



## Kamenny Vek

Kamenny Vek is the world's largest manufacturer of high quality continuous basalt fiber. Kamenny Vek was founded in 2003 by a British private equity fund. The entire range of products produced by Kamenny Vek is sold under the brand name Basfiber®. The best labs and specialists worldwide are involved in development, production, testing and quality control of Basfiber® products.

Basfiber® products ideally suit applications requiring high mechanical strength, resistance to high temperatures, durability, chemical resistance and environmental friendliness especially when combination of such requirements is needed.

Applications of Basfiber® include but are not limited to heat protection, high pressure vessels, tanks and cylinders, load bearing profiles, wind mill blades, boats, friction materials, concrete reinforcement, sport and recreation and many others.



## Basfiber®: advantages and benefits

Compared to regular e-glass, Basfiber® shows:

- 15-20% higher tensile strength and modulus,
- Better chemical resistance,
- Extended operating temperature range,
- Better environmental friendliness.

Basalt fiber properties significantly outperform E-glass and get close to specialty fibers like S-glass, carbon, chemical resistant glass, silica but at a lower price.

Mechanical and thermal properties	Basfiber®	E-glass	
Tensile strength of epoxy impregnated strand (ASTM D2343), MPa	2900 - 3200	2400 - 2700	
Tensile modulus of epoxy impregnated strand (ASTM D2343), GPa	84 - 87	72 - 76	
Application temperature, °C	-260 up to +560	-60 up to +460	
Chemical resistance	Basfiber®	Alkali resistant glass	E-glass
Fiber weight loss after 3h boiling in cement saturated solution, %	0.35	0.15	4.5
Fiber weight loss after 3h boiling in 1N solution of HCl, %	7.1	No data	38.5

# Basfiber® products

## Roving (direct, regular assembled, high performance assembled)

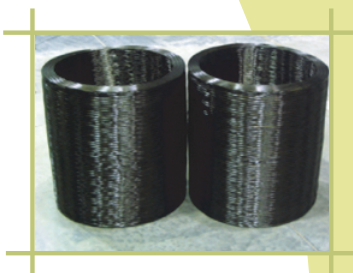
Direct-roving is a continuous one-end strand produced by the drawing process and wound in a form of ready to sell product. The main advantage of direct roving is zero catenary and excellent appearance.

As a rule, direct roving is used for weaving of fine fabrics or for any specific applications.



High performance assembled roving is assembled roving with reduced catenary and special gluing that provides shape of tape to roving and makes it similar to direct roving.

High performance assembled roving is the best product for pultrusion and multiaxial fabrics production.



Regular assembled roving consists of several single-end strands joined together without twisting on special assembling machine.

Regular assembled roving can be used for applications where customers need roving of larger tex compared to direct roving or bobbins with external unwinding.



Type of roving	Direct roving	Assembled roving	High performance roving
Monofilament diameter, µm	11, 13, 14, 17, 19, 20, 21	10, 13, 17	13, 15, 17
Tex	110, 150, 400, 600, 1200, 1800, 2000	270, 600, 1200, 2400, 4800	1200, 2400, 4800
Unwinding	Internal	Internal / External	Internal / External
Type of bobbins	200 mm internal diameter	76 mm internal diameter	200 mm / 76 mm internal diameter
Packaging	5 - 12 kg bobbins, up to 800 kg per pallet (120 x 80 cm pallet)	4.7 - 9 kg bobbins, up to 800 kg per pallet (120 x 80 cm pallet)	8 - 12 kg bobbins, up to 800 kg per pallet (120 x 80 cm pallet)
Sizing	KV-12, KV-42 - for epoxy and phenolic resins, KV-42A - for polyurethane and thermoplastic resins KV-11, KV-41 - for vinyl ester and polyester resins, KV-15 - for spray-up technology		

## Twisted yarn

Twisted yarns are one or more single-end strands twisted in S or Z direction on a special twisting machine.

Basalt twisted yarns are mainly recommended for production of different types of fabrics, tapes, ropes, sleeves etc.



Monofilament diameter, µm	Tex of single-end strand	Number of plies	Tex of twisted yarn	Twist direction	Twists per meter	Bobbin weight, kg	Packaging
10	68	1, 2, 3, 4, 6, 8	68, 136, 204, 272 408, 544	Z, S	30 - 100	2 - 7	66 or 88 spools per pallet (120 x 80 cm pallet)
10	90	1, 2, 3, 4, 6	90, 180, 270, 360 540				
11	100	1, 2, 3, 6	100, 200, 300, 600				
13	150	1, 2, 3, 4	100, 300, 450, 600				

## Chopped strand

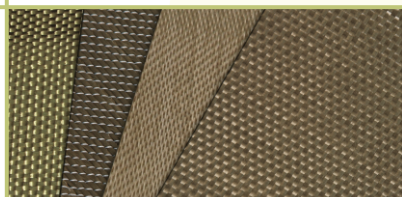
Chopped strand is produced from wet or dry basalt fiber on chopping lines which include drum-type chopper, conveyer and drying oven.

Wet or dry chopped strand is widely used for veils and mats production, reinforcement of concrete, polypropylene, polyamide or other matrixes, auto brake pads and clutch plates.



Sizing	Compatibility	Dry / Wet	Cut length, mm	Monofilament diameter, $\mu\text{m}$	Packaging
KV-02M	Phenolic resin, PA, PP, PE, HDPE	Dry	3.2, 6.4, 12.7, 15.9, 25.4, 31.8, 50.8, 90	13, 15, 17, 19	20 kg PE bags, 30 bags per 1 pallet or 1 big bag of 500 kg per 1 pallet (120 x 80 cm pallet)
KV-16	PP, PE, HDPE	Dry			
KV-13	Concrete, cement	Dry			
KV-41	Polyester and vinyl ester resins	Dry			
KV-14	For needle punching	Dry			15 kg PE bags, 34 bags per 1 pallet
KV-05/1	Aqueous systems	Wet			25 kg PE bags, 500 kg per 1 pallet

## Fabric



Basalt fabrics are produced from high-quality rovings or twisted yarns and have different weave types and surface densities.

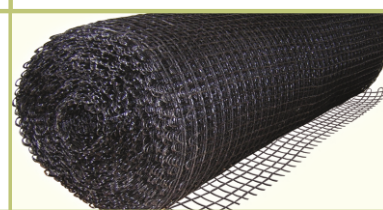
Basalt fabrics can be used in different compositions for fire, sound and heat protection, in laminates production, in construction elements and equipment.

Type of fabric	Weave	Surface density, $\text{g/m}^2$	Width, cm	Roll length, m
TBK-100	Plain	$210 \pm 20$	$100 + 1$	200
UD-tape	Uni directional	400 to 1050	63.5, 127	50 - 100
Biaxial fabric	Biaxial	400 to 600	63.5, 127	50 - 100
Specialty fabrics	per customers' specs			

## Reinforcing mesh

We offer a wide range of basalt reinforcing meshes: scrim 3,5 x 3,5 mm, mesh 25 x 25 mm for roads and construction.

Basalt reinforcing mesh is used for different purposes: reinforcement of roads and highway overlays, preventing of cracks forming in different applications in construction industry, making of self-leveling floors, reinforcement of the plaster layer for both interior and exterior works etc.



Type of mesh	Window size, mm	Surface density, $\text{g/m}^2$	Breaking load, $\text{kN/m}$	Roll width, m
Mesh for roads (open cell)	25 x 25	$220 \pm 10$	$\geq 50$	1, 2, 4
Mesh for roads (closed cell)	30 x 30	$320 \pm 10$	$\geq 55$	1, 2, 4
Mesh for construction	25 x 25	$220 \pm 10$	$\geq 50$	1
Scrim	3,5 x 3,5	$100 \pm 15$	$\geq 1300 \text{ N/cm}$	1





## Logistics advantages

- English speaking staff
- Packaging labels and shipment documents in English
- Door-to-door delivery all around the world
- Worldwide distribution network
- Regional warehouses in Europe and USA



## Ways of delivery

- 20' container, 11 pallets 120x80 cm (max net weight is 10 000 kg)
- 40' container, 23 pallets 120x80 cm (max net weight is 18 500 kg)
- Truck, up to 33 pallets (max net weight is 18 500 kg)

## Distribution Network

Kamenny Vek supplies its products on international market exclusively through its Global distributor Basalt Materials Ltd.

Basalt Materials Ltd supplies Basfiber products to customers through regional distributors in Europe, USA and Australia. To buy Basfiber products customers can contact either Kamenny Vek or one of the following distributors:

### USA

#### B & W Fiber Glass, Inc.

[www.bwfiberglass.com](http://www.bwfiberglass.com)  
100 Glass Way, Shelby,  
North Carolina 28152, USA

Mr. Brent Beason, President  
Tel: +1-704-434-8005,  
[brentb@bwfiberglass.com](mailto:brentb@bwfiberglass.com)

Mr. Miguel H. Ferré, Director of Strategic Growth  
Tel: +1-704-434-8005 ext 117,  
Mobile: +1-336-479-3849,  
[miguelh@bwfiberglass.com](mailto:miguelh@bwfiberglass.com)

### EUROPE

#### Basaltex NV

[www.basaltex.com](http://www.basaltex.com)  
Zuidstraat 18, 8560 Wevelgem, Belgium

Ms. Ilse De Roos,  
Tel: +32 56 43 00 92,  
Fax: +32 56 42 42 34,  
[info@basaltex.com](mailto:info@basaltex.com)

### AUSTRALIA

#### BASALT FIBER TECH

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Victoria, 3166, Australia

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