



Fire Protection, Heat & Sound Insulation

- If you are interested in better fire protection and 150°C higher heat resistance than with E glass materials but less expensive than silica, you need fabrics from our basalt fiber
- If you need reliability, you will get it using materials made of our basalt fiber

Our advanced basalt fibers show 15-20% higher tensile strength and modulus, better chemical resistance, extended operating temperature range than regular E glass, getting close to high strength and corrosion resistant fibers but being less expensive.

Comparison of basalt and glass fibers

Mechanical properties	Basalt fiber (Kamenny Vek)	E glass
Tensile strength of dry fiber (ASTM D3822), mN/tex	600-730	350-500
Tensile strength of single filaments (ASTM D2101), MPa	4000-4300	3450-3800
Tensile modulus of single filaments (ASTM D2101), GPa	84-87	72-76

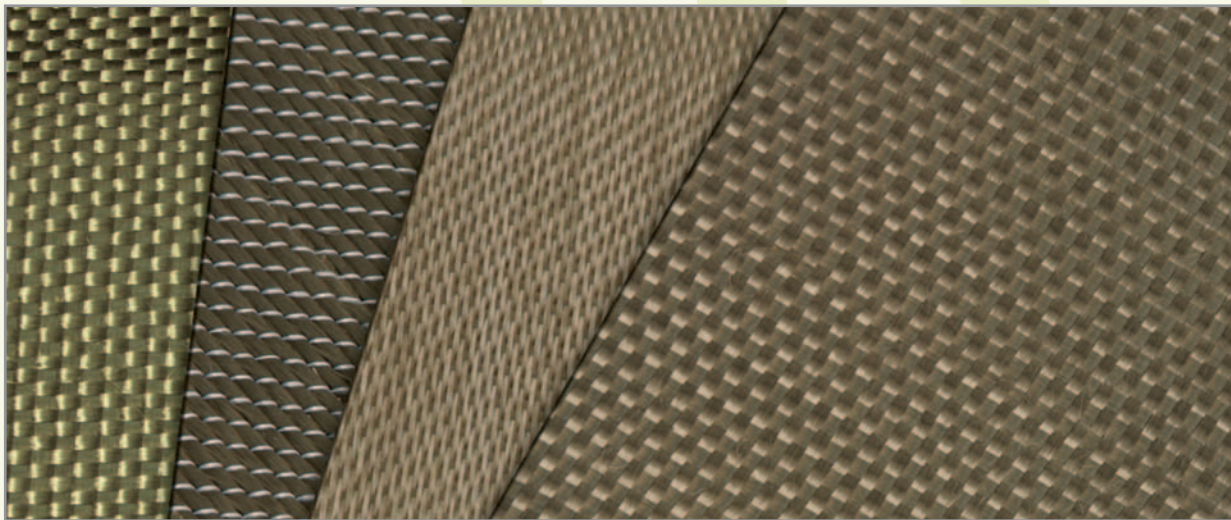
Thermal properties	Basalt fiber (Kamenny Vek)	E glass
Application temperature, °C	-260 up to +560	-60 up to +460
Short-term maximum operation temperature, °C	up to +700	up to +550
Heat conductivity, W/(m.°K)	0.031-0.038	0.034-0.04

- Basalt fibers have better sound insulation properties than glass fibers. Hence, with interior based on basalt fiber you will feel yourself more comfortable.
- The dielectric properties of basalt fibers are equal to ones of glass fibers. So, switch from glass to basalt does not change radar transparency of construction.
- After exposition under 400°C the basalt fibers lose only 20% of their initial strength, while strength of E glass under the same conditions drops substantially - more than 50%.

Kamenny Vek can provide various types of yarns and woven fabrics. We are open for collaboration in manufacturing of special design fabrics and braided sleeves. Our R&D team is ready to work and satisfy various customer requirements.

Product description

Name	Weaving type	Surface density, g/m ²	Breaking load, N (kgf), no less than		Length of fabric roll (m)
			warp	weft	
BF-5/8/13	Plain 1/1	180±15/210±20/ 270±20	882 (90)/ 1024 (105)/ 1425 (145)	590 (60)/ 850 (86)/ 784 (80)	50-200 /50-200/50 ÷ 150
BF-10/11	Satin 5/3	250±20/390±25	927(100)/ 1900(193)	1078 (110)	50-200/50
BF-100/180	Plain 1/1	210±20/180±20	784 (80)/ 600 (60)	784 (80)/ 500 (50)	up to 400



For automotive industry:

- High strength basalt roving for filament winding of CNG cylinders and for SMC/BMC technology;
- Basalt chopped strand for BMC technology and for production of frictional materials;
- Special basalt wet chopped strand for production of mats and veils which are applied in cars interior.

For civil engineering:

- High strength and chemical resistant basalt roving for concrete reinforcing bars, load-bearing profiles and pultruded gratings;
- Chemical resistant chopped strand for concrete and mortar reinforcement;
- Basalt geogrids & stucco nets for roads, bridges construction, for renovation of old concrete structures.