

ETIZ GFRP REBAR IS MADE OF HIGH-QUALITY RAW MATERIALS, HAS STABLE CHARACTERISTICS, PATENTED PRODUCTION TECHNOLOGY AND EQUIPMENT

THE ETIZ GFRP REBAR is made of alkali-resistant glass roving JUSHI GROUP, designed for the manufacture of composite reinforcement by Owens Corning, a member of the TOP-500 global manufacturers of raw materials, (glass fiber).

COMPOSITION:

Glass roving by Jushi Group: 80%
Epoxy binder based on the products from Kumho Chemical: 20%

- ▶ The ETIZ rebar is a rod with a four-thread spiral winding. This significantly increases adhesion to concrete.
- ▶ Each batch of the ETIZ products pass through the internal control.
- ▶ The ETIZ GFRP rebar has passed all the tests ensuring the conformity to GOST 31938-2012. ISO 10406-1:2008, NEQ.



- ▶ Technical documents, rules and methods for designing concrete structures using glass fiber reinforcement of polymer reinforcement bars have been developed and applied all over the world (Europe, Canada, USA, Russia, etc.)
- ▶ The ETIZ GFRP rebar has successfully passed tests at the Research Institute of Reinforced Concrete (Moscow). All characteristics of the ETIZ rebar meet of Russia's GOST (State Standard) 31938-2012. ISO 10406-1:2008, NEQ.

GFRP ETIZ COMPOSITE PHYSICAL & MECHANICAL PROPERTIES

Name of indicator	TEST REPORT ETIZ Composite
Tensile strength, MPa	more than 1 250
Tensile modulus, MPa	more than 50 000
Compressive strength, MPa	more than 340
Compressive strength, MPa	more than 170
Tensile adhesion with concrete, MPa	more than 15
Reduction of tensile strength after exposure to alkaline conditions, %	Less than 15
Reduction of tensile strength after exposure to alkaline conditions, %	More than 12,5
Produced diameters, mm (in)	6-25 (0,25-1)

ETIZ COMPOSITE

ETIZ GLASS FIBER REINFORCED POLYMER (GFRP) REBAR

modern building material designed to reinforce concrete or strengthen multi-layered walls



MATERIAL SAVING



DELIVERY SAVING



LONG SERVICE LIFE OF CONCRETE STRUCTURE

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COMPARISON OF ETIZ AND STEEL REBARS



Light weight: fiberglass reinforcement is 9 times lighter than steel rebar.



Strength: a high tensile strength, the value of which is 3-4 times more than of a steel rebar with the same diameter.



Longevity: made of alkali-resistant raw materials - glass fibers bonded by epoxy resins. This guarantees a long service life (80+ years).



Chemical resistance: composite reinforcement has high chemical resistance in various harsh environments, corrosion-resistant.



Low thermal conductivity: due to the low thermal conductivity, "cold joints" won't appear in the structures. This reduces heat loss by up to 34% and reduces heating expenses.



Ease of installation: GFRP can be cut to any given strength from a coil, fastened with plastic clamps, special fasteners, or clamps.



Ease of transportation and storage: ETIZ can be folded into coils. Therefore, it can be transported even by light vehicles that reduces transfer costs.

COMPARISON OF ETIZ GFRP WITH OTHER GLASS FIBER REINFORCED POLYMER REBARS

- ▶ The ETIZ GFRP rebar is made of high-quality raw materials, has a stable weight, shape, characteristics, patented production technology and equipment.
- ▶ The outer layer is made in the form of winding 4 twisted threads that significantly increases adhesion to concrete.
- ▶ The tensile strength of our products exceeds the strength of the analogues existing on the market by 20-25%. That allows to use smaller diameter rebars to achieve the same or higher strength of the final product.

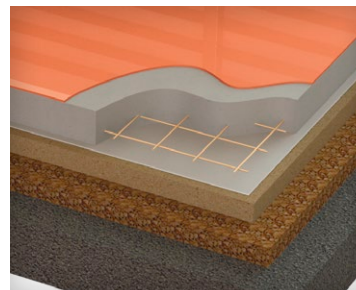
ETIZ GFRP REBAR APPLICATION



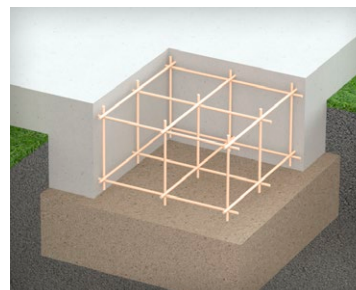
WATER-TIGHT CONCRETE OR ASPHALT STRIP COATING AROUND THE BUILDING



CONCRETE SIDEWALKS, SPATIAL PLANNING, LANDSCAPE DESIGN



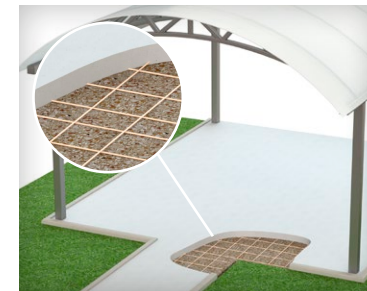
INDUSTRIAL FLOORS (UP TO 5 TONS PER M²)



SLAB FOUNDATIONS OF HOUSES UP TO 2 FLOORS



RETAINING WALLS, UNDERGROUND



PARKING STRUCTURES AND GARAGES



RETAINED SHUTTERING WALLS



STRIP FOUNDATION OF HOUSES UP TO 3 FLOORS