

Fiberton A.Ş.







catalogue

an abstract of Fiberton product range

composites

fiberton.com.tr



together for better fiberton.com.tr

Fiberton A.Ş. artisan reinforced composites









^{*}Following document is an abstract about Fiberton and its material range. It only aims to summarize information. For more details, visit **fiberton.com.tr** or contact **info@fiberton.com.tr**

ABOUT-

Fiberton A.Ş. specializes in efficiently engineered, modular, long lasting reinforced concrete, polymer and gypsum composite wall panel production.

Excellent for both interior and exterior decorative architectural elements. We can cover multiple needs with our wide material range and clever mounting solutions.



20.000 sqm production facility located in Mersin / Turkey

As a company with almost 20 years of experience in the field, Fiberton recognizes its position as a bridge between imagination and realization.

Meeting up with the demands of the customer requires expertise and experience and Fiberton always delivers.

What we do?

Fiberton, with its long years of experience in the industry, offers high quality products with expert service and customer satisfaction. Fiberton specializes in architectural wall panel production for both interior and exterior cladding. Our expertise in reinforced composites makes us a capable company that can offer different materials and solutions for different situations.

Fiberton material range includes precast reinforced composites such as Ultra High Performance Concrete(UH-PC), Glass Fiber Reinforced Concrete (GFRC/GRC), Steel Fiber Reinforced Concrete (SFRC/SRC), Glass Fiber Reinforced Polymer (GFRP) and Glass Fiber Reinforced Gypsum(GFRG/GRG). In addition to commercial products above, Fiberton R&D team continues their progress in perfecting environmental geo-polymer concrete and Textile concrete for commercial projects.

Technique and craftsmanship, perfectly blended. Artisan products meet with technical expertise in Fiberton.

Research & Development

Our research and development team consists of qualified personnels who are experts in their area of expertise. From day one, we work towards improving our products, our industry and ourselves.

The process required to successfully build UHPC, GFRC, GFRP and GFRG was developed in Fiberton labs. Fiberton is one of the first companies who introduced the material UHPC and GFRG to Turkey.



Ouality

Since day one, our main goal is achieving high quality and sustaining the same quality in each product. We comply with TS EN 12467 and TS EN 1170 standards in our production to demonstrate our quality to our clients. We are also a full member of GRCA. To achieve the same high quality material each time, we also carefully select and inspect our suppliers to get the best quality raw materials.

Expertise & Location

Fiberton is capable of supplying everything from precast, tailor-made UHPC façade to standard modular wall panels. Our expertise from GFRC gives us the ability to produce highly complex shapes, curvatures and textures.

Our production facility is located in Mersin, Turkey. Mersin, which is a port city in the south, is the optimum location for production and logistics. It is very close to the best possible high quality raw materials. Also by being a junction point for motorways, aerial transportation and sea routes, logistics is also the strong suit of Fiberton.





GFRC spray production

GRC [1] PLUS

GRC Plus represents Fiberton A.Ş.'s almost 20 years of experience and material quality. GRC Plus operates in the field of Glass Fiber Reinforced Concrete (GFRC/GRC) facade cladding panels expertise and has completed over a hundred projects in different countries. The projects completed in a wide project pool ranging from modern architecture to traditional reproductions, reinforce the recognition of GRC Plus in the global market. Produced in accordance with international standards and meticulously inspected regularly, GRC Plus products are produced in accordance with all kinds of forms and architectural concepts, provide trouble-free application and a long-lasting facade with efficient assembly solutions.



Fiberton A.Ş. exhibits its products in the global market with its **brands** and **wide material range**.

Our brands carry the vision and disciplined quality control approach of Fiberton. These brands, together with Fiberton's quality certificates, R&D activities, laboratory facilities and experienced team, enable Fiberton to be effective in the global market.

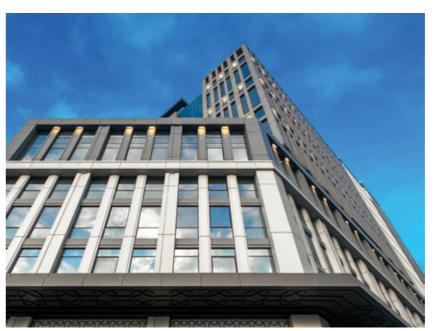








Dekkap is a brand that specializes in Ultra High Performance Concrete (UHPC) and continues its activities in Glass Fiber Reinforced Concrete (GFRC/GRC) and Glass Fiber Reinforced Gypsum (GFRG). Dekkap, which is essentially an R&D and innovation brand, is a global brand that can produce UHPC with its own recipe. With Fiberton in production and R&D activities, Dekkap advances its know-how in architectural concrete day by day. Dekkap, which has completed many projects in the national and global market with its dynamic and innovative structure, has become a sought-after brand in self-compacting concrete mixes, ventilated facade systems, permanent formwork systems and urban furniture with product development and assembly solutions for project conditions. With Fiberton, it has also started to develop products on GFRC with high physical properties. Dekkap makes its difference in the global market with its concrete science, R&D activities and innovative surface applications.



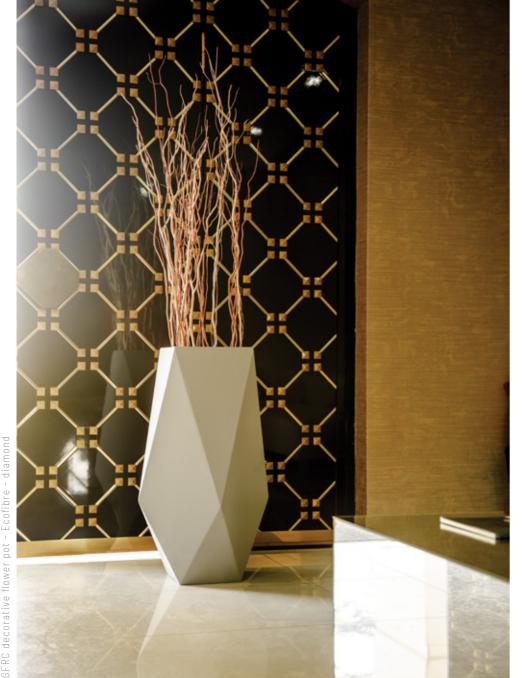


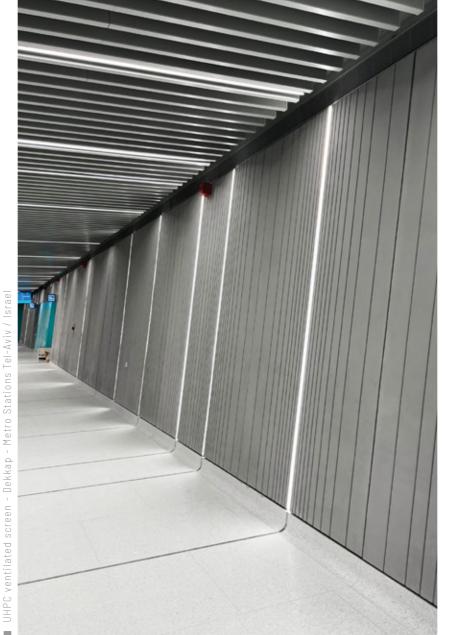


F EcoFibre

Eco Fibre is a brand that complements Fiberton's vision of sustainable products and zero waste.

Eco Fibre, which seriously deals with surplus products that can be observed as a side effect of disciplined quality control systems and residual product problems, which are the side effects of high production volume, operates in upcycling, repurposing and recycling. Eco Fibre, which has an activity area ranging from end-user products to urban furniture, has a design team working with the aim of bringing GFRC into daily life, an environmentally friendly vision and an experienced production team.

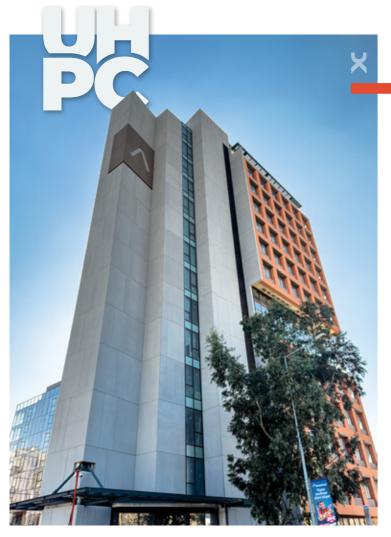












elegant but **strong**, **brutal** but classy.

We make thin and strong concrete panels you can easily apply to your façade.

When densely packed particles meet with low water and fiber content, a superb material named Ultra High Performance Concrete emerges. Stronger material means thinner panels and longer lifespan. Also A1 class incombustible.

Ultra High Performance:

UHPC consists of carefully selected natural raw materials packed in a very specific and harmonious manner to create an innovative material with exceptional compressive and flexural strength, very low water absorption, and a very long lifespan. With its class A1 incombustibility, UHPC offers high thermal qualities and temperature stability. With superior abrasion resistance and dimensional stability, UHPC is highly resistant to weather and thermal factors. Along with its high physical impact resistance, it offers excellent flexural strength to withstand high wind loads. Its excellent mechanical features make it possible to produce lighter panels with superior surface quality and customizable texture and color.

The term UHPC means:

- -Ultra High Strength Concrete with a compressive strength of **over 100 MPa**.
- -Low water/binder ratio.
- **-Optimized particle packing** with a special selection of fine and ultra-fine particles
- **-Low porosity** and high durability.
- -Fiber content to provide matrix ductility and improved **flexural strength.**



Standard Panel Sizes

1200mm x 3600mm, 1200mm x 2400mm, 1200mm x 1200mm sizes are available as standard panels. Pre-drilled panels for undercut type of concealed fixing are 15 mm in thickness. 10, 15, or 20 mm panels are available for clip type of concealed fixing. 10 mm panels are available for visible fixing.





3600mm x 1200mm

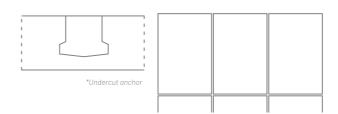
*Custom sizes are available upon request

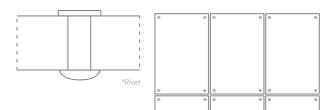


innovative material with exceptional compressive and flexural strength, very low water absorption and a very long lifespan.

Fixing Types

Concealed or visible fixing types are available. Concealed fixing can be achieved with undercut anchors, clips, or adhesives. Visible fixing can be achieved with rivets, screws or clips. UHPC panels for undercut anchors are pre-drilled and easy to install.





Creative freedom

Our thin, strong, and durable panels give infinite freedom to creators to create with endless possibilities. You can choose one of the various formats, colors, or textures to your liking.

Performance

Dekkap UHPC Panels withstand extreme loads compared to regular concrete panels. Due to their robust properties, the panels are weather-resistant and have a long service life.

Durable

With exceptional abrasion resistance and dimensional stability, UHPC is highly resistant to weather and thermal factors. Along with its high physical impact resistance, it offers excellent flexural strength to withstand high wind loads. Its excellent mechanical features make it possible to produce light panels as thin as 10 mm with superior surface quality and customizable texture/color alternatives. Panels only lose 1 mm in thickness in 60 years.

Texture

Texture integrates depth into the façade. Sunlight breathes life into it. Endless possibilities in form and texture make UHPC in harmony with nature and its surroundings.

Colors

Thanks to superior surface quality and excellent finishes it is possible to integrate color with ease. Choose the best for your taste from our color chart. UHPC panels are also paintable.

Green and Respectful

Fiberton A.Ş. is highly aware of its liabilities to the environment. Highly optimized usage of natural mineral raw materials and efficient concrete consumption enables reducing carbon footprint to a minimum degree. Also due to UHPCs thinner and lighter structure, it is possible to ship more panels in a box and it is possible to use less construction equipment and machinery to install. Together with its long lifespan and low maintenance necessity, UHPC is a great green solution respectful to our world.

Format

The standard size for a panel is 1200mm x 3600mm, however, our panels come with 3 different alternatives, which are 1200mm - 2400mm - 3600 mm in height. Custom sizes and textures are available upon request. In production, the slicing process of standard panels is optimized to have maximum efficiency.

Genuine

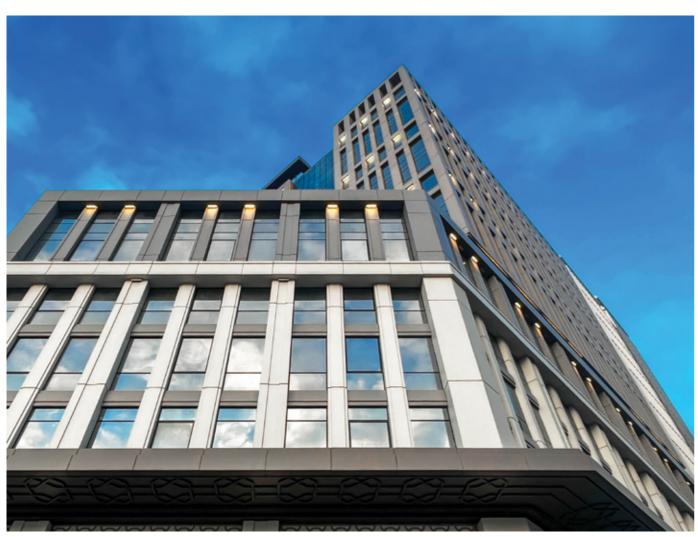
UHPC panels are carefully engineered and skillfully designed. Together with years of experience, Fiberton A.Ş. is highly capable of manufacturing the best all-around solution for any project.

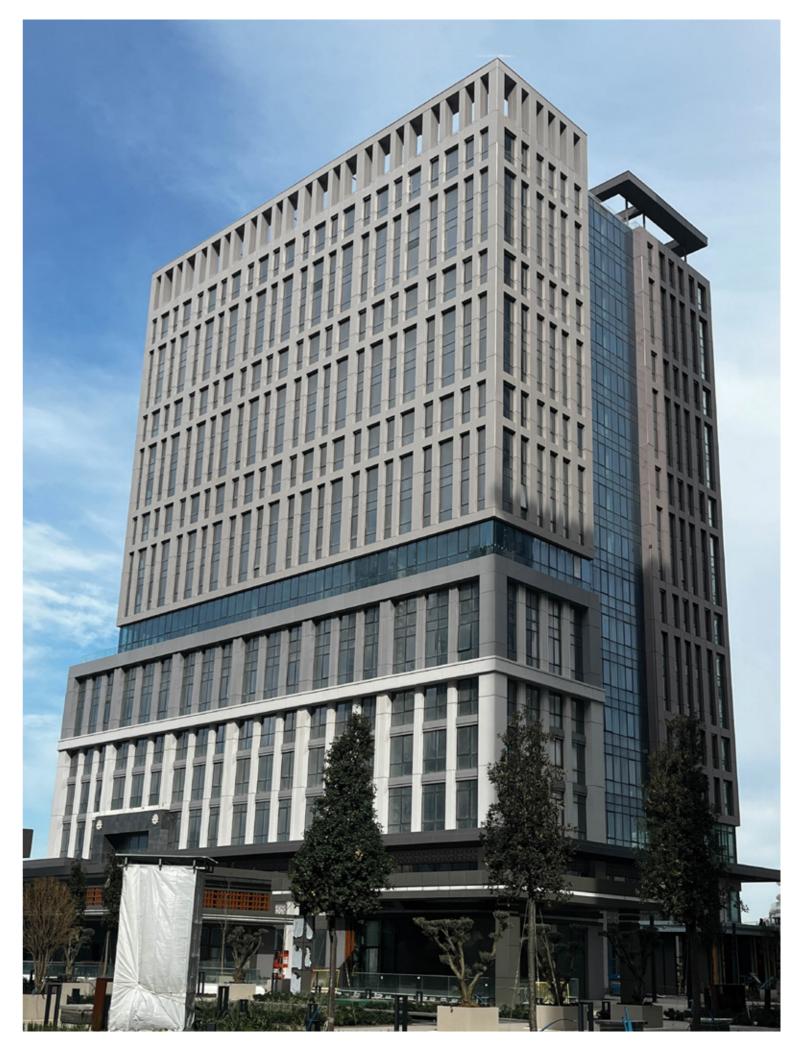
Support

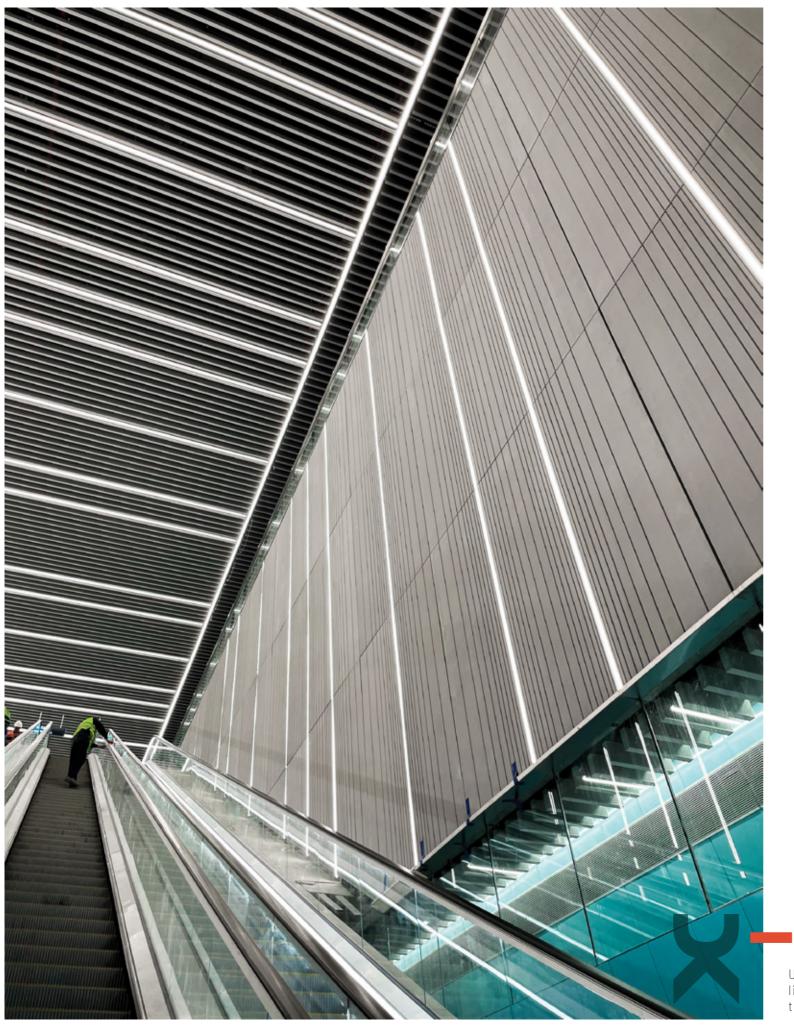
With superior detail capability and a highly formable nature, UHPC is capable of surrounding a building like a glove. Our experienced architect and engineering team is at your service for clever detail solutions.





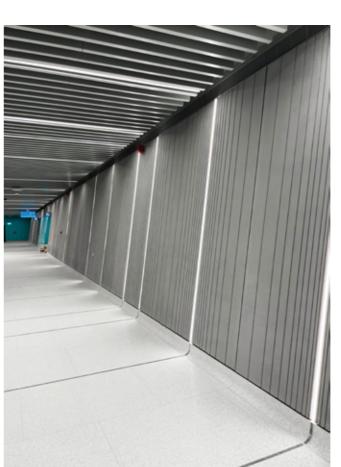














tel aviv metro stations

UHPC panels with variable grooves are installed as a ventilated screen. A great combination with joint lighting, linear metal elements, glass elements and grooves is achieved. This combination enhances the modern look of the stations while the variable grooves adds depth and spaciousness.



creativity like limits

Special façades need experienced specialists. **Forms beyond imagination** are possible with our Glass Fiber Reinforced Concrete panels and experienced team of specialists.

Carefully tailored for your needs.

Glass Fiber Reinforced Concrete

GFRC/GRC stands for Glass Fiber Reinforced Concrete. When high-quality portland cement and carefully optimized silica sand are combined with omnidirectionally woven high glass fiber content, it is possible to produce thin precast concrete panels with outstanding properties. The glass fiber eliminates the need for rebar and allows to produce thinner and lighter concrete panels. The type of glass fiber used in the panel plays a critical role as well. The glass fiber used in the GFRC panels should be alkali resistant (AR) with a zirconia content of at least 16%. If any other type of glass fiber is used, the glass fibers inside the concrete would lose their properties in a short period of time.

Strong and fireproof

The glass fiber reinforcement results in a product with much higher flexural and tensile strengths than traditional concrete, which gives GFRC excellent formability and the ability to be cast in a thin layer. GFRC is a lightweight and durable material that can be cast into many forms and textures. Since it can be produced as a thin shell, it requires way less concrete than traditional methods. High flexural strength also gives GFRC excellent resistance to wind and earthquakes. GFRC panels are fire resistant with A1 "non-combustible" class according to EN-12467.



Cooperation with the expert

GRC production is a complicated process that requires experience and know-how. Fiberton A.Ş. has been in the GRC industry for almost 20 years and Fiberton A.Ş. is one of the most experienced companies in Turkish industry.

Tailor-Made Production:

6

GFRC is a highly formable material that stretches the boundaries of architecture quite a bit. It is possible to efficiently divide complex structures into manageable modules and manufacture them.

Every project is unique and approached specifically. Fiberton's expert team of architects and engineers divides the façade efficiently into modules that can be transported and installed safely to the building.



GAZIANTEP BÜYÜKŞEHİR BELEDİYESI

PANORAMA

25 ARALIK

CINTER MARKARATA MINDENANTA KANDENANTA KANDEN

sculpt your façade

GFRC projects are tailor-made.

Every project is **unique** and has **different needs** such as any of us

Features of the GFRC panels can be shaped for the needs of the project. GFRC production requires organization, planning and know-how due to the intertwined production processes.

■ GFRC is



Highly Formable

The glass fiber reinforcement gives GRC an excellent formability and the ability to be casted in a thin layer. GRC is a lightweight, durable material that can be casted into nearly unlimited shapes, colors and textures.



Colorful

GFRC panels can be produced with color without the need of extra paint. UV resistant pigments mixed into concrete mix allows us to produce panels with color. Be aware, due to the nature of concrete, color variation may occur between different panels.



Earthquake Resistant

Modular structure and special assembly methods give the panels very high earthquake resistance. Panels can move and slide slightly to absorb and dampen earthquake stress.



Durable

Excellent physical characteristics and fiber content makes GFRC a very durable and long life material. With superior abrasion resistance, freeze thaw resistance and compact matrix structure, GFRC stands strong against time.



Insulated

The rainscreen cladding system provides GRC natural thermal insulation. Insulation properties can be increased with the application of mineral wool or other insulation elements.



Light-Weight

GFRC panels are manufactured as a 15 mm thin shell. This characteristic feature makes GFRC much lighter than conventional concrete, prestressed precast concrete and most traditional building materials.



Fire resistant

GRC panels are fire resistant with A1 "non-combustible" class according to EN-13501.



Sustainable

Thinner panels and low cement ratio makes GFRC precast panels more sustainable than traditional concrete. Also, the long lifespan of the material makes GFRC panels environmentally friendly.



Recyclable

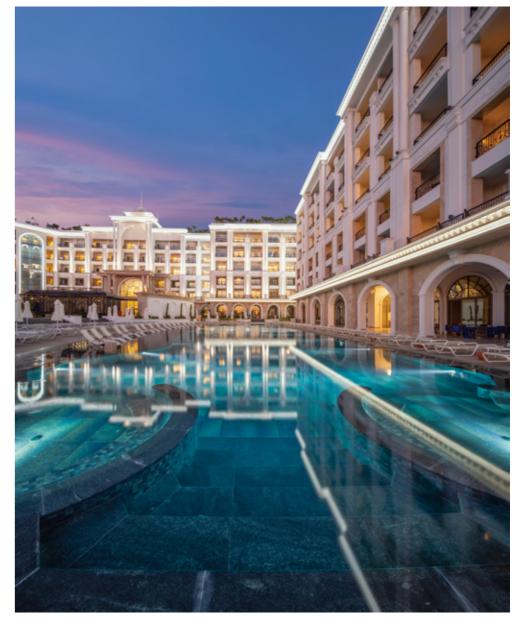
GFRC is a material that uses natural mineral materials in its matrix. GFRC is recyclable and can be reused after its lifetime.



Texture & Finishes

GFRC panels can be produced with a variety of textures.





merit royaldiamond

Merit Royal Diamond is a luxury hotel complex in Cyprus and it is a good example of decorative elements and their effect in the façade. Classic decorative elements, arcs, columns, jambs and sills and some landscaping elements are being used in this project to support the first class service of the hotel.





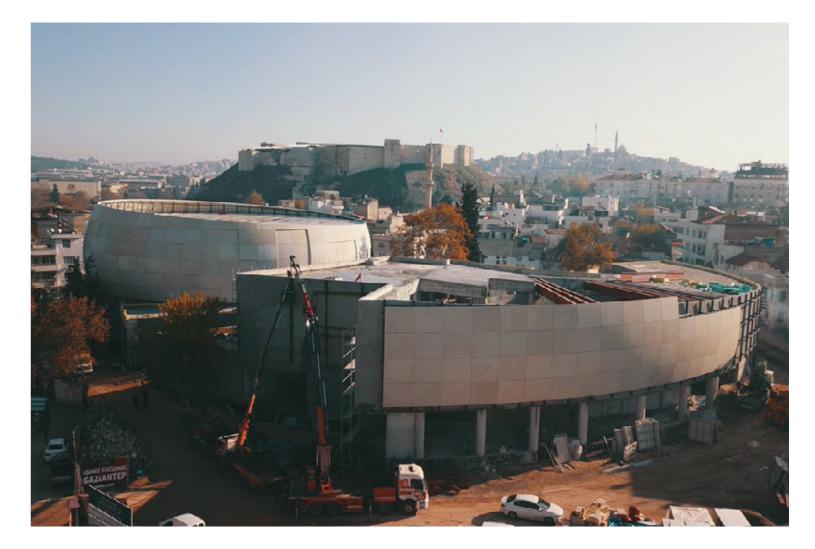
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panorama museum

Panorama Museum is in Gaziantep. It is a museum that aims to present visitors a unique experience and show a panorama of the history of the city. Architectural concept of the building adds up to that experience. With this kind of shapes, GFRC is a great material to work with. With GFRC, you are able to achieve milimetric partitons of a complex shape, manufacture custom pieces and assemble it rapidly to get the desired shape and texture. In this project, a colored and distressed look is achieved to blend in with the history and architecture of the city.







-colors & textures

What is your color?

UHPC and GFRC panels allow colored **production** with UV resistant pigments

Exposed aggregate surfaces are also

Custom colors and textures are available upon request.

Colored by the mix

UHPC panels are light gray in color. GFRC panels are off-white. They are also available in color. Colored production is possible by using pigments in the mix. This method allows our panels to be maintenance-free.

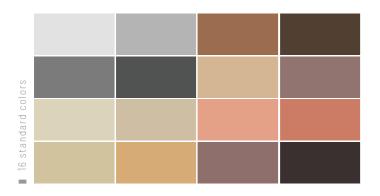
16 standard colors are available. Custom colors are also available upon request.

Surfaces and textures

We offer 3 different finishes as standard. Smooth, sandblasted and rough.

Color Variation

There are certain limitations to color when it comes to colored production. Overuse of pigments might affect physical properties, introduce too much air into the mix or pigments might overflow through the surface. We suggest colored production when it is possible to produce without compromising quality. Even though we suggest colored production, we also need to inform our customers about slight color variation between panels and on the surface. Depending on the nature of the concrete, color changes in aggregates, design differences, hydration process, weather differences, etc. can result in color variation.



would be undetectable in larger-scale façade applications.

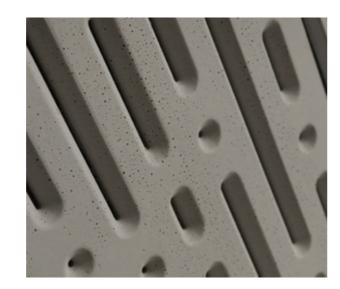
Surface properties described above applies to the visible side of the cladding panel. Concrete surface sample panels can never reflect all of the above features. Small defects may occur on small sample panels but they

UHPC and GFRC panels are also possible to paint. Standard exterior paints and semi-transparent colored impregnations are available. Colored impregnations makes it possible to color the concrete without losing the texture and feel.

Concrete is a special material with unique characteristics. Due to its natural matrix, minor imperfections like depressions, stretch marks, and pores may occur on the surface.

in the mix. They are also paintable.

available with multiple options.



Hydrophobization

UHPC panels come with a layer of hydrophobic coating. Hydrophobic coating provides basic protection against weathering, dust, and dirt. Hydrophobic coating is water impermeable and breathable. Hydrophobic coating does not provide protection against scratches, pressurized liquids, oil, acids, strong alkalis, etc.

Paint

Nature of the concrete



constant control, consistent quality

Since day one, our main goal was to achieve high quality and sustainable consistency in each product. For this, we carefully select and inspect our suppliers to get the best quality raw materials and test constantly.

Fiberton is a full member of GRCA and complies with EN 12467 and 1170 standards and ISO 9001, 14001 and 45001 management systems.

■ tech-specs

Sizes	1,2 x 1,2 m, 2,4 x 1,2 m ve 3,6 x 1,2 m	
Special sizes	on request	
Dimensional Variation Length (3,6m)	± 4 mm	EN 12467
Dimensional Variation Width (1,2m)	±2 mm	EN 12467
Thickness	15 mm (10-13 mm on request)	
Thickness Tolerance e≤6 mm 6 mm <e≤20 mm e="">20 mm</e≤20>	± 0,6 mm ± %10e ± 2 mm	EN 12467
Edge Straightness	± 0.3 %	EN 12467
Dhusiaal Characteristics		
Physical Characteristics Compressive strength	≥110 N/mm²	
Impact resistance	5,97 kJ/m²	
Bulk density	2,0 - 2,3 kg/dm³	EN 12467
Bending tensile strength	13 - 18 N/mm² (MOR*)	EN 12467, Class 3
Dead load / mass per unit area (15mm)	30 - 34,5 kg/m²	
Material class	A1 - non-combustible	EN 13501-1
Modulus of elasticity (deformation)	10000- 20000 MPa	EN 12467
Modulus of elasticity (restraint)	40000 MPa	EN 13412
Water absorbtion	%1-3	TS EN 1170

■ tech-specs

		Premix	Spray
Compressive strength	N/mm2	40 to 60	50to80
Tensile strength	N/mm2	4 to 7	5to10
Modulus of Rupture	N/mm2	8 to 12	15 to25
Elasticity module	kN/mm2	10 to 20	10to20
Density	Kg/dm3	1.9 to2.1	1.9 to2.1
Fire resistance (DIN4102)		Α1	Α1
Water absorption	%	3 to15	3 to15

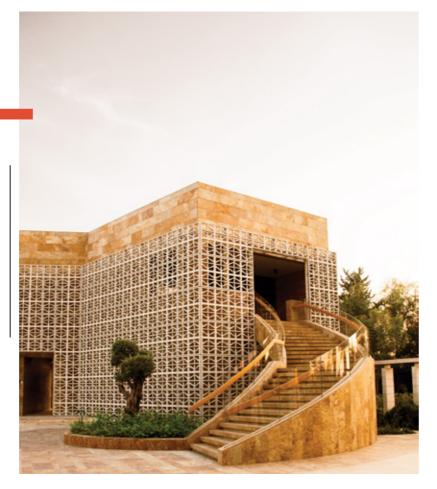


8



hilton hotel —

Hilton Hotel in Adana is in the center of the oldtown with many historical landmarks nearby. Aim of this project is to blend in with its surroundings while achieving a modern and striking look. Classic building materials of the region and modern decorative elements and materials are used in this project for this purpose. GFRC perforated panels are used with natural stone to add dimension. Also GFRP posts with modern form are used in the parking lot to highlight the modern service of the hotel.

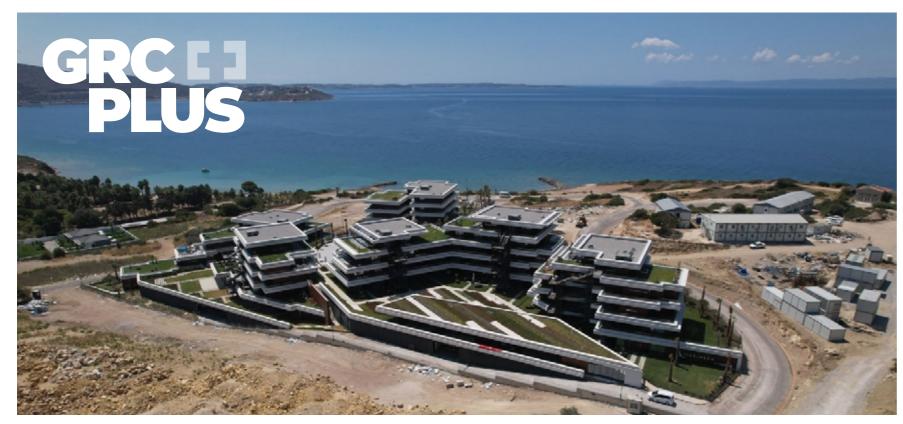






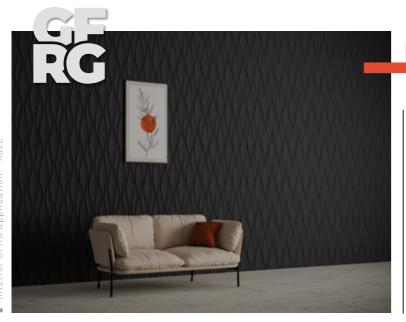
-çeşme marinera

Çeşme Marinera is a great example of modern architecture in a near-sea environment. GFRC is not only a material to work with complex details, but also a great material to achieve a sleek, modern, minimal look with minimalist aesthetics. Also one of the best materials to work with when it comes to humid and hot environments.





3



pieces make up

Texture is everything.

It is one of the most important aspects that allows us to **define the world better**. It reveals light and shadow, black and white, full and empty, yin and yang.

We can confidently assert that texture is an indispensable element in architecture, as in everything else. Precisely for this purpose, Fiberton GFRG aims to enrich the texture quality to bring a better look and feel to our environment.

Structure

GFRG, which is formed by the combination of high density, strong porcelain gypsum and glass fiber, brings a new approach to wall panels with its superior physical properties and environmental sensitivity. Porcelain gypsum has become indispensable for many sectors thanks to its higher density, high strength, hardness and superior detail ability compared to conventional gypsum types.

When the strong structure of porcelain gypsum combines with glass fiber reinforcement, a smooth surfaced and long-lasting wall panel that is highly

resistant to scratch and impact emerges. In addition to its strong structure, Fiberton GFRG wall panels stand out with their features such as ease of application, seamless patterns, modular structure and monoblock application ability.

Eco-Friendly

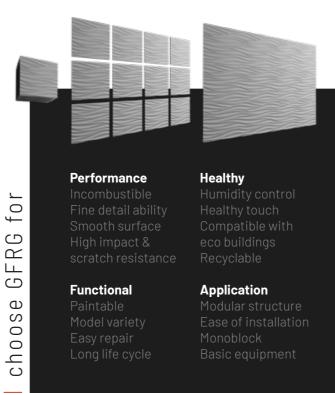
Fiberton GFRG wall panels are fireproof, healthy, strong, recyclable, easy to install, and practical. Along with these features it also is an environmentally friendly approach to interior wall panels.

GFRG also is one of the healthier materials to live with. Along with its natural matrix, it also acts as a humidity balancer in your home. Gypsum captures and stores excess moisture in humid conditions and releases in low humidity. Also by being incombustible and recyclable, GFRG is highly suitable for eco buildings.

Convenience

Fiberton GFRG panels are usually produced 500x500mm in dimensions. Panels consist of repetitive textures which form a bigger seamless pattern when installed. In some models, it is possible to change the pattern by rotating pieces. It is also possible to create a seamless, monoblock pattern by filling the joints.

Monoblock coverage of large areas in a relatively small size is a great advantage. It allows easier transportation, fast delivery, storability, low labor and transportation costs and lower carbon footprint.



Variety

Having the ability to adapt quickly due to its nature and production method, GFRG is capable of responding quickly to new developments and customer demands. Where the dynamics of the world change faster every second, it becomes more and more important to adapt and improve rapidly. With teamwork, creativity and energy, GFRG is able to provide model diversity, good design, sales and support.

Application:

Dekkap GFRG panels can be resized with a hand saw. Panels are suitable for mounting with screws or adhesive. A screw hole with countersink can be easily covered after application. Quick repair of damaged pieces is also possible with repair putty.

Monoblock:

In a monoblock application, joints should be filled with repair putty or gypsum with a scraper. Then the filling should be sanded until a smooth, even level between panels is achieved. Then the panels are ready to be painted. Panels can be painted with a roller, brush or spray.

Repetitive panels make up the majority of models. In some models, more flexible applications are possible by applying several modules in different combinations. Thanks to its modularity and ease of assembly, it paves the way for even the classic home user to decorate their own home with their own taste. Thanks to its jointless monoblock application capability, long-lasting, healthy and unique interiors are now much easier.



interior GFRG application - f

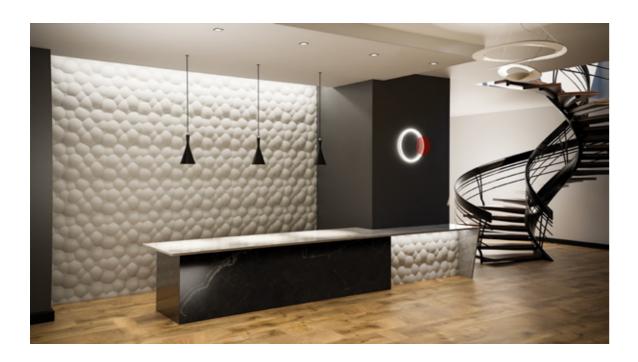
rapid,light& formable

applications.

GFRP stands for Glass Fiber Reinforced Polymer. Similar to GFRC, it is **ultra formable** and also **light**. Lighter panels mean faster mounting. Also **UV resistant** and **colored** gelcoat layer makes it suitable for outdoor

Custom forms and rich colors make GFRP a perfect alternative for both interior and exterior applications.







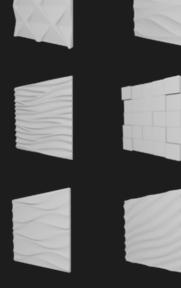


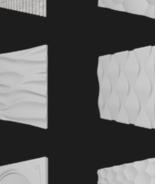


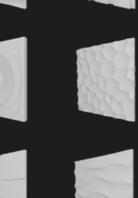






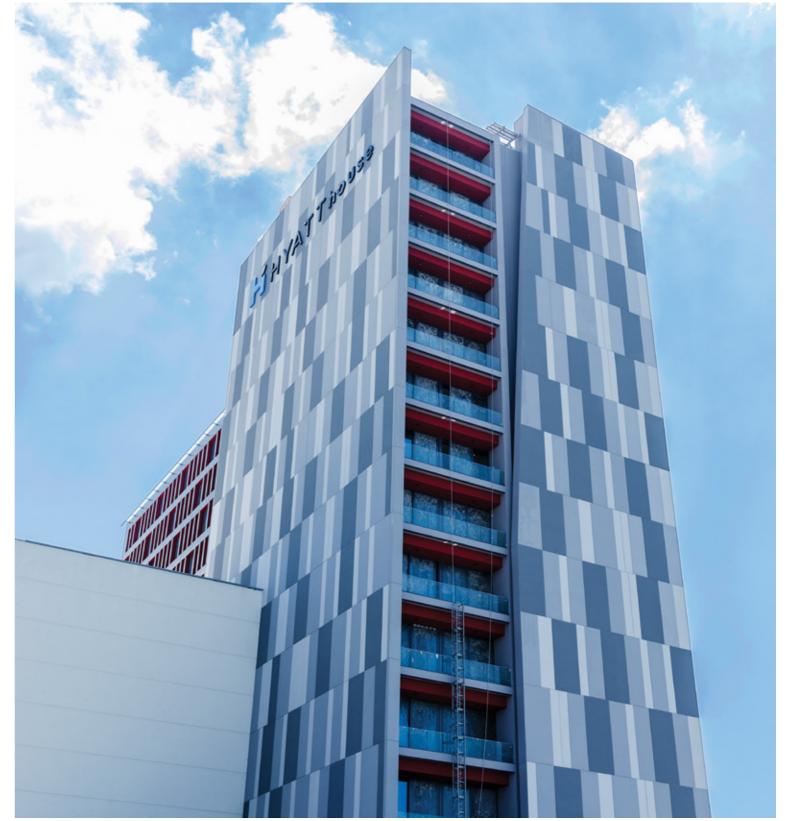








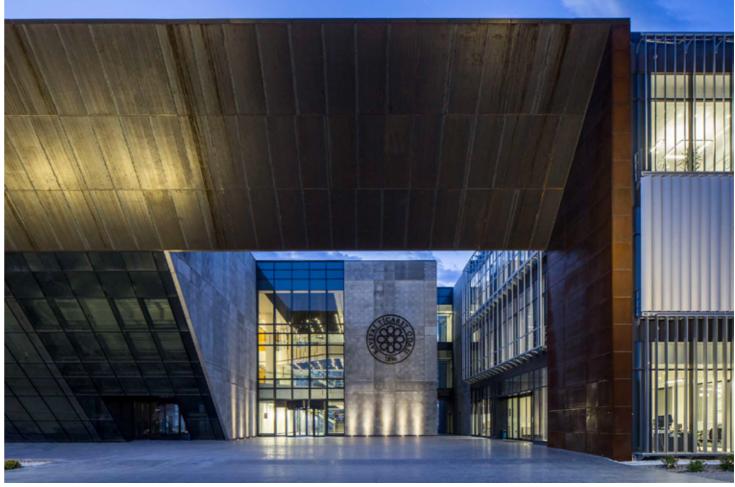




-hyatt house hotel

Hyatt House Hotel is in Istanbul. Several shades of grey are applied randomly to amplify depth. The result with shades of grey is a sleek and modern facade achieved with flat colored panels.



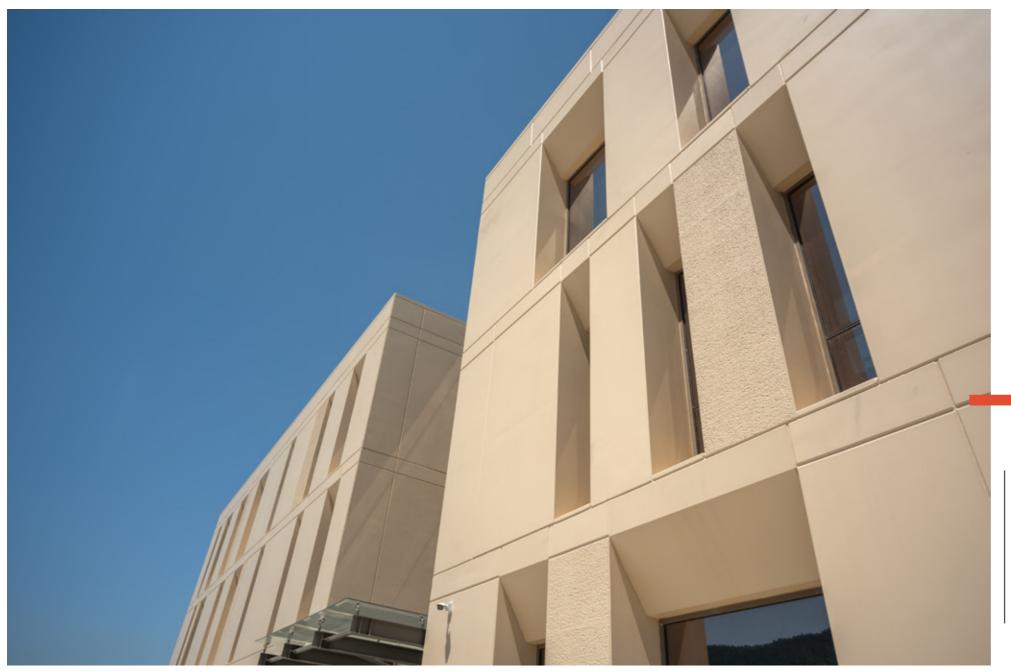




chamber of commerce

Chamber of commerce building is a project in Kayseri. Raw concrete look and rusty steel inclined pieces amplify the brutal look of the project. With its unique look and great aesthetics, this project won architectural awards in several categories.







- aksa headquarters have textured and colored panels.

Aksa headquarters have textured and colored panels. It is a perfect example of modern and minimal architecture that blends with its surroundings. Geometric form of the building with textured pieces fits well with the modern and elegant look of the company.













hotel la mirage

Hotel la Mirage is a project in Istanbul that is a landmark in its region. While standing on a junction point of a crowded main road in the center of the city, the building is familiar with people in Istanbul for over 10 years.

















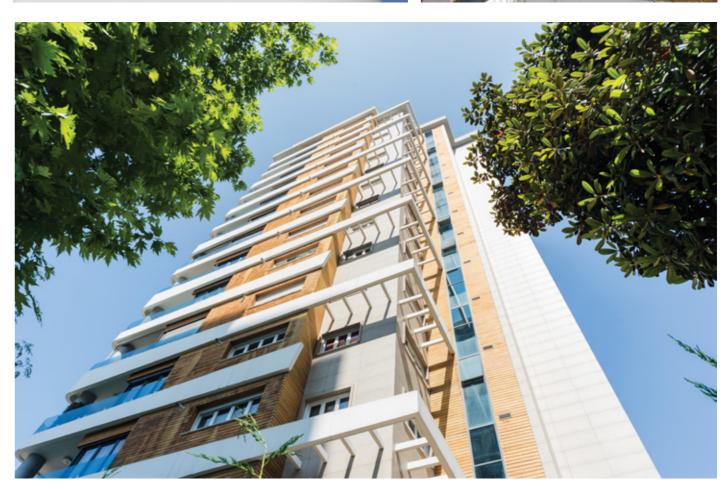






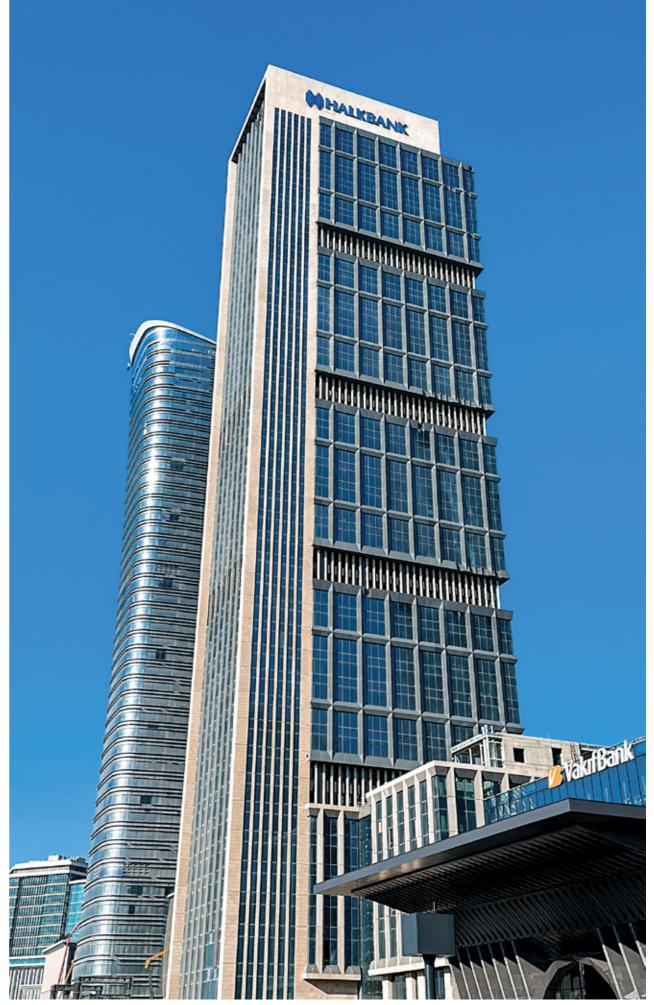


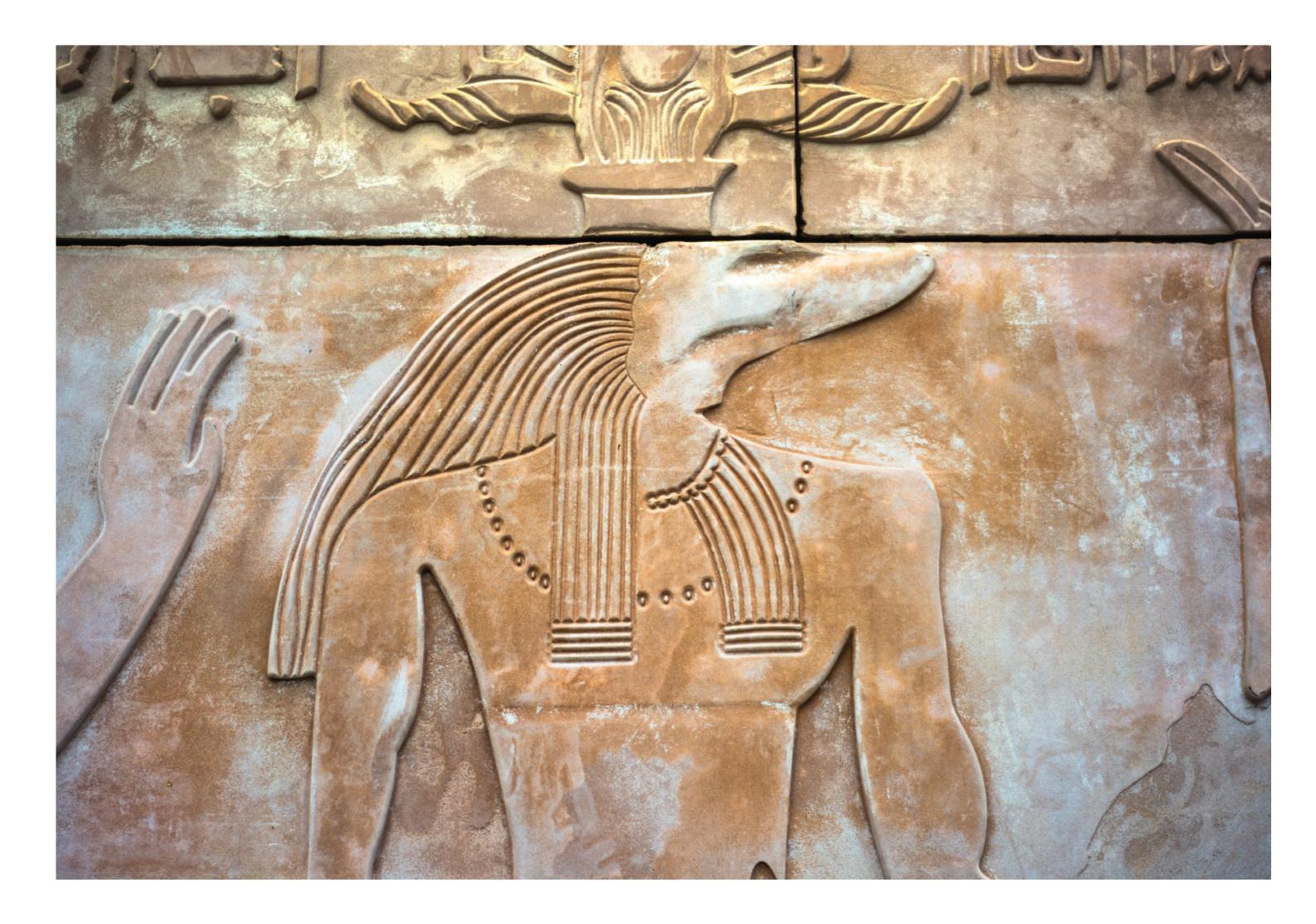


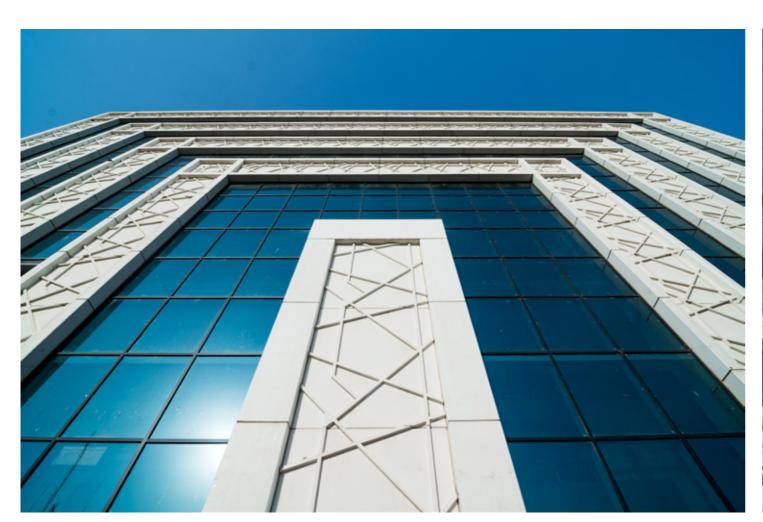


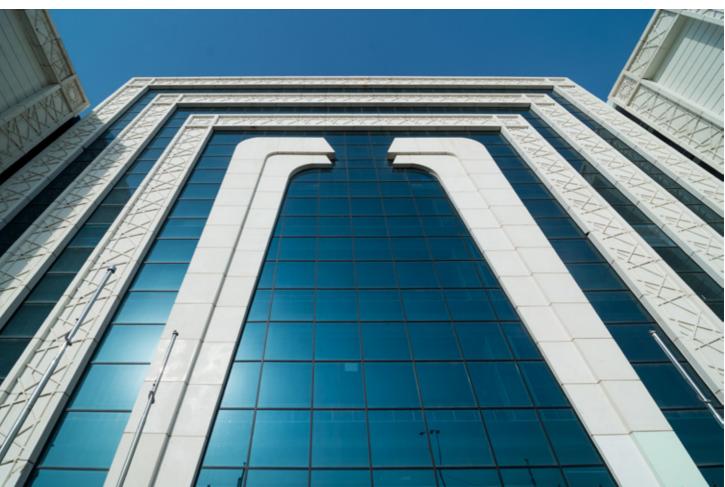














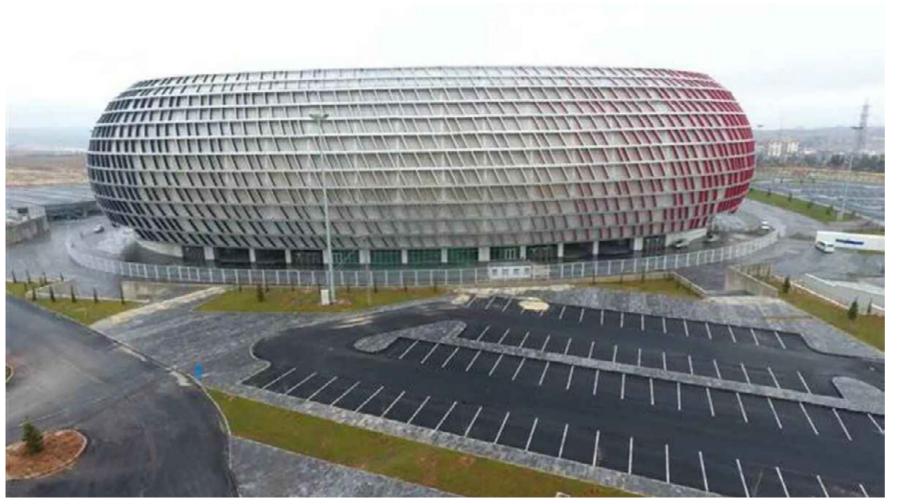










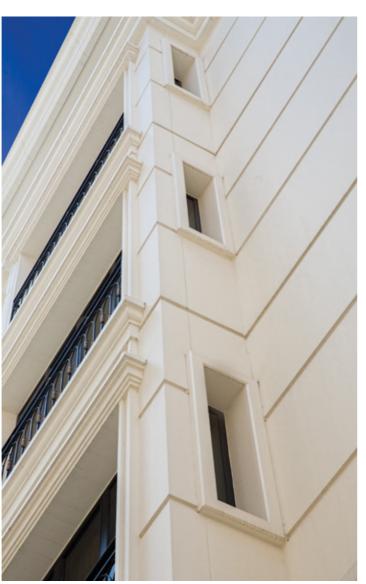




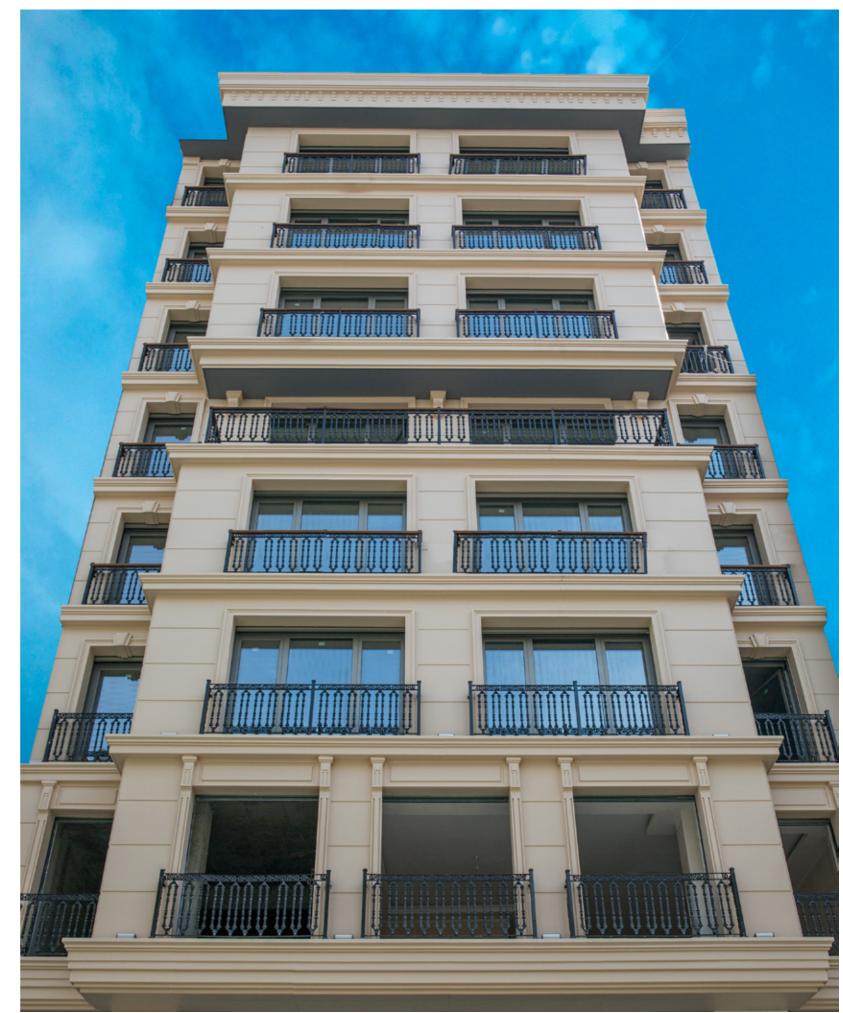




















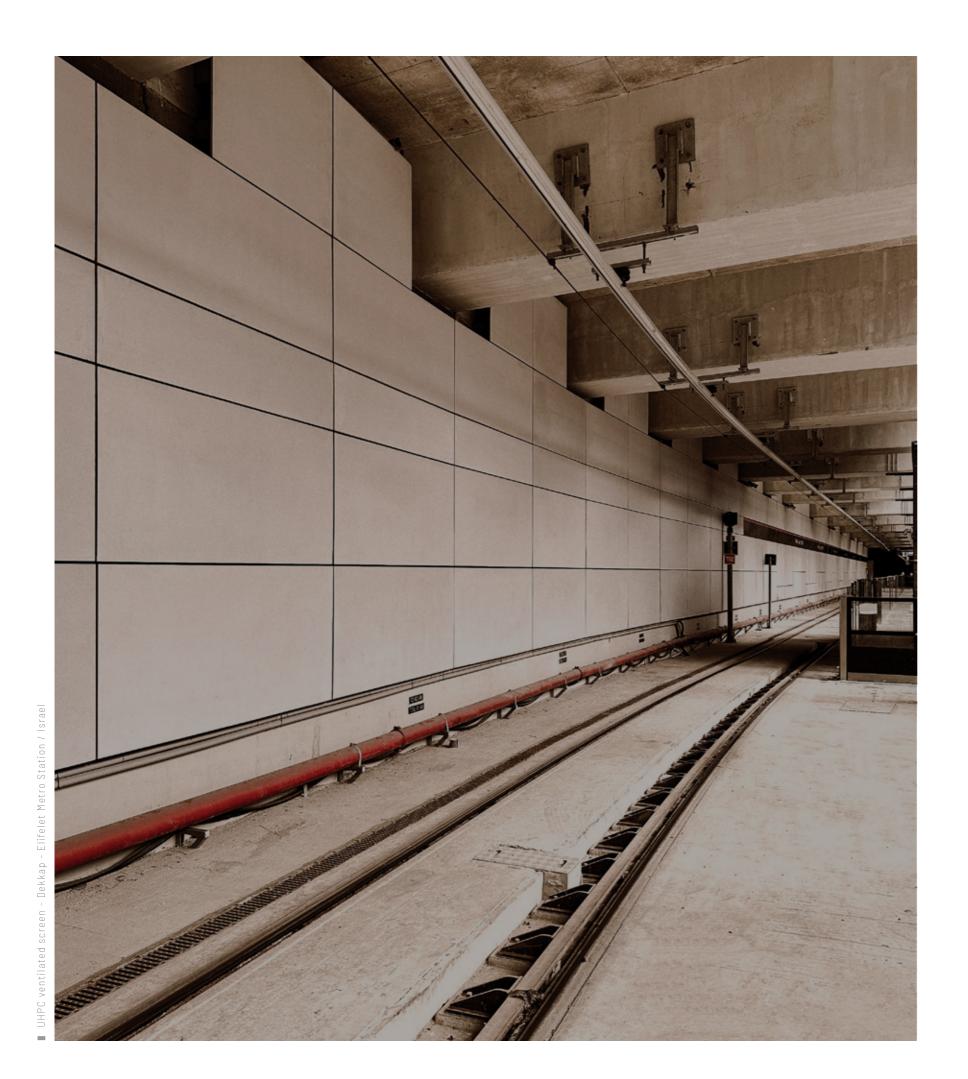












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*Following document is an abstract about Fiberton and its material range. It only aims to summarize information. For more details, visit fiberton.com.tr or contact info@fiberton.com.tr