ARMOBET BW

A basalt reinforcing mesh – part of reinforcing system BETOSAN©

1. Product characteristics

ARMOBET BW bidirectional basalt fiber fabric – reinforcing mesh

- suitable for reinforcing of anchoring to the base
- suitable for environment with higher risk of corrosion
- doesn't require high coverage
- permanently alkali-resistant
- thermally resistant, incombustible

2. Use

ARMOBET BW is a bidirectional basalt fiber fabric with perpendicular fiber direction. The fabric is used a reinforcing filler for cement and polymer-cement materials especially from **MONOCRETE PPE (TH)**, **WATERFIX XP (TH)**, **MONOCRETE MPH** (and other) series. It is intended mainly for so called mechanical anchoring on problematic substrates (old paint contamination, reduced surface strength of the substrate, etc.) for chemically aggressive environment and on sites which doesn't allow a higher coverage of the steel reinforcement.

3. Physical and mechanical parameters

Properties

	ARMOBET BW 22/22/1	ARMOBET BW 30/30/1
Weight of the mesh (g/m^2)	260 ± 30	250 ± 10
Tensile strength of the fiber (mN/tex)	> 700	> 700
Tensile strength of the mesh – in both main directions (kN/m)	> 50	> 55
Elongation at break – in both main directions (%)	2.5 ± 1	2.5 ± 1
Geometry of the reinforcing mesh	0/90°, 22x22mm, Open mesh	0/90°, 30x30mm, Open mesh
Fiber density (g/cm^3)	2.67 ± 5%	2.67 ± 5%
Melting point (°C)	1350 ± 100	1350 ± 100

Comparison of properties of basalt fibers with other types of fibers

Properties of the fibers	Basalt fiber	E - glass	S - glass	polypropylene
Tensile strength (MPa)	4000 ÷ 4300	3450 ÷ 3800	< 3500	450 ÷ 600
Tensile elasticity modulus (GPa)	84 ÷ 87	72 ÷ 76	72	13

4. Test certificates

The product is certified according to Act No. 22/1997 Coll. and Governmental Decree No. 163/2002 Coll. Continuous independent production quality control is provided by AZL 1687 LABBET®. Supervision of quality management, environmental and OSH systems is performed by Certification Body No. 3029.

5. Instruction for preparation and application

ARMOBET BW mesh is specifically designed for reinforcing to eliminate the need for any further preparation. Common cutting tools can be used for adjusting the size. The first technological step consist of general mechanical removal of the existing damaged concrete surface and subsequent cleaning of the surface with a pressure washer (max. 500 bar). The purpose is to remove all the corrosion from the reinforcement including the incoherent concrete, dust and other separating components form the surface of the repaired construction.
Then the basalt mesh anchoring holes shall be made in the surface (substrate) if possible by drilling holes with a minimum diameter of 12 mm and a depth of 75-100 mm. Holes shall be cleaned from dust and rinsed out. The appropriate number of anchor holes is min. 4 per 1m^2.
In these previously drilled and well moistened holes the expansive mortar **SUPERFIX TH f** will be injected and right after that **ARMOBET BW** basalt anchors (fibrous anchors – basaltic fiber strands covered in a plastic tube) will be put (pressed) into the fresh mortar. After 24 hours the properly moistened base will be overlaid, e.g. in the traditional masonic way, with a chosen cement or polymer-cement composition (e.g. **MONOCRETE PPE (TH), WATERFIX XP (TH), MONOCRETE MPH** Sulfate-resistant spread **MONOCRETE TH rapid** etc.) in minimum layer thickness of 3mm. Immediately after applying the spread the **ARMOBET BW** basalt mesh will be pressed into the fresh mortar. Subsequently basalt anchors will be used to attach the mesh to the surface. The strand will be released from the plastic cover and spreading the fibers in as regular circle as possible. Right after the mesh

was pressed into the base mortar it shall be overlaid. The (after 6 – 24 hours) second layer of the mortar/spread will be applied so that the **ARMOBET BW** mesh is perfectly overlaid.

6. Specific consumption

Specific consumption of **ARMOBET BW** depends on the geometry of the surface. Usually 10% more than the surface area is enough for offcuts and to overlay the stripes of the mesh.
A good cutting knife proved best for shortening or narrowing the mesh.

7. Packaging and storage

ARMOBET BW 22/22/1 is a bidirectional basalt fiber fabric supplied in roll of 100 cm width and 50 m length, one roll holding 50 m^2 of the fabric. **ARMOBET BW 30/30/1** bidirectional basalt fiber fabric is supplied in a roll of 100 cm width and 100m length, one roll holds 100 m^2 of the fabric.
On personal request it is possible to buy the fabric in meters, but minimum length is one meter.
The shelf life in a dry place is unlimited. Rolls must be stores horizontally, **the fabric must not be stored vertically**. Wrong storage may cause irreversible deformation = destruction of the fabric.

8. Health protection at work

While manipulating with the fabric it is recommended to use working gloves to prevent skin irritation, protective glasses against eyes irritation and anti-dust mask against flying dust.

9. Important notice

All information mentioned above, especially advice for processing and application of our products is based on our knowledge from the development of chemical products and on years of experience with applications in practice at standard conditions, and proper storage and use. Due to the differing conditions during processing, high count of products, varying nature and modifications of base and other external influences, the procedure based on the information provided or on other written or oral recommendations, may not always ensure satisfactory working results. BETOSAN s.r.o. assumes no liability for provided advice or recommendation. The applicator must prove, that he submitted complete information on time and in writing which is necessary for a proper detailed assessment by BETOSAN s.r.o. The applicator must test the suitability of the products for the intended application. Proprietary rights of third parties, above all, must be taken into account. All received are orders subject to our current "General sales and delivery conditions ". Please always make sure that you follow the most recent issue of the Technical Data Sheet. It is available, along with other information, at our Technical Department or at www.betosan.cz

Technical Data Sheet No. 2-36
Issued 1.1.2018

CONCRETE REPAIR

BETOSAN s.r.o., Na Dolinách 28, 147 00 Praha, Czech Republic
Bussiness and technical office Nová cesta 291/40, 140 00 Prague 4, Czech Republic
Tel./fax.:+420 241 431 212, tel.:+420 241 431 215
E-mail: praha@betosan.cz, www.betosan.cz