



## Friction Materials

- If you need to **replace asbestos** in your friction materials, our basalt fiber is the best solution for this
- If you are forced to change your glass filled brake pads very frequently or your brakes do not work properly under high loading, you need brake pads based on 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

Properties of single filaments (ASTM D2101)	Basalt fiber (Kamenny Vek)	E glass
Tensile strength, MPa	4000-4300	3450-3800
Tensile modulus, GPa	84-87	72-76

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

- 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%.
- Friction materials based on basalt fiber have better and more stable friction coefficient and longer life than other ones.

Kamenny Vek company offers special basalt chopped strand for phenolic resin compositions. This product is mostly recommended for manufacture of friction materials. In case of different application, special sizing compositions are also possible

## Product description

Monofilament diameter [ m]	13-17
Cut length [mm]	3/6/9/.../75
Sizing compatibility	phenolic
Sizing content [% wt]	0.4-0.6
Moisture content [% wt]	<0.3



### **Also, Kamenny Vek can provide For automotive industry:**

- High strength basalt roving for filament winding of CNG cylinders and for SMC/BMC technology;
- Special basalt wet chopped strand for production of mats and veils which are applied in car interior;
  - Basalt woven fabrics for fire protection, heat & sound insulation;
  - Basalt chopped strand for BMC technology.