

Sika at Work



The Montearroyo Residential Complex Villavicencio, Colombia

“From the Basement to the Roof” – with Sika



Innovation & Consistency | since 1910



Project Description

The Montearroyo gated community is situated in the beautiful Hacienda El Trapiche in Villavicencio, surrounded by ancient forests and the River Buque, in the Meta Department in Colombia.

The complex includes 118 individually designed, detached houses with a floor area of 220 m² each and 2 blocks with 30 apartments of 135 m² in each. There are also extensive new leisure and recreation facilities including communal and private swimming pools, sauna and Jacuzzi, tennis and games courts, a football pitch and plenty of open green space.

Project Requirements

This complex is designed as a distinctive and extremely pleasant place to live in an area of fabulous natural beauty.

Due to the ground conditions, all of the building foundations and swimming pools had to be produced using watertight concrete.

The structural elements (beams, columns and floor sections) were produced with cast-in-place concrete. This concrete therefore had to achieve high early strengths, to allow both fast turn-around and de-moulding of the formwork, plus to enable fast track assembly and construction on site.

All of the residential floors are covered with high quality ceramic tiles that required an equally high performance waterproof tile adhesive and grout.

With the high UV light exposure in this tropical location, the architect required a waterproof, lightfast, decorative and protective surface coating to be applied on all of the exposed concrete and rendered façade surfaces.

The interior ceilings are produced in light fibre-cement, drywall systems and there are natural wood finishes on the balconies and facades, which also highlight the good design and high quality of all of the materials used in the development.



SikaTop® Seal-107 application



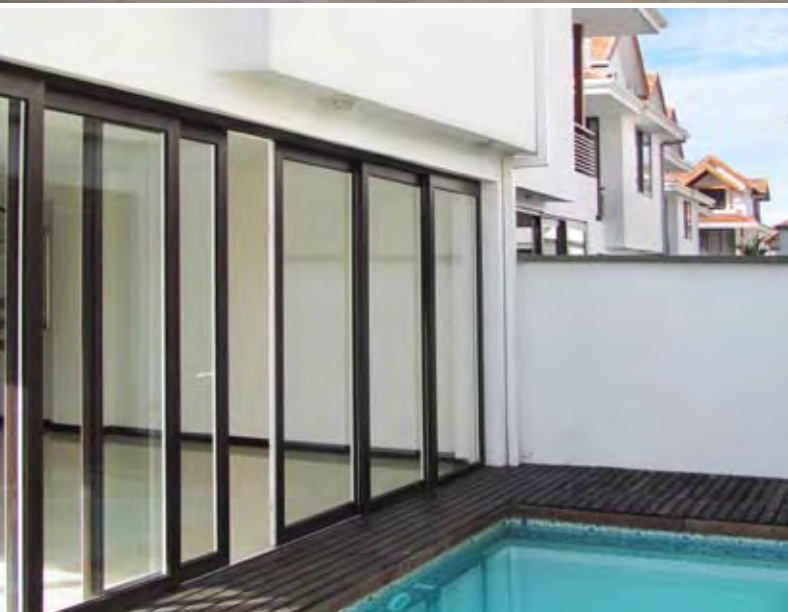
SikaCeram® tile adhesive application

Sika Solutions

Sika Salesman and the Sika Distribution partners worked closely with the project engineers and contractors, to develop and control the required concrete mix designs at the site batching plant and in their laboratories. This was achieved despite there being no nearby Sika regional offices, Technical Department or Warehouse.

The testing clearly demonstrated the superior performance of the Sika watertight concrete using **Plastocrete® DM** and **Sika®-1**, which was used for the building foundations and the swimming pool's construction. **SikaTop® Seal-107** waterproofing mortar and **Igol®** modified bitumen waterproof coatings were used to line the drinking water supply tanks and also the waste water disposal and containment areas.

Where required, accelerated concrete mixes were produced to enable faster de-moulding or structural assembly, using advanced **Sika®** admixture technology. For the ceramic tiling, the contractors used high performance **SikaCeram®** tile adhesives and grouts to meet all of the project demands and to produce the highest quality tiled finishes. For the in drywall ceilings, **Sikadur® Panel** – a specially developed epoxy adhesive has been used to bond and seal the joints.



On the exposed concrete and mortar surfaces, the decorative, water-proof protection was provided by **SikaColor®**, a highly UV light resistant and anti-carbonation coating based on pigmented acrylic resins. To protect the natural stones used on some of the facades and on the clay tile roofs, **Sika Transparente®**, a siloxane based water repellent impregnation was selected.

Following Products have also been used:

Plastocrete® 169 HE
Pega Enchape Sika®
Sika® Ceram B.A
SikaColor® C
Igol® Denso

Binda® Boquilla Acrílico
Sikadur® Panel
SikaTop®-Seal 107
Sika Transparente®

Project Participants

Developer: Union Temporal Mediterranea

Architect: Edwin Forero

Engineers: Wilson Cabanzo and Andres Vesga

Construction Joint Venture Partners: Construcciones Mediterranea Ltda.
 Inversiones Cerro Alto Ltda.

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