HITEX

HIGH SILICA GLASS

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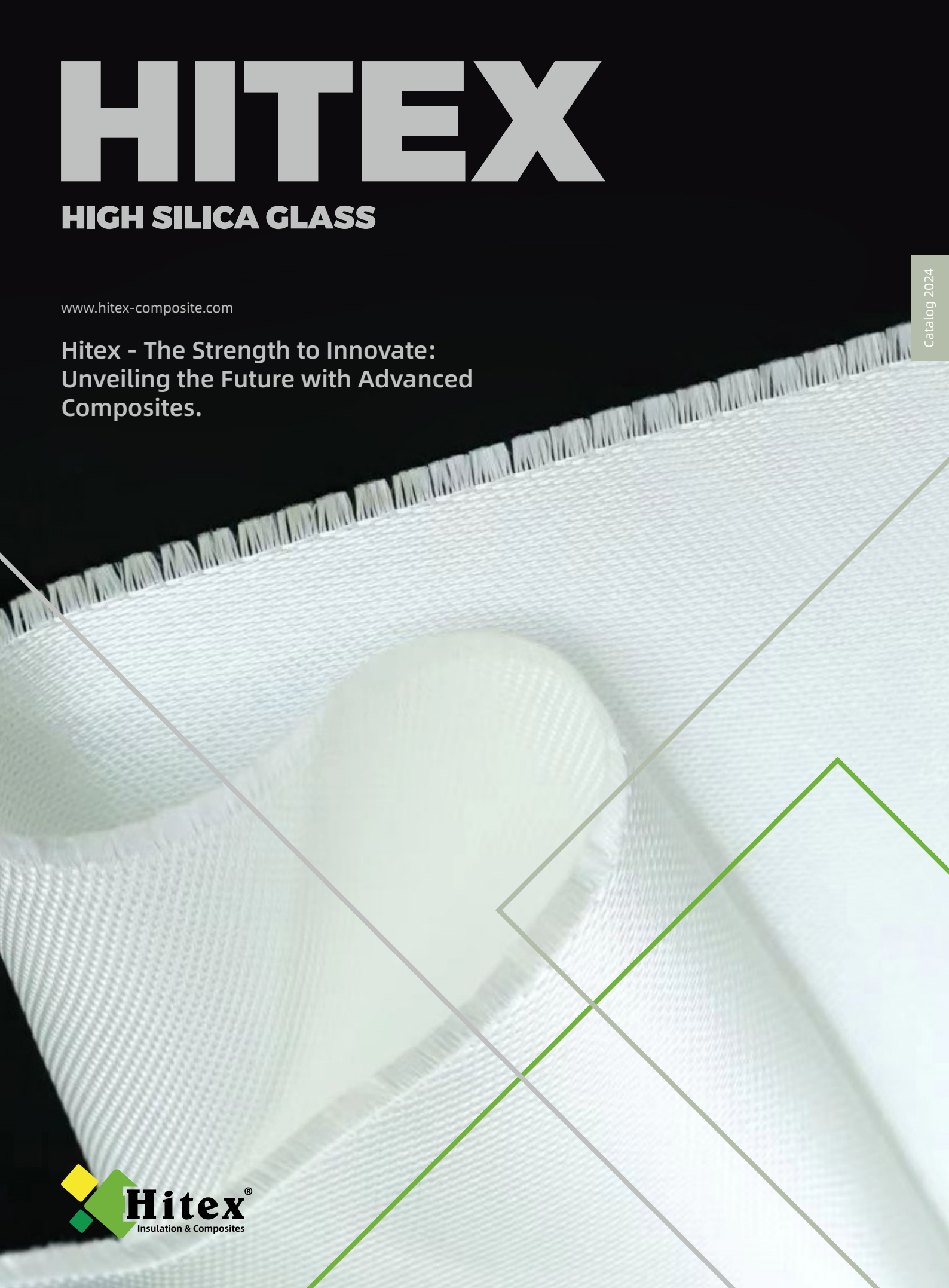

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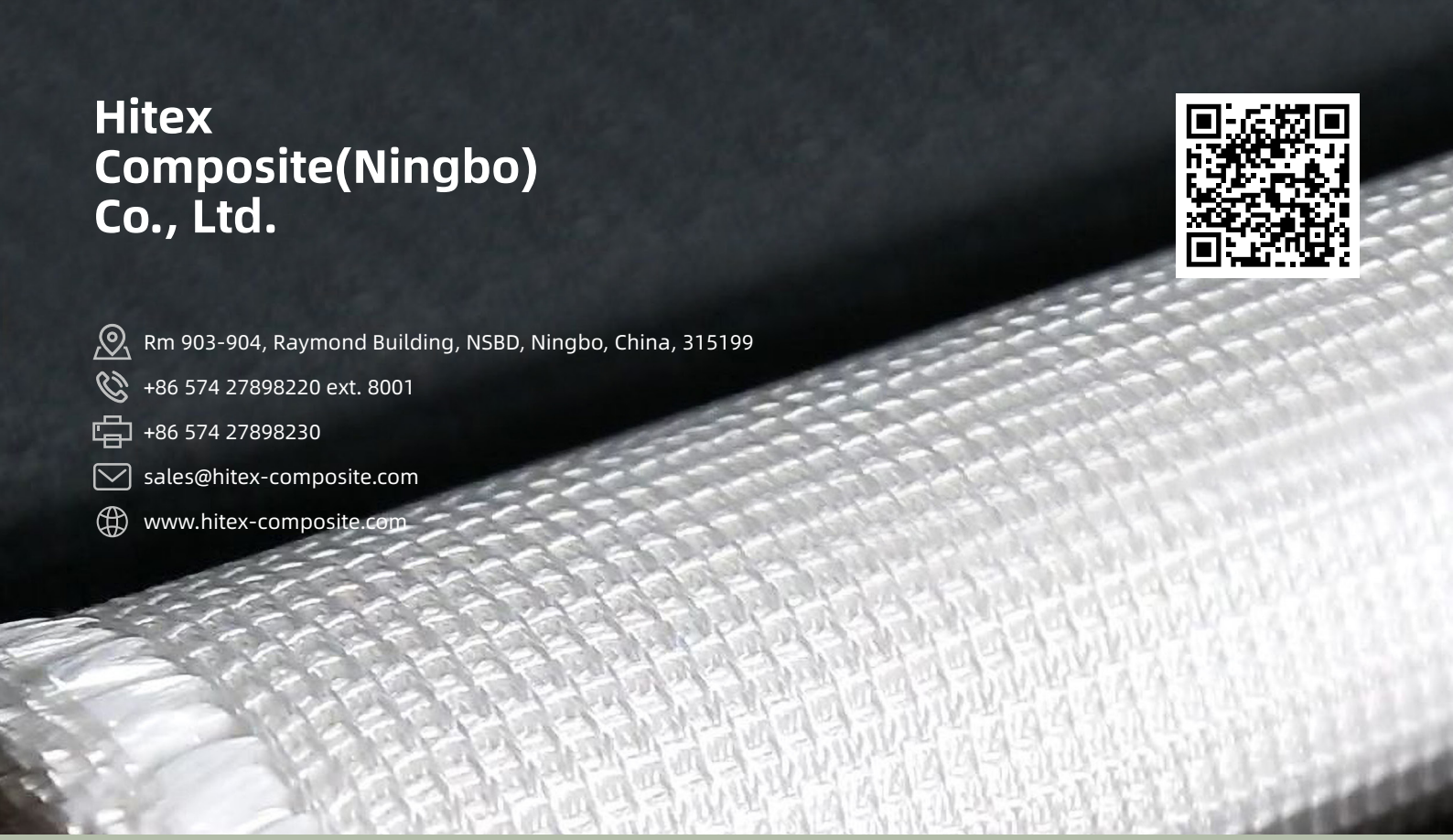

ABOUT HITEX

Welcome to Hitex Composites, your premier destination for top-quality composites and exceptional service. Our company has been providing high-quality composites to customers for many years, and we take great pride in our ability to consistently deliver excellence in both product quality and customer service.

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 HIGH SILICA GLASS

Fire Protection

Industries

Aviation

Construction

Petroleum

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 SiO_2 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 (℃)
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 (℃)
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℃)	Working Temperture (℃)
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/m^2)	Length (m)	SiO_2 (%)	Working Temperture (℃)
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/m^2)	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/m^2)	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	
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/m^2)	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/m^2)	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 hich 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/m^2)	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/m^3)	Weight (g/m^2)
	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 (℃)
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 (℃)
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		