



the power of nature

technobasalt™

# TECHNOBASALT® FIBER

Chopped basalt roving (RBR)

- Uniform dispersed 3D reinforcement (1 kg of fiber contains about 74 million monofilaments)
- Tensile strength is three times stronger than of steel.
- The lowest elongation comparing to other fiber types:
  - 1.5 times less than that of glass;
  - 7 times less than that of steel;
  - tens of times less than of polypropylene.
- Has high corrosion resistance in all environments.
- Has excellent adhesion to concrete, linear expansion is close to it, which excludes the appearance of cracks.
- Working temperature range is from -260 to +680°C.

## Basalt fiber improves the properties of fiber-reinforced concrete

- Prevents the appearance of shrinkage microcracks up to 90%.
- Increases concrete flexural strength up to 55%, compression and splitting strength.
- Reduces the formation of internal stresses during plastic shrinkage up to 50%.
- Increases frost resistance of concrete.
- Increases the impact and fatigue strength of concrete.
- Provides homogeneity of the concrete mix (no concrete bleeding).

[www.technobasalt.com](http://www.technobasalt.com)

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## Road surfaces



Asphalt concrete, cement  
concrete roads and runways

## Industrial floors



Logistic centers, parkings,  
screeds, helipads

## Underground structures



Metro, underground  
communications, foundations

## Structural elements



Reinforcement of concrete  
structures, dry mixes

## Technical characteristics of TECHNOBASALT® FIBER

| in comparison with other categories of materials

Characteristic	Unit of measure	Technobasalt® Fiber	Steel fiber	Glass fiber	Poly- propylene
Tensile strength	MPa	1 100-1 400	360-420	35-530	170-260
Elastic module	GPa	79-110	190-200	до 50	до 35
Density	g/cm <sup>3</sup>	2,8-3,0	7,80	2,6-2,7	0,89-0,92
Elongation at break	%	1,5-3,1	3,0-4,0	до 4,5	20-250
Operating temperature	°C	-260...+680	-60...+540	-60...+250	-5...+80
Thermal expansion coefficient	-	0,65·10 <sup>-5</sup>	1,3-1,5·10 <sup>-5</sup>	0,65·10 <sup>-5</sup>	0,3-0,5·10 <sup>-5</sup>
Corrosion resistance (alkaline environment)	-	very high	low	high	low

## Basalt fiber — what is it?

Basalt fiber is a chopped basalt fiber with a fixed length. We supply fiber with special sizing type (lubricants) developed for various mixtures to increase the strength properties of the material and improve its adhesion to the corresponding medium.

Basalt fiber is an extremely effective and versatile reinforcing material.

## Permissive documentation

- TU U V.2.7-26.8-34323267-002: 2009 "Roving from basalt fibers".
- Certificate of conformity UkrSEPRO.
- Radiation certificate.
- Conclusion of the State SES of the Ministry of Health of Ukraine.

