REBAR

Rebar has been established in 2012 with sole and only purpose to disrupt the market with a new type of construction materials.

About us

We pride ourselves in taking construction products that are commonly used, re-thinking and upgrading them with our in-house team of engineers and top class industry professionals, using technologies that are as up to date as possible. The result of our work is represented by a line of products that surpasses standard alternatives by all technical characteristics within their medium.

Product

Used in concrete reinforcement, our fiber glass bars have already become a better alternative to standard and industry common steel bars.

Product

Approved by all major construction institutes our FG bars allow for new construction techniques that result in added value for clients and a stronger, more sustainable buildings that overcome weather and deterioration factors, which in turn, prolongs life of a construction object.

Market

Standard steel reinforcement bars are the most common way to reinforce concrete. While concrete has high compressive strength, it has limited tensile capabilities. Steel bars are usually used to overcome these limitations of concrete, placed in high tension parts of concrete structures. It has historically been used as a one stop effective option to harden the concrete in all types of construction. Nevertheless, steel bars carry a number of disadvantages that shorten life of a structure, requiring further refurbishment work as time passes.

Disadvantages of steel reinforcement bars:

- High corrosion of metal (coastal areas, high salt level environments, aggresive chemicals mediums)
- Corrosion increases volume of steel, causing concrete to crack as it can not sustain increased tensile load, which in turn deteriorates steel even further.
- Electric and magnetic conductivity (attributes of medical, airport, nuclear, power generating and electronic mediums)

Disadvantages of steel reinforcement bars:

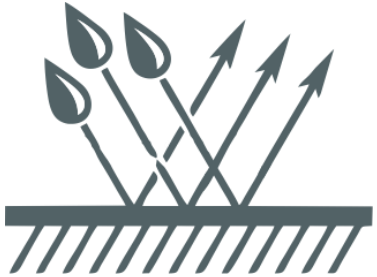
- Fluctuating price of metal

Prices of steel reinforcement bars are directly dependent on the market price of metal. Such dependency results in constant fluctuation of final prices, making it difficult to project costs of construction

- Limited length of bars

Due to the production and transportation factors steel bars always have a limited maximum length. Bars are usually welded together in order to achieve required size, where joints become new breaking points when stress is applied.

Advantages of our fiber glass reinforcement bars:



Corrosion resistant

- Does not rust
- immune to salt ions, chemicals, concrete inherent alkaline

Corrosion resistant

Much harder to break compared to steel. Prone to low/high temperatures

(-70C -- +150C)

Advantages of our fiber glass reinforcement bars:

Unlimited length

Lighter than steel by at least 5 times

Concrete like heat expansion ratio

Eliminates cracks in concrete and breaking of the structure

Easy to transport

Prolongs life of a construction structure (over 80 years).

Hence lowers refurbishment expenses

Advantages of our fiber glass reinforcement bars:

Eco-friendly

Linked by plastic or metal joints/hubs

(does not require a welder)

Electro-magnetic fields' neutral

Thermal efficient (does not conduct heat and cold)

Application

Construction in sea water
or in close proximity to it

Concrete exposed to deicing salts
(roads, foundations, bridges, tunnels, etc)

Low electric conductivity mediums
(factories, manholes, telecomm towers, airports, hospitals etc)

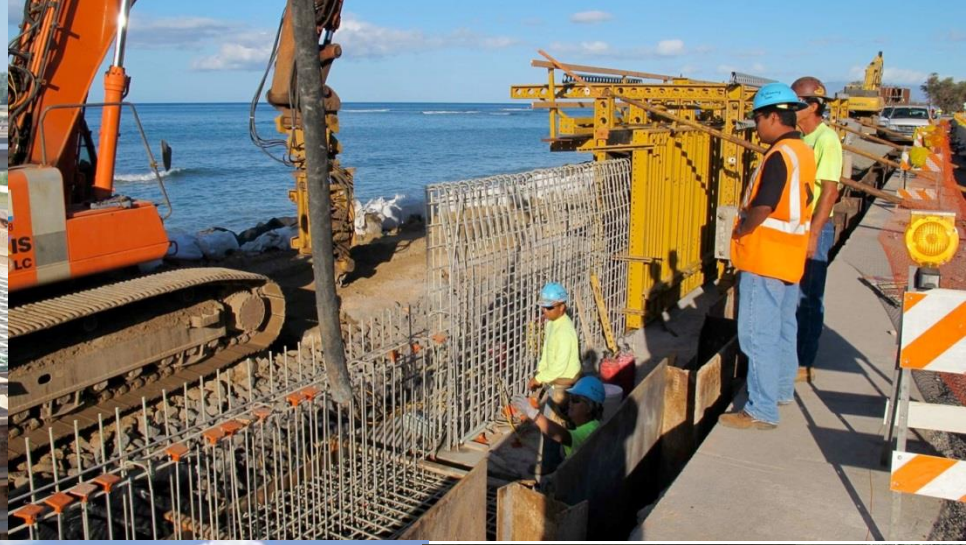
Weight sensitive structures

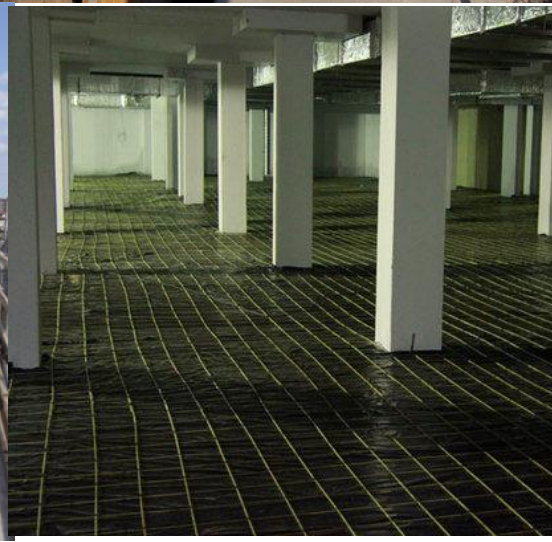
Heat/cold sensitive environments
(patio decks, heated floors, air conditioned rooms, basements etc)

Tech specification

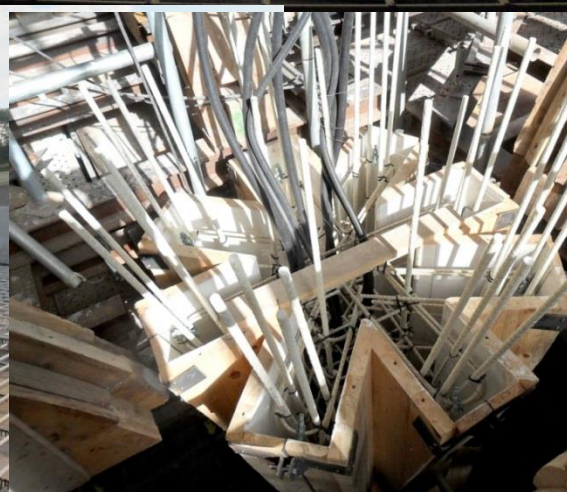
Technical characteristics	Composite reinforcement ALB-REBAR BFRP	Composite reinforcement ALB-REBAR GFRP	Carbon steel AV reinforcement	Stainless steel reinforcement
1. Tensile strength, MPa	1200	1000	550	550
2. Thermal conductivity	< 0,46	< 0,56	56	17
3. Density, g/sm3	2,0	2,0	7,85	7,85
4. Modulus of elasticity , GPa	50-55	45	200	200
Safety parameters:	✔	✔	✔	✔
1.Electrical conductivity	dielectric	dielectric	electrically conductive	electrically conductive
2. Magnetic characteristic	non magnetic	non magnetic	magnetic	non magnetic
3. Fire resistance, 0C	up to 300	up to 300	up to 600	up to 600
4. Corrosion- & chemical resistance	very high	high	low	high

Application in pictures





Application in pictures



Summary

Alb-Rebar is on a constant look out for new technologies, that can be implemented in manufacturing processes of construction materials

Being an innovative company, we go side by side with technological progress, updating not only the final product but also the manufacturing processes involved (developed in-house).

Our reinforcement bars prevail over common steel competition by all means possible, opening new possibilities to construction companies and in the end allowing for better end results for clients.

Utilization of our bars helps to decrease expenses, prolongs life of a construction and is perfectly suited for many stress environments like coastal areas, bridges, goverment institutes, tunnels, etc.

Summary

The end result is an eco-friendly and lightweight construction structure with an improved life duration

Supported by many international institutes, we have already helped a large number of our clients to shift to a better way of construction

Being an easy to transport product, you can start saving money before initiating construction processes.

Our reinforcement bars will help you to futureproof your construction project, making it more eco friendly and overall a more durable and efficient subject to stress.