

Case Study

Achrafieh 4748

Beirut, Lebanon



Background

Achrafieh 4748 is an urban oasis located in an underdeveloped area, surrounded by green space, and nestled within the very heart of Beirut, the capital of Lebanon. It's one of the most important residential projects locally. Achrafieh 4748 consists of three luxurious residential towers; each consisting of two blocks featuring over 25 floors.

Also, it includes a commercial area of 500 m² and a club house, two swimming pools, a recreational facility and a tennis court with an urban corridor.

The project design and construction was led by two of the most proficient Lebanese companies: "Erga Group" the consultants and "Hourie Enterprises" the contractors.

The external facades of "Achrafieh 4748" were creatively designed to be illuminated by a render that exhibits a decorative appearance with proven and permanent results.



Challenges

One challenge was to render the external elevated facades fitting high standards and getting work done on time and within budget. Besides, the construction should withstand both the hot Lebanese summer and the rainy winter which would be an additional obstacle for the application of the render.

Solution

TA Group proposed the use of Repois R from TEAIS-Spain. REPOIS R is a self-colored cement-base render manufactured for use as a durable one-coat decorative monocouche rendering.

After going through tedious preparatory negotiations and meetings, and covering a lot of technical, statistical, and financial issues, TA group was chosen to handle the monocouche activity throughout the entire project duration.

TA Group team overcame all technical and on-site obstacles. They put into work three integral coordinated qualified teams (double shifting) to fulfill the activity. In addition, they conducted some tasks out of their scope of work to overcome delay or defects in the completion of some steps prior to rendering.

Regarding the application method of Repois R, it was



very precise. Four mixers and three pumps were used to ensure optimum mixing. Tejais reinforcing mesh was installed wherever joints are located, including stop beads at corners and abutments, and forming dip over openings. Specially-designed jointing accessories, Juntis and aluminum plasertops, were used as well.

The total quantity of monocouche executed was approximately 30 000 m² with the application of 26 500 LM of PVC angle beads in addition to 5 000 LM plasterstops and around 7500 LM of joints. The treatment of joints enabled a uniform finish besides avoiding the formation of uncontrolled cracks under retraction.

In addition, TA Group installed temporary guide to ensure accurate rodding of plaster to true surfaces. They check the straightness in each corner and add grout to hold the external corner beads in a correct manner. A first layer of monocouche as spatter dash was applied followed by a final layer to reach a minimum thickness of 13mm before scratching; the final coat was scratched as per mockup.

On the other side, TA Group took special precautions to face the extreme weather conditions. In hot and dry weather, the rendering was dampened 24 hours after it had been applied to favor the setting of the rendering and avoid cracks or other irregularities.

Low temperatures and high humidity levels (rainfall after the rendering had been applied) were also taken into account because there would be a higher risk that carbonation efflorescence might appear.

Pull-out test had been done on various specimens where results met the requirements. Literally, the professional work done by TA group team resulted in arresting architectural homogenous facades. The owner, the contractors and the consultants were all pleased by the quality and speed of the fulfilling work.



Location:
Achrafieh-Beirut

Developer:
Achrafieh 4748 s.a.l.

Owner Representative:
Civi Arch s.a.l.

Contractor:
A.R. Hourie Enterprises s.a.l

Consultant:
Erga Group s.a.l.

**Monocouche Supplier and
Applicator:**
TA Group S.A.R.L.

Product used:
Repois R