



# GOLDEN

# TERRACES

**Innovative products for a golden building site**

After two-year works, in February 2007 Warsaw city centre was completely transformed by the opening of a new gigantic architectural complex. This is the Złote Tarasy, or Golden Terraces, the biggest business/office/entertainment centre of Poland and one of the largest in Europe, located in the very center of the country's capital, between the Central Railway

Station and Złota street, opposite the Palace of Culture and Science. The project covers a total area of 225,000 m<sup>2</sup> and includes a three-storey central area, the so called "platform", housing shops, restaurants and a multiplex cinema with 800 seats. Below the street level, there are two further storeys, housing shopping and service units and a two-level underground car

park for nearly 1,700 cars. Three office buildings also belong to the complex: a 100 m high tower block and two twelve-storey buildings with inclined facades. The heart of the project is a multi-level terrace-like courtyard, covered with a wavy glass roof, with surface area of 10,250 m<sup>2</sup>. It is the most characteristic element of the complex: it is not



1



2



3

flat, but folded in an irregular way. Particularly innovative is the unique structure of the roof: the undulating shape is supported on eleven pillars in the form of trees. The structure of the roof is composed of approximately 5 thousands glass panels and hundreds tons of steel. The design work of the dome took the architectural design office Jerde almost two years and six months. The restaurants, bars and shops located under the roof are integrated into green areas with water cascades. The result is an ideal meeting place, encouraging evening walks, suitable for cultural and entertainment events. Indeed, the whole complex well embodies Warsaw's lively, vogue and smart spirit.

### **Kerapoxy F: the Ace up on the Sleeve**

Mapei contributed to the building of this multifunctional complex, which is not second to any big American "mall", by supplying products able to solve even the most difficult problems arising on the site. The competitors' solutions proved to be no match for Mapei grouts.

Under the glass roof, in the central point of the complex, the several levels of the shopping gallery sport floorings of 30x30x2 cm polished granite slabs, arranged according a geometric pattern. The joints thickness was inferior or equal to 2 mm and no manufacturer seemed able to offer a grout suitable for so narrow joints.

Mapei proposed KERAPOXY F\*, an innovative fine-grained epoxy mortar especially designed for joints of up to 3 mm. To meet the customer's need, Mapei SpA's Research & Development Laboratories developed the anthracite shade (No 114) of this grout, which successfully passed the tests at the building site.

About 7 tons of KERAPOXY F\* were

used to grout the joints of 20,000 m<sup>2</sup> floorings.

Instead, the traditional formulation of KERAPOXY\* was used for the joints of wall and floor covering in several toilettes', for a total surface of about 12,000 m<sup>2</sup>, as in this case the joints featured standard thickness.

Other Mapei products also came into use in this building project. For instance, in some places the substrates were smoothed with NOVOPLAN 21\*. This is a product commonly used for preparing the substrate before the installation of resilient materials but is also suitable to level the substrates before laying ceramics. In this case, NOVOPLAN 21\* endowed the surfaces with the mechanical strengths requested by the customer.

In the toilettes MAPELASTIC\* cementitious mortar was used for waterproofing floors and MAPEGUM WPS\* liquid membrane for waterproofing walls. On the damp insulated surfaces ceramic tiles were laid with the high-performance cementitious adhesive ADESILEX P9\*. KERABOND\* was instead used for the installation of tiles onto not insulated substrates, which had been previously treated with PRIMER G\*.

In the toilettes expansion joints were sealed with MAPESIL AC\* silicone sealant, while mirrors were installed with MAPESIL LM\*.

*Photo 1, 2 and 3.*

*Kerapoxy F was used to grout the very narrow joints of the granite floorings in the shops, corridors and galleries under the glass dome.*

*Photo 4.*

*Several Mapei products (such as Novoplan 21, Mapelastic and Mapegum WPS) were used for treating the floor and wall surfaces in the toilettes, before laying ceramic tiles with Adesilex P9 or Kerabond.*

**\*Mapei Products:** the products referred to in this article belong to the "Products for the Installation of Resilient, Textile and Wood Floor and Wall Coverings" and "Products for Ceramic Tiles and Stone Materials" ranges. The technical data sheets are available on the "Mapei Global Infonet" DVD or at the web site: [www.mapei.com](http://www.mapei.com).

Mapei's adhesives and grouts conform to EN 12004, EN 12002 and EN 13888 standards.

**Adesilex P9 (C2TE):** high-performance cementitious adhesive with no vertical slip and extended open time for ceramic tiles.

**Kerabond (C1, becomes C2E and S2 class when Isolastic is added):** cementitious adhesive for ceramic tiles.

**Kerapoxy (RG):** two-component, acid-resistant epoxy mortar for grouting joints wider than 3 mm, available in 26 different colours. May also be used as an adhesive.

**Kerapoxy F (RG):** two-component, acid-resistant epoxy mortar for grouting joints up to 3 mm. N.B. This is a product especially developed for particular applications.

**Mapegum WPS:** fast drying flexible liquid membrane for interior waterproofing.

**Mapelastic:** two-component, flexible cementitious mortar for waterproofing concrete, balconies, terraces, bathrooms and swimming pools.

**Mapesil AC:** solvent-free, acetic cross-linking mildew-resistant silicone sealant, available in 26 colours and transparent.

**Mapesil LM:** solvent-free, odourless neutral cross-linking silicone sealant for natural stone and ceramic tiles on façades.

**Novoplan 21:** fast hardening, self levelling smoothing compound for thicknesses from 1 to 5 mm.

**Primer G:** synthetic resin based primer in water dispersion with very low emission of volatile organic compounds (VOC).

## **TECHNICAL DATA**

**Zlote Tarasi Multifunctional Center,**  
Warsaw (Poland)

**Work:** grouting joints on the granite floorings in the corridors and in the galleries housing the shops; treating and waterproofing the floors substrates in the toilettes; laying and grouting the ceramic floor and wall coverings in the toilettes.

**Years:** 2005-2007

**Customer:** ING Real Estate (arch. David Rogers), Warsaw

**Project:** Jerde Partnership, Los Angeles (USA)

**Work Management:** Mike Sulivan

**Contractor:** Skanska SA, Warsaw

**Installation Company:** Italian Polish Stone Works, Warsaw

**Mapei Distributor:** Phwiu Olimp (currently called Oktaw)

**Mapei Co-ordinators:** Andrea Aliverti (Mapei SpA), Roman Owczarek (Mapei Polska)

