

Let's meet AT THE MALL



Buying is no longer enough. Shopping malls have turned into meeting and leisure places. The touch words are modernity, style and quality.

Gone are the days when people went to shopping malls for the week's shopping or to purchase things for the home. They are now turning into meeting places full of people of all ages, hanging out as if they were in the town square and buying the odd thing, particularly on Sundays. Architects have achieved this success by focusing on modernity, linear forms and elegance.

One of the finest recent examples is the Campo dei Fiori Shopping Mall in the province of Varese. This is an extremely modern facility, which is well connected to local urban centres. Mapei products were used for the stone and ceramic coatings and flooring that began in October 2000 and were completed in June 2001.

A super-resistant screed

The client expected the need for substrates with an R_{ck} of 25 MPa in the communal areas and 15 MPa in the shops to withstand all the trolley traffic. This was obtained using MAPEFLUID PZ500*, added to the cement in a dose of about 15%. This product drastically reduces the water/cement ratio and, thanks to its silica-fume formula, makes for a more compact screed with little shrinkage; this meant that wide spans could be used, thereby reducing the cuts in the control joints.

The first stage involved installing a layer of plastic to separate the screed from the main structure by placing polystyrene spacers along the edges and columns. The screed, measuring 7-8 cm, was strengthened with meshing, making sure the reinforcement was placed about midway through it. The choice of aggregate was also important, opting for a grain size of between 0-8 mm; in the end 5,800 m² were applied in this manner.

Full-contact Technology

The 20x20 porcelained gres was applied using ADESILEX P4*, a fast-setting product with the feature of completely "backbuttering" the back of the tiles to ensure total adhesion. All by simply trowelling it on in one smooth stroke. To obtain the same result using a conventional adhesive, a "double spread" system would need to be used, also requiring the adhesive to be spread over the back of the tiles.

Room for Fitness

Porcelain tiles were also laid using KERAFLEX* in the approximately 500 m² gym (in line with the latest concept of a shopping mall that has nothing to do with conventional shops). This choice was partly dictated by the ambient temperature, rising at the time due to the good weather. Bearing in mind that this setting did not require a full-contact product, it was decided to use KERAFLEX*, whose reasonable deformability ensured it would be workable for a longer period of time.

The Marble Challenge

India green and Turkey silver beige chequered 1-cm thick, 30x30 "marble-module" was laid in the shopping mall's communal spaces; a total of about 1,900 m² were laid. This called for a careful analysis of the different types of marble used, since it is a well known fact that greens in particular tend



to lose their shape and clear colours often get stained. There is usually a tendency to opt for water-free adhesives in the former case (like KERALASTIC*), whereas GRANIRAPID* does the job nicely in the latter case. But in this particular instance, workability problems linked with high temperatures meant it was decided to use a product that would allow more time for working without jeopardising the final result.

The two types of marble had to be tested

out in the Mapei laboratories: the instruments showed there was acceptable stability in terms of size and no danger of staining.

This meant KERABOND* could be used mixed with ISOLASTIC* diluted by 50% with water: this guaranteed the longest possible

times conceivable and the highest levels of deformability.

Sealing joints

An interesting system was also used to deal with the joints. Tiles cannot overlap with joints because this is likely to cause the tiles to crack or break off due to natural movements in the joints. This is why they were sealed using EPORIP*: this epoxy resin, poured into the joint "seals" it, which then is recreated near the tile multiple.

In another area a wall coating has been made using tiles laid on plaster covering a total surface area of 700 m².

ADESILEX P22* was chosen for these operations, since this ready-to-use paste allows bonding to plaster not previously treated with a primer.

Easy solutions

The technology used for the locker rooms was also extremely interesting: the floors were actually waterproofed with one single 2-mm layer of MAPELASTIC*, a two-component cementitious mortar for waterproofing balconies and swimming pools, with a fibreglass mesh inserted in it.



Above and opposite, some pictures of the finished premises. Left and bottom, four different steps in the laying of tiles with ADESILEX P4. In particular, the centre photo shows how the back of the tile, just resting on the adhesive, is completely soaked by the product.





"The products referred to in this article belong to the "Products for Ceramics and Stone Materials", "Building Speciality" and "Admixtures for Concrete" ranges. The technical data sheets are available on the CD entitled "Mapei Global Infonet" and at the Internet site: www.mapei.com. The Mapei adhesives and grouts conform to EN 12004 and EN 13888 standards.



***Adesilex P22 (DITE):** ready-to-use superadhesive paste, with extended open time and resistant to slip, for ceramic tiles (for thicknesses up to 5 mm)*

***Adesilex P4 (C2F):** Fast setting full-contact adhesive for ceramic tiles*

***Eporip:** two-component epoxy adhesive for bonding new and old concrete and for the monolithic sealing of cracks in screeds*

***Granirapid (C2F):** Fast setting and hydrating two-component adhesive system for ceramics natural stone and agglomerates (for thicknesses up to 10 mm)*

***Isolastic:** flexible latex additive to be mixed with Kerabond and Kerafloor (for thicknesses respectively up to 5 and 15 mm)*

***Kerabond (C1 turns into C2 if mixed with Isolastic):** cement-based powder adhesive for ceramic tiles (for thicknesses up to 5 mm)*

***Keracolor GG (CG2):** cement-based mortar for grouting joints between 4-15 mm*

***Keraflex (C2TE):** cementitious adhesive with high adhesion strength extended open time and resistant to slip for ceramic tiles and stone materials*

***Keralastic (R2):** two-component polyurethane adhesive for ceramic tiles and stone materials*

***Mapefluid PZ500:** superplasticiser with pozzolanic effect for high quality and chemically resistant mortar and concrete*

***Mapelastic:** two-component flexible cementitious mortar for waterproofing swimming pools and balconies*

TECHNICAL DATA

Campo dei Fiori Shopping Mall, Gavirate (Varese) - Italy

Project: paving and coating operations

Built in: October 2000-June 2001

Built by: Centro Ceramiche Pagnoncelli, Capriate S.G. (Bergamo)

Materials used: 20x20 porcelain tiles over 5,800 m² plus 500 m² in the gym, 30x30x1 marble-module over 1,900 m² in communal premises, tiles laid on plaster over a total surface area of 700 m² and 60x60 Logos di Bisazza agglomerate marble in a shop in the mall.

Mapei products: MAPEFLUID PZ 500, ADESILEX P4, KERAFLEX, KERABOND + ISOLASTIC, EPORIP, ADESILEX P22,

MAPELASTIC, KERACOLOR GG, KERALSTIC and GRANIRPID

Mapei retailer: Centro Commerciale Pagnoncelli, Capriate S.G. (Bergamo)

Mapei coordinator: Andrea Peli

This project won a prize in the Ceramics Category of the "1° Grand Prix Reference Mapei 2002". We would like to congratulate all those who took part in its design and thank those who supplied the information.

The tiles were then bonded with KERAFLEX*, a cement-based adhesive with high adhesion strength, extended open time and no vertical slip, ideal for ceramic tiles and stone materials. This system is easy to use and can be carried out by any tile-fitter. The joints were grouted with large-grain KERACOLOR GG*, designed for joints from 4-15 mm.

The "marble-module" was also fitted on metal supports in the lifts using KERALASTIC*. This polyurethane adhesive is the best way of combining such different materials as metal and stone. White GRANIRAPID* was used in one of the shops in the mall to bond 60x60 Logos di Bisazza agglomerate. In this case, GRANIRAPID*, designed for both natural and agglomerate marbles, guaranteed a perfect result. Mapei products, used as the manufacturers suggested, enabled these designs to be made.

