



Case Study: Anthill Towers, Istanbul, Turkey



Fibrobeton has made its mark on the Istanbul skyline by completing Turkey’s tallest pre-cast clad building project. The Anthill Residence project comprises two 55-storey towers, reaching 210 metres, making it the 2nd tallest structure in Istanbul. With its reinforced concrete structure, and clad with Fibrobeton’s patented Fibrofombeton insulated GRC facade panels, Anthill Residence is the first residential project in Turkey to carry BREEAM Certification for its environmental attributes.

With this project, main contractor Ant Yapi (ranked 70th in the world) brought its international experience to Turkey. The project was completed in a record time of just 24 months, with the GRC facade taking just 14 months to complete.

PROJECT REQUIREMENTS

MM Proje was required to design a building which was both elegant and modern, and providing new levels of energy efficiency. Additionally, the Marmara Sea region is one of the most tectonically active regions of Eurasia, and the seismic resistance of buildings is a growing priority in urban areas.

GRC has already been successfully used in many regions with high degrees of seismic activity, but rarely on a building of this height and degree of exposure, where significant wind speeds could occur. Therefore MM Proje required research to prove the suitability of GRC on such a prominent building.



As the second tallest building in Istanbul, the Anthill Residences have an unsurpassed view over the metropolitan area.



The Anthill Residences stand-out on the Istanbul skyline.

SOLUTION

A great advantage of the Fibrofombeton® facade system is that it is a standard construction system which has been thoroughly evaluated for fire resistance (Class A1), an optimum level of sound insulation (35 dB at frequencies under 500Hz), and has thermal insulation incorporated in the panels.

Each Fibrofombeton® panel is mounted on an independent steel frame during manufacture, so when attached to the building each panel is able to act independently under earthquake loads, and in testing by the “Kazakh Research and Design Experimental Institute of Earthquake-Resistant Construction and Architecture” in 2005 they were able to withstand seismic events of up to 9.0 on the Richter scale.

Additionally, because of the height of Anthill Residence project a comprehensive study was commissioned by Fibrobeton to study the wind loads. This involved detailed modelling by Turbomakina Teknolojileri Ltd to determine the worst combination of conditions, and proved the panels resistant to the 48m/sec (108 mph) winds which could occur at such altitude.

The Istanbul skyline is dotted with GRC projects, most produced by Fibrobeton, but Anthill Towers stands head and shoulders above all others, providing a unique panorama of this vibrant and exotic city.

PROJECT INFORMATION

USD 400 million project built on 25 acres of land in one of the oldest districts of Istanbul (Sisli-Bomonti).

Contributors	Architect	MM Proje
	Contractor	Ant Yapi
	GRC Producer	Fibrobeton
	Project Owner	Private Residences
Project	Location	Bomonti - Istanbul, Turkey
	GRC Type	Sprayed GRC Facade panels
	GRC Volume	75,000m2
	GRC Finish	White ex-mould
	Mould Type	FRP
	Completion Date	2010
Materials	AR Glass Fiber	Cem-FIL™ 54 Roving

cem-fil@owenscorning.com

www.cem-fil.com

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