	22×21.5	8HS	2500×2400	295±10	0.275±0.025

S-glass Chopped Strand

S-glass chopped strand, comprised of short S-glass fibers known for their exceptional tensile strength, is a high-performance reinforcement material.It is instrumental in reinforcing composite structures, such as aircraft components, automotive parts, and construction materials, contributing to enhanced durability and strength. Its versatility and high-performance features make S-glass chopped strand a crucial element in various applications requiring superior mechanical properties.

Resin Matrix	Filament Diameter(μm)	Chopped Length(mm)	Weight(kg/bag)
EP/UP/PE/VE/PF/PU/PP/PC/PA/ABS	8, 9	3, 6, 9, 12	20




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MAIN APPLICATION AREAS
OF ALUMINA FIBER



Here is an introduction to **the characteristics and applications of alumina fiber** products:



High Temperature Resistance

Alumina fiber demonstrates outstanding high-temperature resistance, excelling in extreme heat environments. It can withstand high temperatures of 1200-1300° C (2192° F-2372° F), makes it ideal for use in the aerospace and thermal industries, as well as for insulation and refractory materials.

High Chemical Stability

Alumina fiber possess a high level of chemical inertness, ensuring stability and durability when exposed to various corrosive substances. This characteristic enhances their performance in challenging chemical environments.

High Corrosion Resistance

Alumina fiber boasts exceptional corrosion resistance, making it highly durable in challenging environments where exposure to corrosive substances is a concern. This unique property enhances its suitability for various industrial applications, ensuring long-lasting performance and reliability.

Low Thermal Expansion

The low thermal expansion coefficient of Alumina fiber contributes to their dimensional stability under temperature variations. This property is advantageous in applications where maintaining precise dimensions is critical for optimal performance.

Continuous alumina fibers are categorized into four classes based on their composition:

Alumina continuous fibers are advanced materials capable of enduring long-term usage at temperatures between 1200-1300° C, with individual fibers measuring around 7 to 14µm in diameter and containing no organic components, ensuring safety for human health. These fibers are manufactured into a variety of products such as woven fabrics, tapes, braided ropes, sleeves, sewing threads, and more, finding applications in fireproof and heat-insulating soft pads, as well as in ceramic matrix and metal matrix composites. Exhibiting properties like high-temperature resistance, high strength, low thermal conductivity, oxidation and corrosion resistance, and minimal shrinkage under high temperatures, alumina continuous fibers are integral to fabricating next-generation advanced equipment. Their impressive performance under extreme conditions makes them suitable for use in high-temperature furnace linings, abrasive tools, insulating curtains, sintering gaskets, alloy filtration, glass production, and as insulating materials in semiconductor manufacturing, aerospace, and electrical systems, among other applications, showcasing their versatility and essential role in various high-demand settings.

F-72

ALUMINA CONTENT ≥72%

With 72% alumina content, service temperature more than 1200° C, this fiber has a soft texture conducive to textile manufacturing. Once woven and stitched, it can be fashioned into various shapes of heat-insulating textiles and is also suitable for use in composite reinforcement materials.

P-80

ALUMINA CONTENT ≥80%

Containing 80% alumina, these fibers exhibit good toughness and excellent weaving properties. They can endure long-term use in high-temperature environments, making them ideal for producing heat-resistant fabrics of various shapes, as well as for forming high-temperature resistant composites with resins and ceramics.

C-85

ALUMINA CONTENT ≥85%

With an alumina content of 85%, this fiber can withstand long-term use at 1300° C without losing strength. It is especially suited for ceramic matrix composite applications. Ceramic products made from this material offer the best resistance to high-temperature thermal shock and creep, allowing for long-term use in high-temperature, oxygen-rich environments.

M-99

ALUMINA CONTENT ≥99%

The 99% alumina content makes this fiber suitable for metal matrix composite applications. It has the best room temperature strength, and the high alumina content effectively controls interfacial effects in materials. It combines well with reactive metals, and products made from this fiber using filament winding or lay-up methods are lightweight and high-strength metal matrix composites.

Property	Unit	F-72	P-80	C-85	M-99
Chemical Composition	Wt.%	72%Al ₂ O ₃ -28%SiO ₂	80Al ₂ O ₃ -20SiO ₂	85%Al ₂ O ₃ -15%SiO ₂	>99Al ₂ O ₃
Melting Point	°C	1800	1850	1850	2050
Continuous Use Temperature	°C	1200	1250	1300	1000
Single Filament Diameter	µm	7-10	10-12	10-12	12-14
Tex/Number of Filaments	g/1000m	60-90/400 100/500	115/500	150/500	160/750 140/400
Crystal Phase	/	γ-Al2O3	γ/δ-Al2O3+Mullite	α-Al2O3+Mullite	α-Al2O3
Density	g/cm³	2.9	3.0	3.1	3.5
Single Filament Tensile Strength (Gauge Length 25.4mm)	GPa	1.9	2.0	2.2	2.6
Single Filament Modulus	GPa	184	215	235	330

Alumina Fiber Braided Rope

Alumina Fiber Braided Ropes are high-performance ropes crafted from alumina fibers using advanced braiding techniques. With exceptional strength, flexibility, and resistance to high temperatures, they find versatile applications across industries. These include thermal insulation in furnaces, fire protection, high-pressure seals, electrical insulation, mechanical reinforcement,expansion joints, and thermal pads for insulation purposes. Alumina fiber ropes offer superior temperature resistance compared to glass fiber and ceramic fiber counterparts, making them ideal for use in demanding environments requiring strength, temperature resistance, and durability.

Code	Diameter (mm)	Weight (g/m)	Length Per Roll (m)
F172-1	1	1.7	50/100
F172-2	2	3.7	
F172-3	3	5.4	

Alumina Fiber Woven Fabric

Alumina fiber woven fabrics, made from high-purity aluminum oxide (Al2O3) fibers, are prized for their exceptional high-temperature resistance (up to 1200° C), thermal stability, low thermal conductivity, and excellent chemical resistance. These characteristics make them ideal for demanding applications requiring superior thermal insulation and durability, such as in furnace linings, thermal barriers, and protective clothing for high-temperature environments. Their ability to maintain performance under extreme conditions makes alumina fiber fabrics indispensable in industries like metallurgy, aerospace, and manufacturing, where they provide energy efficiency, protection, and enhanced safety.

Code	Weave Type	Weight (g/m²)	Thickness (mm)	Length Per Roll (m)
F175MP-180	Mesh Plain	170	0.15	25/50
F175P/T/S-240	Plain/Twill/Satin	235	0.18	
F175P/T/S-270	Plain/Twill/Satin	265	0.22	
F175P/T/S-320	Plain/Twill/Satin	315	0.30	
F175P/T/S-400	Plain/Twill/Satin	395	0.40	
F175T/S-480	Twill/satin	475	0.48	
F175T/S-560	Twill/satin	550	0.54	
F175T/S-640	Twill/satin	630	0.62	
F175T/S-840	Twill/satin	830	0.75	
C175T/S-340	Twill/satin	325	0.28	
C175T/S-540	Twill/satin	530	0.51	
C175T/S-600	Twill/satin	600	0.62	
C175T/S-810	Twill/satin	810	0.78	

Alumina Fiber Woven Tape

Alumina fiber tape is woven using high-strength alumina fibers, meticulously woven to meet varying customer demands. Tailored with different yarn specifications and weaving techniques suitable for diverse usage temperatures and conditions, it boasts a continuous operating temperature of approximately 1200-1300° C. Notably, it exhibits outstanding resistance to molten metal corrosion. This product finds application in high-temperature environments for thermal insulation, heat preservation, sealing, electrical insulation, sound absorption, and filtration.

Code	Yarn (Tex)	Width (mm)	Yarn Count (ends/cm)		Weaving Type	Thickness (mm)	Weight (g/m)	Length Per Roll (m)
			Warp	Weft				
F176-10	100	25	5	5	Plain/Twill/Satin	0.12-0.16	10	20/50/100
F176-24	100	50	6	6		0.16-0.18	12	
C176-15	100	25	8	8		0.18-0.22	16	
F176-24	150	50	6	6		0.20-0.25	18	
C176-15	150	25	8	8		0.25-0.30	24	
F176-24	150	50	10	10		0.35-0.40	30	

Alumina Fiber Braided Sleeve

Alumina Fiber Braided Sleeve is made using innovative continuous alumina fiber yarns and optimized braiding techniques. It boasts advantages such as lightweight construction, low heat capacity, excellent thermal insulation and heat resistance, as well as superior fire resistance. Additionally, it exhibits stable chemical properties, corrosion resistance, and oxidation resistance. With outstanding features including high-pressure resistance, high-temperature resistance, and electrical insulation, it finds application in thermal protection and sealing for various pipelines. Moreover, it can be combined with other materials to create gasket seals.

Code	Yarn (Tex)	Inner Diameter (mm)	Weight (g/m)	Length Per Roll (m)
F177-1	80	1.4	1.6	25/50/100
F177-4	100	4	16	25/50/100
F177-10	100	10	18	25/50
F177-15	100	15	36	25/50
F177-20	100	20	50	25/50
F177-35	100	35	90	25/50
F177-50	100	50	135	25/50
F177-60	100	60	146	25/50

Alumina Fiber Blanket

Alumina Fiber Blanket, produced from optimized aluminum oxide short fibers using a proprietary needle-punching process. This physical method ensures an organic-free composition, enhancing tensile strength through dual-sided needle-punching. With a temperature resistance up to 1500° C (1600° C maximum), our blanket excels in various atmospheres, maintaining resilience and flexibility without requiring special protection. Key features include outstanding thermal reflectivity, low heat storage, minimal linear expansion, and high tensile strength. It also resists wind erosion, excelling in high-temperature flexibility, heat shock, and chemical stability. Applications span kiln linings, high-temperature filtration, sealing gaskets, catalytic converter substrates, to sound insulation, versatile and robust.

Code	F178				
Classification Temperature	1600°C				
Long-term Service Temperature	1500°C				
Chemical Composition (%)	Al ₂ O ₃	71-73			
	SiO ₂	27-29			
	Al ₂ O ₃ +SiO ₂	>99			
Thermal Conductivity (W/(m·K))	600°C	0.064			
	800°C	0.094			
	1000°C	0.169			
	1300°C	0.217			
24-Hour Heat Shrinkage (%)	1300°C	0.4			
	1500°C	0.9			
Specific Heat (kJ/(kg·K))	1090°C	1.315			
Fiber Diameter (μm)		5-7			

Thickness / Bulk Density (mm/Kg/m³)	Weight (g/m²)	Length (mm) × Width (mm)			
8/96	768	3600×610	7200×610	10000×610	12000×610
8/128	1024	3600×610	7200×610	10000×610	12000×610
10/128	1280	3600×610	7200×610	10000×610	12000×610
10/150	1500	3600×610	7200×610	10000×610	12000×610
12.5/96	1200	3600×610	7200×610	10000×610	12000×610
12.5/128	1600	3600×610	7200×610	10000×610	12000×610
12.5/150	1875	3600×610	7200×610	10000×610	12000×610
25/96	2400	3600×610	7200×610	--	--
25/128	3200	3600×610	7200×610	--	--
50/96	4800	3600×610	7200×610	--	--
50/128	6400	3600×610	7200×610	--	--

Alumina Fiber Mat

Alumina fiber Mat, a non-woven product crafted through spray and electrostatic spinning, yields a lightweight, organic-free material resistant to smoke or ignition at high temperatures. With a remarkable long-term serviceability up to 1500° C (max 1600° C), it retains resilience, strength, and flexibility in various atmospheres. Ranging from 0.2 to 1mm in thickness, the Mat excels in processability, finding significant market potential in high-temperature composite materials. Notable features include exceptional heat stability, minimal linear change, low slag content, superior fire resistance, and excellent thermal and mechanical properties. Its versatile applications span high-temperature tapes, resin/ceramic composites, aerospace thermal protection, fire isolation in battery casings, sound insulation, and high-temperature sealing and filtering materials.

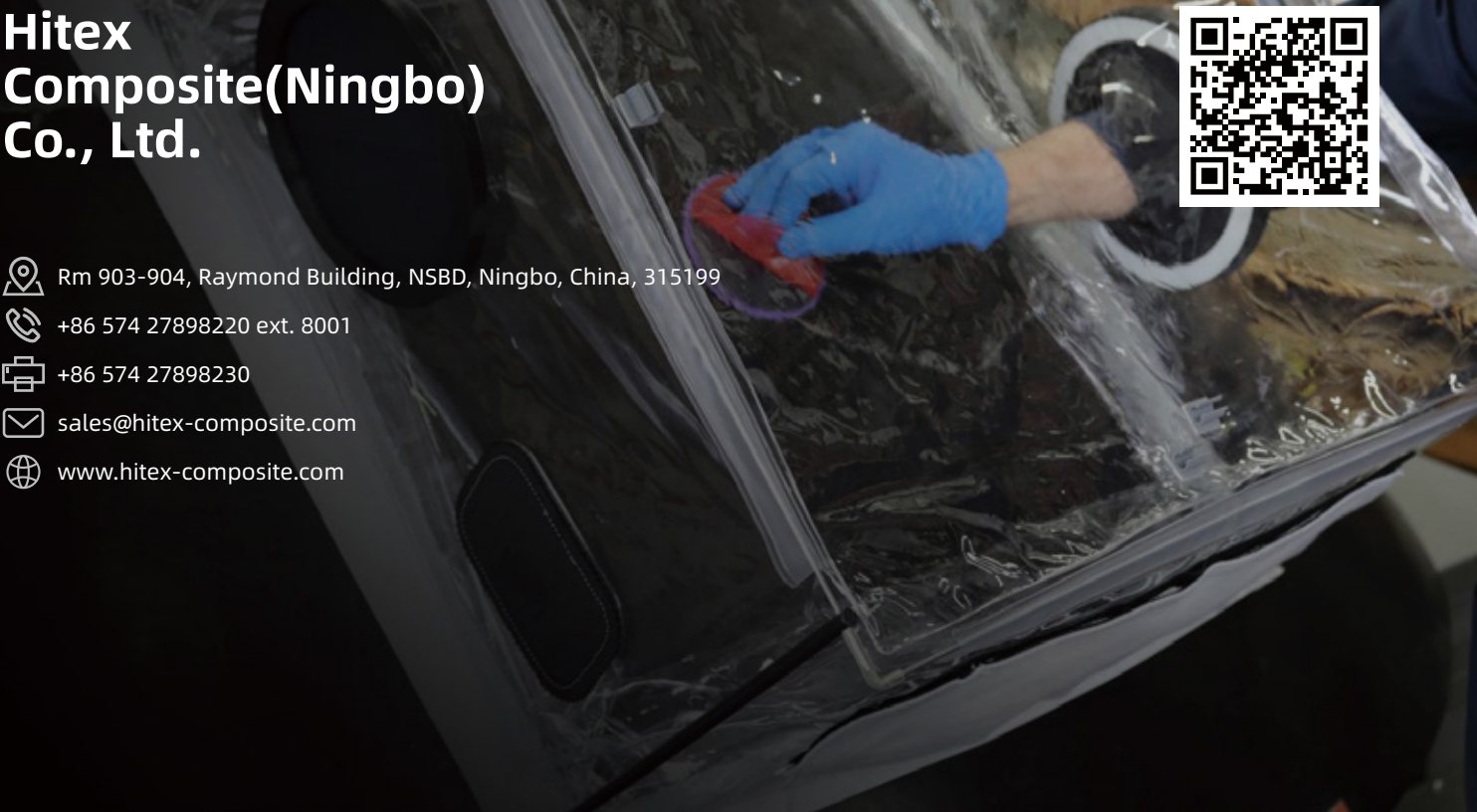
Code	F178M	
Classification Temperature	1600°C	
Long-term Service Temperature	1500°C	
Chemical Composition (%)	Al ₂ O ₃	70-85
	SiO ₂	15-30
	Al ₂ O ₃ +SiO ₂	99.5
Thermal Conductivity (W/(m·K))	600°C	0.16
	800°C	0.20
	1000°C	0.32
	1200°C	0.46
24-Hour Heat Shrinkage (%)	1300°C	0.52
	1500°C	0.98
Fiber Diameter (μm)		5
Thickness (mm)		0.2-1
Weight(g/m²)		60-200

Alumina Fiber Paper






Alumina fiber paper is crafted from high-purity alumina (Al2O3) fibers, showcasing exceptional thermal insulation capabilities and resistance to high temperatures, often exceeding 1600° C. The production process begins with the synthesis of alumina fibers through the spinning of molten aluminum oxide, which then undergoes a series of treatments to enhance its purity and thermal properties. These fibers are subsequently layered and bonded together using either organic or inorganic binders to form a coherent sheet or roll of paper. This process allows for the fine-tuning of the paper's thickness, density, and flexibility, ensuring it meets specific application requirements. The meticulous crafting of alumina fiber paper results in a material that combines chemical stability, ease of customization, low thermal conductivity, and minimal heat storage. It is extensively employed in applications demanding high-temperature resistance and thermal insulation, such as thermal barriers in aerospace and automotive sectors, fireproofing, creation of high-temperature gaskets and seals, insulation for industrial furnaces and kilns, and as electrical insulation in conditions where maintaining high-temperature tolerance is vital. The detailed manufacturing process contributes to its unparalleled performance in challenging environments, positioning alumina fiber paper as a critical material across various advanced manufacturing and safety domains.

Test Item	Standard	Technic Index
Appearance	--	Smooth, no impurities
Insulating Property	Under condition of 1000V DC, test time 60s	Insulation resistance ≥500MΩ
Fibre ID	--	5.5-7.5μm
Tensile Strength	GBT 17911-2018	≥200kPa
Flame Retardance Property	UL94-V0	Approved
Thermal Conductivity	GB/T 10297-2015	≤0.04w/m·k
ELV	EU ELV Directive 2000/53/EC	Approved

Code	F1710-0.6	F1710-0.8	F1710-1.0	F1710-1.5	F1710-2.0	F1710-2.5	F1710-3.0	F1710-4.0	F1710-5.0
Thickness (mm)	0.60	0.80	1.00	1.50	2.00	2.50	3.00	4.00	5.00
Range of Thickness (mm)	0.50-0.70	0.70-0.90	0.90-1.10	1.35-1.65	1.80-2.20	2.25-2.75	2.70-3.30	3.60-4.40	4.50-5.50
Areal Density (g/m²)	60	80	100	200	250	300	400	550	700
Range of Areal Density (g/m²)	50-70	70-90	90-110	180-220	225-275	270-330	360-440	495-605	630-770



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MAIN APPLICATION AREAS OF VACUUM AUXILIARY



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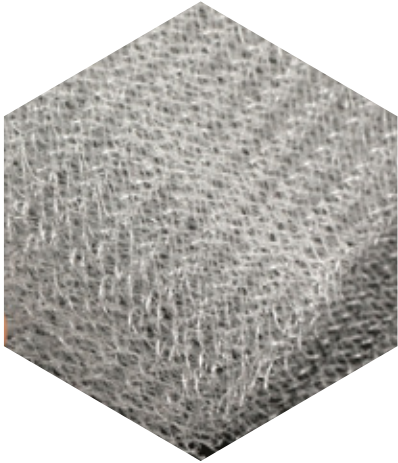
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Here is an introduction to **the characteristics and applications of vacuum auxiliary products:**



High Vacuum Performance

Vacuum auxiliary materials are designed to maintain a high vacuum level in vacuum systems. They possess excellent gas-tightness and low outgassing properties, ensuring minimal loss of vacuum pressure.

Low Vapor Pressure

Vacuum auxiliary materials have a low vapor pressure, which means they do not readily evaporate into the vacuum environment. This property helps maintain a clean and stable vacuum, preventing contamination or interference with sensitive processes.

High Temperature Resistance

Vacuum auxiliary materials are engineered to withstand high temperatures without compromising their sealing and insulation properties. This characteristic is crucial in applications where the vacuum environment may reach elevated temperatures.

Chemical Compatibility

Vacuum auxiliary materials are chemically compatible with a wide range of substances typically encountered in vacuum systems. They exhibit resistance to corrosion or chemical degradation, ensuring long-term durability and reliability.

Vacuum Bagging Film 真空袋膜

Vacuum bagging film is a flexible, high-strength material used to encase composite layups, applying uniform pressure and removing air to enhance the quality and strength of cured composites in industries like aerospace and automotive.

Thickness	Material	Film Color	Resin Compatibility	Working Temperature
55 Microns	PA-PE-PA	Green	Styrene+Epoxy	Max up to 180°C
65 Microns	PA-PE-PA	Green	Styrene+Epoxy	Max up to 180°C
75 Microns	PA-PE-PA	Green	Styrene+Epoxy	Max up to 180°C

Vacuum Bag Sealant Tapes 密封胶带

Vacuum bag sealant tape is an adhesive substance used to create an airtight seal between the vacuum bagging film and the tool or mold surface, ensuring proper pressure application and resin infusion in composite material manufacturing.

Code	Max Temperature	Color	Solids	Roll Size
LTS90	150°C	Black	100%	15m*12mm*3mm
SM5130	204°C continuous	Grey	100%	9.14m*12m*3mm

Release Film 隔离膜

Release film is a non-stick film applied between a composite laminate and its consumable materials to allow easy separation after curing, facilitating the production of defect-free parts in manufacturing processes.

Code	Raw Material	Thickness	Temperature Resistance	Type
SF-PP-35	PP/PE	35±5μm	150°C	Non-perforated
PF-PP-35	PP/PE	35±5μm	150°C	Perforated (customized)

Peel Ply 脱模布

Peel Ply is a release fabric that is applied to composite materials to create a textured surface finish and provide a clean, ready-to-bond surface by easily peeling off after curing, promoting adhesion in subsequent layers of composite structures.

Raw Material	Weight (g/m ²)	Color	Temperature Resistance
Polyester	85	White with red Stripe	≤ 180°C
Nylon	85/105	White with red Stripe	≤ 230°C

Infusion Mesh 导流网

Infusion mesh is a fabric-like material placed within a layup to enhance resin flow during the vacuum-assisted resin transfer molding process, ensuring even distribution and complete infusion of the resin in composite constructions.

Code	Areal Weight (g/m ²)	Temperature (°C)	Thickness (mm)	Color
MPEW-145	145	120	1.0	Green/Black
MPEW-180	180	120	1.3	Black
MPEE-105	105	120	1.0	Green
MPEE-200	200	120	1.3	Green

Breather Fabric 透气毡

Breather fabric is a lightweight, porous material used in vacuum bagging processes to allow the escape of excess air and volatile gases from the laminate, ensuring uniform pressure and aiding in the compaction and consolidation of composite materials during curing.

Code	Fiber Content	Weight	Color	Recommended Working Temp	Width	Roll Size
BF-150	100% Polyester	150gsm	White	≤ 200°C	1.5 meter	100 meters
BF-300	100% Polyester	300gsm	White	≤ 200°C	1.5 meter	50 meters

Infusion Block 导胶座

Infusion block is a specialized device or tool designed to regulate and control the flow of resin into a composite layup during the vacuum infusion process, ensuring precise resin distribution and preventing premature curing.

Code	Inner Diameter(mm)
INB16	16
INB35	35

Infusion Valve 倒扣阀

Infusion valve is a device integrated within a vacuum bagging or resin infusion system that allows for controlled regulation of resin entry into the laminate, ensuring optimal infusion rate and pressure for the composite manufacturing process.

Code	Outside Diameter(mm)
IV10	10
IV12	12
IV18	18
IV35	35

Omega Profile 欧米茄管

Omega Profile is a specially-shaped extruded profile that is used to create a rigid and durable edge or to maintain separation between the vacuum bag and the breather layer, ensuring consistent vacuum pressure and facilitating resin flow during the composite fabrication process.

Code	Inner Diameter (mm)	Temp. Resistance (°C)	Color
OE16	16	≤ 120	Transparent
OE22	22	≤ 120	Transparent
OE24	24	≤ 120	Transparent

Flow Tube 导流管

Flow Tube is a conduit designed to facilitate the even distribution of resin across the material being consolidated in composite fabrication, ensuring a more uniform and efficient impregnation process.

Code	Inner Diameter (mm)	Temp. Resistance (°C)	Color
E8	8	≤ 100	Transparent or White
E10	10	≤ 100	
E12	12	≤ 100	Transparent with Reinforcing Rib
E18	18	≤ 100	
RV35	35	≤ 100	

L-Connector 直角接头

L-Connector in vacuum bagging is a shaped fitting used to create a tight seal between the vacuum bag and the vacuum source, facilitating the removal of air and volatiles to compact composite materials and ensure a uniform resin infusion during the curing process.

Code	Outside Diameter(mm)
L12	12
L18	18

T-Connector 三角接头

T-Connector in vacuum bagging is a T-shaped fitting that allows for branching of the vacuum line within the bagging setup to facilitate multiple points of vacuum application, streamlining the de-airing process for more complex composite molds.

Code	Outside Diameter(mm)	Temp. Resistance(°C)
T10	10	≤ 120
T12	12	≤ 120
T18	18	≤ 120

Enka-Channel 导流带

Enka-Channel is a tool that offers a groove-shaped channel for consistent and effective removal of air and volatiles during the vacuum consolidation process in composite material manufacturing, leading to enhanced quality and integrity of the final product.

Code	Width(mm)	Temp. Resistance(°C)
Enka-Channel 100	100	≤ 254
Enka-Channel 50	50	≤ 254

Spiral Warp 螺旋管

Spiral warp allows for the consistent flow of resin or the removal of excess air during the vacuum bagging process, ensuring a more even and defect-free consolidation of composite materials.

Code	Inner Diameter (mm)	Temp. Resistance (°C)	Color
SWP10	10	≤ 100	Transparent or White
SWP12	12	≤ 100	
SWP18	18	≤ 100	

Tooling Products

Series	Code	Size
Forceps 大力钳	DLQ8	8 inch
	DLQ10	10 inch
Dry Sandpaper 干砂纸	P40-51×50	51mm×50m
	P40-115×50	115mm×50m
	P40-200×50	200mm×50m
	P60-51×50	51mm×50m
	P60-115×50	115mm×50m
	P80-115×50	115mm×50m
	P80-200×50	200mm×50m
	P100-100×50	100mm×50m
	P100-115×50	115mm×50m
	P100-200×50	200mm×50m
Water Sandpaper 水砂纸	W280-280×230	280mm×230mm
	W320-280×230	
	W360-280×230	
	W800-280×230	
	W1000-280×230	
	W1500-280×230	
Membrane Sandpaper 覆膜砂纸	W2000-280×230	280mm×230mm
	MU150-280×230	
	MU180-280×230	
	MU240-280×230	
	MU320-280×230	
	MU600-280×230	

Series	Code	Size
Pressure Sensitive Adhesive Tape 压敏胶带	PST3×55	3mm×55m
	PST4×55	4mm×55m
	PST5×55	5mm×55m
	PST6×55	5mm×55m
	PST10×55	10mm×55m
	PST15×55	15mm×55m
	PST18×55	18mm×55m
	PST24×55	24mm×55m
	PST48×55	48mm×55m
Double-faced Adhesive Tape 双面粘胶带	DAT15×20	15mm×20m
	DAT20×20	20mm×20m
Transparent Tape 透明胶带	TT24×50	24mm×50m
	TT36×50	36mm×50m
	TT48×50	48mm×50m
Colorful Adhesive Tape 有色胶带	CT48×50	48mm×50m
	CT72×50	72mm×50m

Series	Code	Size	
		mm	inch
Aluminium Paddle Roller 铝制横纹辊	AR101	44×140	13/4×5.5
	AR102	21.5×140	3/4×5.5
	AR103	21.5×70	3/4×3
	AR104	15.5×105	2/3×4
	AR105	15.5×50	2/3×2
	AR106	21.5×225	3/4×9
	AR107	44×225	13/4×9
	AR201	12.5×37.5	1/2×1.5
	AR202	12.5×75	1/2×3
	AR203	12.5×100	1/2×4
Aluminium Radial Roller 铝制直径辊	AR204	12.5×150	1/2×6
	AR205	25×75	1×3
	AR206	25×100	1×4
	AR207	25×150	1×6
	AR501	12.5×50	1/2×2
	AR502	12.5×75	1/2×3
Aluminium Radius Roller 铝制圆筒辊	AR503	12.5×100	1/2×4
	AR504	25×50	1×2
	AR505	25×75	1×3
	AR506	25×100	1×4
	AR901	25×75	1×3
	AR902	25×100	1×4
Aluminium Bubble Buster Roller 铝制气泡切断辊	AR903	25×150	1×6
	AR904	25×200	1×8
Aluminium Slotted Paddle Roller 铝制菱形辊	AR801	17×152	7/10×6