



SUPER LUXURY HOTELS In Dubai

WATERPROOFING AND INSTALLING CERAMICS AND MARBLES IN THREE NEW 5-STAR HOTELS

Three excellent hotels with unparalleled amenities grace Al Habtoor City in Dubai. World-famous international designers and architects have worked on the three 5-star hotels in the new neighborhood, representing famous hospitality brands that inspire confidence and symbolize luxury living and offering more than 1.600 elegant rooms. All three hotels are designed and inspired by different époques and styles. The St. Regis Dubai is inspired by the legacy of New York's gilded age and represents nobility and Beaux-Arts architecture. W Hotel is characterized by an avant-garde design. On the other hand, The Westin Dubai interiors feature stylized motifs inspired by Art Décor, which combines modernist style with fine craftsmanship and rich materials.

Owners and designers choose Mapei waterproofing systems for underground structures, bathrooms and damp areas due to the company's reputation as supplier of quality products. Mapei solutions were also used for building screeds and installing ceramic tiles and marble slabs in several areas of the hotels.

Besides, all the materials and systems supplied in the project feature low emission level of VOC (Volatile Organic Compounds) and comply with the LEED requirements, which enable designers and contractors to create eco-sustainable projects.

WATERPROOFING UNDERGROUND STRUCTURES

For waterproofing 70,000 m² of substructure, the contractors used the synthetic membrane MAPEPLAN TU WL 30 with good mechanical and welding characteristics. The innovative concept of inserting a "warning layer" allows easily detection of any eventual damage, that may occur during the installation or subsequent working phases, safeguarding the integrity of the whole waterproofing system.

For waterproofing structural joints, IDROSTOP PVC BI/BE was used, a highly flexible water stop made out of high-quality thermo-plastic vinyl resins. The anchorage of the membrane was completed with MAPEPLAN T DISK, a PVC-P

» **Mapei synthetic membranes to waterproof substrates on 70,000 m²**

fixing element with high puncturing resistance. Sealing and waterproofing injections in construction joints were carried out with IDROSTOP MULTI PVC-P re-injectable hoses.

More than 1.000 piles were treated using MAPEGROUT ME05, a high performance, shrinkage-compensated, high-flow micro concrete along with PLANIGROUT 300 ME PCT, a three-component, multi-purpose fluid epoxy resin grout. Both products are manufactured and distributed on the UAE market by Mapei Construction Chemicals L.L.C., the UAE subsidiary of the Group. Onsite technical support was provided by Mapei during the system installation, which was important to ensure the quality of welding.

WATERPROOFING BATHROOMS AND DAMP ENVIRONMENTS

MAPELASTIC SMART, a two-component, highly flexible cementitious mortar, was chosen for waterproofing substrates on all types of damp environments due to its durability, high performance and easiness of application characteristics. It was applied on over 90,000 m² in the three hotels.

MAPELASTIC SMART is easily applied by brush, roller or spray, on both horizontal and vertical surfaces, at a thickness of approximately 2 mm. Due to the content and high quality of the synthetic polymers used in the formulation, the hardened layer of MAPELASTIC SMART remains constantly flexible under all environmental conditions.

In order to ensure the excellent mechanical characteristics of MAPELASTIC SMART membrane, it was reinforced with MA-PETEX SEL, a non-woven, macroholed polypropylene fabric.

BUILDING SCREEDS AND CONSOLIDATING THE SUBSTRATES

A Mapei system was used for substrate preparation on both horizontal and vertical surfaces, before installing ceramic tiles and natural stone. The company proposed TOPCEM, a special quick-drying (4 days), controlled-shrinkage hydraulic binder, to create screeds on an area of 50.000 m². TOPCEM allows ceramic tiles to be installed after 24 hours and natural



ABOVE. Ceramic tiles were installed with KERAFLEX MAXI S1, KERAFLEX and ADESILEX P9.
BELOW. Substrates in the bathrooms were waterproofed with MAPELASTIC SMART and MAPELASTIC SEL.



stone after 2 days. These properties added a great value for the projects by speeding up the process of tile installation in comparison with traditional sand-cement screeds.

Gypsum boards were treated with PRIMER G, a synthetic resin primer in water dispersion with a very low content of VOC, prior to the installation of ceramic tiles.

INSTALLING CERAMIC TILES AND NATURAL STONE

Thanks to its complete range of adhesives and grouts, Mapei was chosen by the investor as supplier of systems for installing ceramic and marble coverings. Before selecting the most suitable adhesives, dimensional stability and staining tests were conducted in Mapei Research & Development Laboratory. Based on laboratory results, it was decided to use the high performance adhesives KERAFLEX MAXI S1, KERAFLEX, and ADESILEX P9.

KERAFLEX MAXI S1 is a deformable cementitious adhesive with extended open time and no vertical slip, especially suitable for the installation of large-size porcelain tiles and natural stone.

KERAFLEX, also a cementitious adhesive, is suitable for single-fired, double-fired, and porcelain tiles, terracotta, klinker, stone materials and mosaics on every type of floors, walls and ceilings.

ADESILEX P9 cementitious adhesive with no vertical slip was selected for bonding porcelain tiles on vertical and horizontal surfaces.

As for grouting joints on both ceramic and marble coverings, Mapei proposed KERACOLOR FF and ULTRACOLOR PLUS, high-performance, anti-efflorescence, quick-setting and drying poly-mer-modified mortars with water-repellent DropEffect and mould-resistant BioBlock technology. Their wide range of colors enables designers to choose appropriate tones for proper combination with ceramic tiles.

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ADESILEX P9 was used to bond porcelain tiles on both horizontal and vertical surfaces

IN THE SPOTLIGHT

ADESILEX P9

It is an improved (2) slip resistant (T) cementitious adhesive (C) with extended open time (E) classified as C2TE according to EN 12004. Ideal for interior and exterior bonding of ceramic tiles and mosaics on floors, walls and ceilings.

Also suitable for spot bonding of insulating materials such as expanded polystyrene, rock and glass wool, sound-deadening panels, etc.

It is easily workable and highly

thixotropic and can be applied on a vertical surface without slumping or slipping even when heavy tiles are used. It ensures perfect adherence to all materials normally used in building and hardens with minimal shrinkage.



TECHNICAL DATA

St. Regis, The Westin Dubai and W Hotel, Al Habtoor City, Dubai (UAE)

Period of construction: 2013- 2016

Period of the Mapei intervention: 2013-2016

Intervention by Mapei: supplying products for screeds, waterproofing and bonding ceramic tiles and marble

Client: Al Habtoor Group LLC

Design consultant:

Khatib & Alami Consolidated Engineering Company

Main contractor: HLG Contracting

Sub-contractors: Al Shirawi (waterproofing), GCS (screeds)

Installation companies:

AHK International, Marmi Group, Dar Al Rokham

Mapei coordinators:

Bachir A Abdallah, Shatha Weldali, Hany Al Assal, and Ian Gregory, Mapei Construction Chemicals L.L.C. (UAE)

MAPEI PRODUCTS

Underground waterproofing:

Idrostop Multi, Mapeplan T Disk**, Mapeplan TU WL**, Mapegrout ME 05*, Planigrout 300 ME PCT*, Idrostop PVC BI/BE

Waterproofing damp areas:

Mapelastic Smart, Mapetex Sel

Building screeds and

preparing substrates: Topcem, Planicrete, Primer G

Ceramic and marble

installation: Keraflex Maxi S1, Keraflex, Adesilex P9

Grouting joints: Keracolor FF, Ultracolor Plus

*These products are manufactured and distributed in the UAE by Mapei Construction Chemicals.

**These products are manufactured by Polyglass SpA, Mapei Group.

For further information see www.mapei.ae and www.mapei.com