

eccotexx

PATH-BREAKING INNOVATIONS

Dear sirs,

ECCOTEXX is an R&D company manufacturing top-quality proprietary products. Much of our product range is either patented or protected as know-how.

Our unique business model provides for close cooperation with partner companies to offer comprehensive services:

- 1. Building information modeling (BIM) and use of composite materials**
- 2. Concrete quality assurance and control at the customer's sites**
- 3. Concrete laboratory testing and improvement recommendations**
- 4. Sales of products**



GOST 31938-2012



CONCRETE REINFORCEMENT WITH ECCOTEXX REBAR

Composite rebar

Eccotexx composite rebar features thermal spray coating with hollow microspheres which distinguishes it from competitors' products.

Eccotexx fiberglass reinforcement is produced from corrosion-resistant Advantex EC-R fiber

Advantages

- Improved bonding properties
- Increased heat resistance
- UV protection
- High corrosion resistance
- Low weight
- High tensile strength
- Long service life
- Resistance to acids
- Low thermal conductivity
- Ease of installation
- Low operating costs

Areas of application:

- Concrete reinforcement
- Masonry reinforcement
- Decking solutions
- Reinforcement of structures exposed to aggressive environments
- Reinforcement of structures containing EMR sources
- Reinforcement of structures with special radio transparency requirements
- Reinforcement of temporary structures



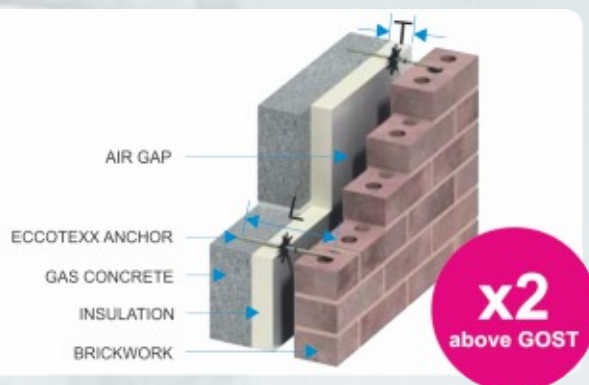
BRICKWORK REINFORCEMENT WITH ECCOTEXX FLEXIBLE ANCHORS

Eccotexx flexible anchors feature increased adhesion to brickwork mortar. Eccotexx technology ensures two times higher bond strength than required by Russian national standard GOST R 54932-2012 x2 stronger bonding



Advantages of ECCOTEXX composite anchors:

- Increased adhesion to mortar
- Tensile strength higher than that of steel
- Four times lighter than steel anchors
- Heat conductivity 100 times lower than that of steel
- No thermal bridges
- No corrosion
- Unlike steel mesh, do not prevent facade insulation



ECCOTEXX composite anchors in brickwork reinforcement

To determine the length of anchors (L), use the following formula:

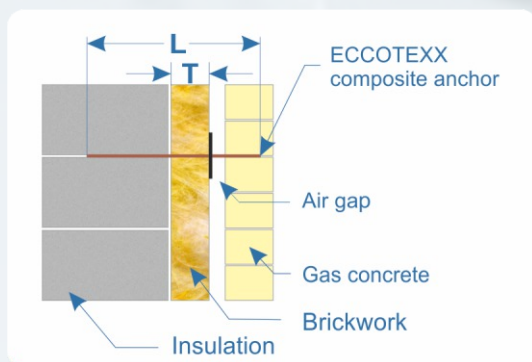
$L = 90 \text{ mm} + T + 40 \text{ mm} + 90 \text{ mm}$, where

90 mm is how deep the anchors are placed inside gas concrete joints

T mm is the thickness of insulation

40 mm is the air gap width

90 mm is how deep the anchors are placed inside brickwork joints





CONCRETE REINFORCEMENT WITH ECCOTEXX FIBER



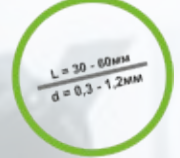
FibrMic

The product's small-diameter fibers have a large specific surface area and are very effective in controlling creep-induced cracks. It also prevents formation of cracks and dents and is suitable for plaster mixes.



- Plaster mixes
- Decorative concrete
- Perimeter pavement
- Screeds

- Industrial floorings
- Road surface
- Concrete roads
- Tunnels and shafts



FibrMax

The product is macro synthetic fiber reinforcement that can be substituted for steel reinforcement in concrete. Its key advantage is higher mechanical strength and ultimate corrosion resistance.



- Supplement to longitudinal reinforcement
- Alternative to steel reinforcement
- Slabs on vibrated piles
- Precast concrete structures



DRY POWDER



DOSING FIBRAMIC AT 0.5-1 KG/CU M



DRY MIXING FOR 5 MINUTES



ADDING WATER



MIXING FOR 5 MINUTES



APPLICATION

FibrMax dosing guidelines:

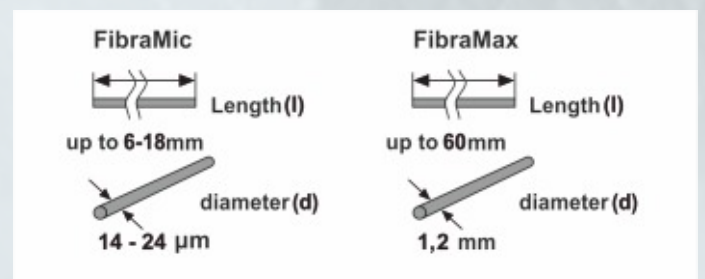
1. Dosing at a cement factory

- ✓ Never add fiber to the mixer as the first component
- ✓ It is recommended to add fiber with sand and a filling compound, or to fresh concrete

2. Mixing in a truck mixer

- ✓ Mix at the speed of 12-18 rpm.
- ✓ The slump of concrete must be at least 12 cm (conventional water reducers or superplasticizers are recommended)
- ✓ Add fiber at the maximum rate of 5 kg/min
- ✓ Continue agitation for 4-5 minutes after adding fiber

Material	Density (g/cu m)	Elastic modulus (GPa)	Tensile strength (MPa)
Concrete	2,4	30 - 40	3 - 4
ECCOTEXX FIBRAMIC	2,6	74	1700
ECCOTEXX FIBRAMAX	1,7 - 2,0	50 - 55	1000 - 1500
Steel	7,8	210	500 - 1100
Polypropylene	0,9	1,5 - 9,5	100 - 500



BETON UHPFRC

ULTRA-HIGH PERFORMANCE FIBRE-REINFORCED CONCRETE

EXPLOSION PROOF AND CORROSION RESISTANT HEAVY DUTY FIBER-REINFORCED CONCRETE



Up to 500% higher shock resistance

M750 to M1500 strength grades

Resistance to dynamic loads

Ultimate corrosion resistance

Improved blast resistance

Suitable for critical structures

Ease of machining

Increased frost resistance

Lower water permeability

Alternative to linear reinforcement

Extended service life

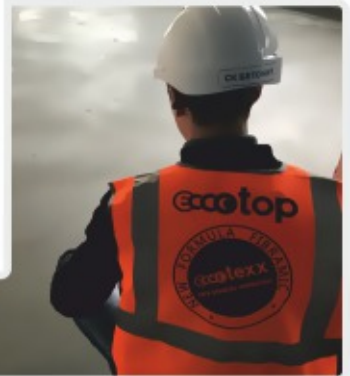


RECOMMENDED FOR SEISMICALLY ACTIVE REGIONS

Boasting excellent stress resistant properties, BETON UHPFRC can be used to make structural components exposed to dynamic loads, e.g. motorways, airport aprons, bridge roads, breakwaters, pile foundations, ship and reactor hulls, warehouses, and flow pipes. UHPFRC ECCOTEXX Fiber-reinforced concrete is also effective in repairing buildings and structures in seismically active regions.

CONCRETE FLOOR HARDENING WITH ECCOTOP TOPPINGS

The first concrete hardener to contain FibraMic microfiber



70%
CRACKING
REDUCTION

Eccotexx offers its new product, a concrete hardener with increased light reflectivity. Eccotop Green is designed specifically for greenhouse walkways.

- Suitable for intensive foot traffic
- Generates no dust
- Highly wear resistant
- Not prone to micro cracking
- Ease of application
- Ready to use
- High longevity

Specifications:

- Bulk density: 1.6...1.8 kg/L
- Max. filler particle size: 4 mm
- Layer thickness: 2.5...3.0 mm
- Bending strength: 8 MPa (in 28 days)
- Compressive strength: 60 MPa (in 28 days)
- Dry mixture application rate: 4–5 kg per sq m (excl. surface irregularities)

This topping is made specifically to reduce shrinkage cracks during concrete finishing. Crack formation after finishing is now reduced by 70%.

- Suitable for intensive foot traffic
- Generates no dust
- Highly wear resistant
- Not prone to micro cracking
- Ease of application
- Ready to use
- High longevity

Specifications:

- Bulk density: 1.6...1.8 kg/L
- Max. filler particle size: 4 mm
- Layer thickness: 2.5...3.0 mm
- Bending strength: 8 MPa (in 28 days)
- Compressive strength: 60 MPa (in 28 days)
- Dry mixture application rate: 4–5 kg per sq m (excl. surface irregularities)



General requirements: Apply the product to fresh concrete (M300 or higher) screeds after vibration or vacuum compaction. Remove excessive moisture (puddles) from the concrete surface prior to application. Use concrete finishing machinery to finish the floor.

Application: After the concrete surface is leveled and compacted by vibration, apply the product (3 kg per square meter) and use a disk-type power float. When finished, spread evenly the second layer (2 kg per square meter) and continue floating. To smooth the surface, use a blade-type power float. Avoid excessive moisture on the concrete surface while floating.

Further action: After finishing the concrete floating, apply a concrete sealer to maintain the moisture level in the concrete. Once the concrete is strong enough, cut contraction joints in it and clean them. When concrete curing is finished, seal the joints in accordance with the engineering design.

BETON M500

HIGH PERFORMANCE CONCRETE

ECCOTEXX BETON M500 HEAVY DUTY REPAIR MORTARS



Layer thickness: 10-100 mm

Eccotexx BETON M500 LF is a fiber-reinforced non-shrink and rapid-hardening fluid repair mortar.

The product is best used to grout structures with strict compression and deflection strength requirements.

Other uses include:

- High-strength thin-layer concrete resurfacing
- High-precision grouting to repair bearing parts of industrial machinery exposed to vibration and dynamic loads
- Grouting for bearing parts of bridge spans
- Installation of chemical defenses (Bekaplast, etc.)
- Concrete floors with high shock and dynamic load resistance
- Bedding layers for high-strength concrete components and structures.



Layer thickness: 5-100 mm

Eccotexx BETON M500 TF is a fiber-reinforced non-shrink and rapid-hardening thixotropic repair mortar.

The product is best used to repair (reinforced) concrete structures that need high compression strength and resistance to mechanic damage and dynamic loads. Other uses include:

- Repairing damaged parts of motorway bridges
- Manual and mechanized shortcreting of damaged structures
- Repairing foundations and pedestals of industrial machinery exposed to dynamic loads
- Repairing structures and buildings for vibration causing machinery
- Sealing major dents and hollows in one coat
- Restoring protective concrete layers in structures damaged by corrosion of reinforcement components (corners, bearing parts, beams, balcony slabs, stair flights, etc.)



Layer thickness: 3-50 mm

Eccotexx BETON M500 L is a non-shrink rapid-hardening fluid repair mortar.

The product is best used to repair structures by grouting when high concrete fluidity is required, and for grouting column base parts (pedestals and supporting slabs).

Other uses include:

- Grouting cavities during equipment installation
- Repairing and installing wear-resistant floors, including those to be coated with polymers
- Repairing and reinforcing thin concrete structures
- Installation of barriers on motorways and other roads
- Bedding layers for high-strength concrete components and structures
- Installation of anchoring parts (pins and reinforcement bars)



Layer thickness: 2-50 mm

Eccotexx BETON M500 T is a non-shrink rapid-hardening thixotropic repair mortar.

The product is best used to repair (reinforced) concrete structures that need high compression strength. Other uses include:

- Sealing horizontal and vertical joints between pre-cast reinforced concrete components
- Repairing dents, cracks and hollows on critical surfaces without formwork
- Manual and mechanized shortcreting of damaged structures
- Repairing structures exposed to water and temperature drops on an ongoing basis
- Restoring protective concrete layers in structures damaged by corrosion of reinforcement components (corners, bearing parts, beams, balcony slabs, stair flights, etc.)



EFFECTIVE CONCRETE TREATMENT PRODUCTS



EccoSeal Base is designed for concrete curing and based on organic solvents. It prevents the loss of moisture in young concrete and brings a fine shine to its surface.



EccoSeal Water is a water-based curing agent with an excellent penetrating action.



EccoSeal Hard is a high-performance hardener that contains no solvents, improves toppings on freshly cast concrete, and prevents salt efflorescence.



EccoSeal Super Hard is a ready-to-use lithium-based impregnation agent that makes surfaces of both new and old concrete harder and dust-free.



TYPICAL USES

- Protection of concrete overlays from premature drying and loss of moisture
- Prevention of micro-cracks on concrete floor surfaces
- Optimal hardening of concrete floors coated with EccoTop dry shake toppings
- Indoor and outdoor concrete curing
- Protection of multicolor concrete toppings

ADVANTAGES

- No concrete scaling
- Effective protection from premature drying
- Affordable and effective concrete protection in one coat
- High adhesion to old and new concrete
- Easy application by roller or sprayer

TECHNICAL SPECIFICATIONS

Density: 0.9–1.15 g/cu cm

Drying time: max. 2 hours at +20°C and 75% RH

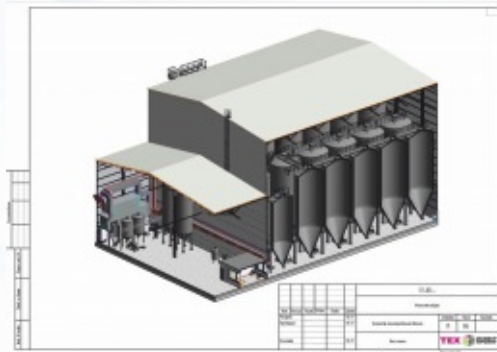
Application temperature: +5...+30°C

APPLICATION RATE

100–150 g/sq m depending on smoothness and porosity of concrete surfaces

	BASE	WATER BASE	HARD	SUPER HARD
Low cost	✓	✓		
Gloss effect	✓			
Odor	✓			
Protection of young concrete from moisture loss	✓	✓	✓	
No surface scaling		✓	✓	✓
Hardening			✓	✓
Increased waterproofing			✓	✓
Less salt efflorescence			✓	✓
Increased abrasion resistance			✓	✓
Suitable for old concrete				✓



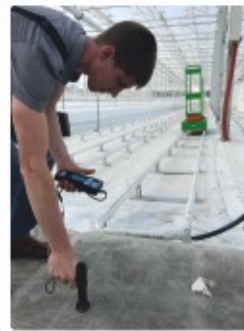


1. Building information modeling (BIM) and use of composite materials.

BIM allows for an integrated approach to engineering design and construction management: changes in any value result in automatic adjustments in all related parameters, as well as drawings, visual models and specifications.

2. Concrete quality assurance and control at the customer's sites:

- Strength grade measurement
- Concrete fluidity test
- Waterproofing test
- Frost resistance test



3. Concrete laboratory testing and improvement recommendations.

Our recommendations will help to improve cost efficiency and performance of concrete mixes used.



CUSTOMERS ORDERING ECCOTEXX PRODUCTS ARE OFFERED FREE-OF-CHARGE ENGINEERING SERVICES IN ACCORDANCE WITH CONSTRUCTION RULES SP295.1325800.2017

In association with: **ФОНД СОДЕЙСТВИЯ ИННОВАЦИЯМ**

ECCOTEXX Limited Liability Company
Legal address: 12a Proyezd Potapova, Lipetsk
Place of business: 15 Izhorskaya St., Moscow
Tel.: +7 4742 78 33 43 (Lipetsk)
+7 495 320 80 12 (Moscow)
Email: eccotexx.company@gmail.com
Web: eccotexx.com

