HITEX

BASALT FIBER

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Unveiling the Future with Advanced Composites.

Catalog 2024

Hitex®
Insulation & Composites

Hitex Composite(Ningbo) Co., Ltd.

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 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℃) 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/m^2)	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/m^2)	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/m^2)	Direction (g/m^2)				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/m^2)	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/m^2)	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℃ . 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	25
BF607B050	50	0.9	
BF607B055	55	0.9	
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/m^2)	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/m^3)	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/m^2)	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(mm^2)	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	According to customers' requested
BF611R/19	19	295.50	592	
BF611R/22	22	382.73	768	
BF611R/25	25	537.90	1076	

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