

National Stadium

WARSAW - POLAND

KEY FACTS

- Most important sports arena of the Polish part of UEFA EURO 2012™
- 22 000 m² of ceramic tiles installed with MAPEI products



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Let's present the project...

The National Stadium in Warsaw with its capacity is the biggest and the most modern association football arena in Poland. It was constructed on the site of the previous 10th Anniversary Stadium. The building works took place from October 2008 until November 2011. This object is a multi-function sports facility including conference rooms and office spaces and can host events of different kinds, including music concerts. Making a long story short, it can be called a business-sport arena.

The company responsible for stadium construction was Narodowe Centrum Sportu Sp. z o.o. (National Sports Centre). The project was designed by the consortium of JSK Architekci Sp. z o.o., GMP International GmbH and Schlaich Bergermann und Partner. The role of the general contractor was taken over by a German-Austrian-Polish consortium headed by the Alpine Bau company.

The total cubature of the stadium, excluding the roof, exceeds 1 000 000 m³, the area in total amounts to 204 000 m². It can contain 58 000 spectators, including the 900 seats for press, whereas, the "premium seats" zone can be occupied by 4600 guests. Additionally, the tribunes contain special sites for 106 disabled persons and VIP guests zone of 800 seats. Below the grandstands, changing rooms are located, along with auxiliary spaces, conference rooms and commercial area of 130 000 m². All that makes the stadium a high class international standard facility.

The facade of this facility is made from aluminum mesh painted in red and silverish white which brings to our minds the resemblance of the Polish flag waving in the wind. The main architects: Mariusz Rutz and Zbigniew Pszczulny wanted to associate the object's form with a wicker basket weaved with willow tree twigs. This form was truly intentional, as the mentioned tree is in Poland considered one of the national symbols. The stadium's illumination brings up additionally the Polish national colors and makes it even more spectacular to admire at nighttime.

On January 29th of 2012 the stadium had its official opening with concert called "Oto jestem" (Here I am). Soon it hosted its first sports events – 2 football matches, one between national teams of Poland and Portugal, and the second between Legia Warszawa and FC Sevilla. During UEFA EURO 2012™ 3 matches of group phase (the opening match Poland – Greece included), one quarterfinal (Czech Republic – Portugal) and one semifinal (Italy – Germany) were played here. On June 28, 2012 National Stadium in Warsaw was given a name of one of the best and most respected Polish football coaches ever – Mr Kazimierz Górski.

...and MAPEI contribution

The first shovel made its way into the first bits of ground broken for the stadium's construction in October 2008. The first stage of works consisted in demolishing the structure of the previous facility and building the construction piles to form new object's foundation. This process was completed on March 9th, 2009. Two months later, works for the first two tiers were commenced (together they amount to 8). The cornerstone was set on the 7th of October 2009. The following construction stage was crowned with the symbolic decoration of the ridgepole on January 4th of 2011. Construction work has officially been completed on November 30th of 2011.

The collaboration between Mapei and laying companies started somewhere between the end of July and the beginning of August 2011, to finally participate in the installation of ceramic tiles in bathrooms on each level of the stadium, as well as in the changing rooms, the VIP zone and the catering area. **With the use of Mapei products the ceramic tiles covered the area of 22 000 m².**

Before Mapei products conquered the building site, the works were partially executed with other manufacturers' products. For wall and floor mosaics' grouting installers used a mortar which at the end did not allow to obtain an uniform color and did not comply with the designers' vision. Mapei consultants proposed ULTRACOLOR PLUS, high-quality grout proven on many investment sites.



The scheme for tiles installation in different zones was similar and executed under the guidance of Mapei's Technical Department. Absorbent substrates were treated with diluted PRIMER G, synthetic resin primer for internal use. The second step consisted in waterproofing each area submitted to damp and water (sanitary and catering zones). Waterproofing required the use of three products, the MAPEBAND tape, the MAPEGUM WPS "liquid foil", and MAPELASTIC waterproofing barrier.

Ceramic tiles were installed on correctly primed and insulated surfaces in sanitary and catering areas. Depending on the type of the space and its designation, the walls were covered with: mosaics, 30x30 cm or 30x60 cm tiles. The porcelain tiles were installed on floors. Three cementitious, thixotropic, high-performance adhesives of C2TE class were used for this purpose: ADESILEX P9 and its fast-setting version ADESILEX P9 EXPRESS for standard format tiles and KERAFLEX for bigger ones. If the substrate required self-leveling, PLANOLIT 315 was used.

The last stage of installation works consisted in grouting. Each of the bathrooms had the tile joints filled with ULTRACOLOR PLUS – a flexible, water-repellent, antiefflorescence, fast-setting and fast drying, grouting mortar (CG2WA class), resistant to abrasion for joints from 1 till 20 mm wide, with DropEffect® and BioBlock® technology preventing from mould. Afterwards, the matching color silicone sealants were applied - MAPESIL AC. The catering zone's joints were filled with KERAPOXY - two-component, acid-resistant, epoxy, reaction resin (RG class) grout for joints from 3 mm which is highly recommended in areas where hygiene and chemical resistance is required.

Additionally - wall leveling in the catering zone was done on the surface of 1300 m². As the electric installation plan idea evolved and new wires ought to be distributed, the cavities needed to be filled and the surface smoothen. For this scope, the MAPETHERM DO SIATKI mortar was used with fiberglass mesh. Whole surface was then smoothed with NIVOPLAN PLUS.

MAPEI PRODUCTS: ADESILEX P9, ADESILEX P9 EXPRESS*, KERAFLEX, KERAPOXY, MAPEBAND, MAPEGUM WPS, MAPELASTIC, MAPENET 150, MAPESIL AC, MAPETHERM DO SIATKI*, NIVOPLAN PLUS*, PLANOLIT 315, PRIMER G, ULTRACOLOR PLUS.

*product manufactured and distributed locally.





TECHNICAL DATA

- **Name of building intervention:** National Stadium / Warsaw / Poland
- **Type:** SPORT (STADIUM)
- **Designer:** JSK Architekci Sp. z o.o., GMP International GmbH oraz Schlaich Bergermann und Partner
- **Period of construction:** 2008-2011
- **Period of MAPEI intervention:** 2011
- **Intervention by MAPEI:** installation of ceramic tiles on total surface of 22 000 m² on 8 levels of the stadium (including bathrooms, locker rooms and catering establishments)
- **Customer:** Narodowe Centrum Sportu Sp. z o.o.
- **General contractor:** Alpine Bau
- **Site manager:** mgr inż. Jacek Kucybała
- **Laying company:** Blue Mountain Group Robert Bugajski, Nowe Wnętrza Krzysztof Godlewski, Decor Lux Bis, F.H.U. „Smoleń” Bronisław Smoleń, Batistroy Janusz Czubała, Glaz Bruk
- **Mapei Distributor:** DagoTech Dariusz Górak
- **MAPEI Coordinators:** Piotr Kuglin, Jakub Mamaj, Krzysztof Olejnik, Tomasz Kobus.

MAPEI PRODUCTS	MATERIAL INSTALLED	SUBSTRATE	QUANTITY OF PRODUCT	SURFACE	INSIDE/ OUTSIDE	NEW/ RENOVATION	PRODUCT LINE
	DO NOT COMPLETE FOR BUILDING PRODUCTS						
ADESILEX P9 EXPRESS GREY	CERAMIC TILES		1 250 kg	22 000 m ²	INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
ADESILEX P9 GREY			68 375 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
KERABOND T GREY			13 750 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
KERAFLEX GREY			44 700 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
KERAPOXY			3 005 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
MAPEBAND			13 300 m		INSIDE	NEW	PRODUCTS FOR BUILDING
MAPEGUM WPS			12 600 kg		INSIDE	NEW	PRODUCTS FOR BUILDING
MAPELASTIC			2 688 kg		INSIDE	NEW	PRODUCTS FOR BUILDING
MAPENET 150			2 200 kg		INSIDE	NEW	PRODUCTS FOR BUILDING
MAPESIL AC			1 354 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
MAPETHERM DO SIATKI			8 000 kg		INSIDE	NEW	PRODUCTS FOR THERMAL INSULATION
NIVOPLAN PLUS			19 950 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
PLANOLIT 315			4 117 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
PRIMER G			1 650 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
ULTRACOLOR PLUS			18 520 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE

