

Lech Wałęsa Airport

GDAŃSK - POLAND



KEY FACTS

- Third most important airport in Poland, named after Lech Walesa - co-founder of Solidarity movement and world's symbol of the beginning of the peaceful process of communist system dismantlement
- Installation of 20 000 m² of ceramic tiles
- MAPELASTIC waterproofing on the surface of 5 000 m²



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Let's present the project...

The construction of the second terminal in Lech Walesa airport in Gdańsk was completed on March 31st, 2012 – after 24 long months of intense works and 69 days before EURO 2012 Football Championship. The task to accomplish the project, designed by JSK Architekci company (creators of such architectural works like the National Stadium in Warsaw) was taken up by a consortium constituted of Budimex SA and Korporacja Budowlana Doraco sp. z o.o.

A clear, single-space interior of the departure hall is intended for passengers traveling within the Schengen area. The airport's roof, supported by a V-shaped pillar system is inspired by the sea waves image. The skylights composed in the roof construction allow the natural light to illuminate the terminal. This creates also an opportunity to observe the arriving planes. During wintertime, the roof has the heating system turned on, so the danger related to snow lying over is practically eliminated.

The terminal's total usable area sums up to 37 thousands m² and it is divided to 3 overground floors and single underground one. The entrance to check-in hall is possible through three front entrances, in turn, the access to the apron is situated directly from the aircraft parking space. On the first floor there is a passage for the passengers due to travel outside Schengen which leads to renovated Terminal 1. In the departure hall there are 20 check-in desks, another 20 are intended for travel agencies. The building contains also the baggage handling system, waiting rooms, shops, airline offices, restaurants, playground and a safety control room.

Thanks to the creation of Terminal 2, the capacity of the Gdańsk airport will be double and can reach up to 5 million passengers per year. The increased number of check-in desks allows to clear even more than 2400 persons per hour. A complete novelty is a fully automated baggage handling system based on automatic trolleys which transport rapidly the luggage for scanning. The staircases in the building are especially adapted to have the jet bridge installed allowing to board directly on the plane. A great care was also taken to develop facilities both for families and children, and disable persons. The designers expected further potential terminal expansion according to the modular system, if occurred necessary.

...and MAPEI contribution

The MAPEI products were present during the construction of the new Gdańsk Airport's new terminal right from the first foundation stage. For external heavy waterproofing of the new building, the constructors made a good use of a two-component, flexible, mineral waterproofing mortar, MAPELASTIC. Because of the size of the surface (approx. 5000 m²), MAPELASTIC was applied by spraying. In the contractor's eyes, this product is perfect for such method of application, because it speeds up substantially the works progress, particularly on such vast areas. MAPELASTIC also found its use in internal waterproofing of two fire-fighting 22,2 x 6,4 x 5,75 m large water tanks. Prior to this action, it was necessary to create bevels in junction zones of the foundation wall and the foundation base. For this purpose, another MAPEI product PLANITOP 400, a fast-setting, thixotropic, repairing mortar came with help. In all corners, in the waterproofing mortar layer, MAPEBAND tape was additionally applied. This product was used due to protect from damage all the crucial elements of the barrier, even in case of construction elements' substantial movements.

MAPEI participated in a wide range of finishing works of the new terminal - from the social back-up facilities (social, sanitary and technical ones), to nearly the half of the flooring area of the departures and arrivals halls amounting to round 20 000 m². The hall, according to the designer's project, had a stone-tiles covering installed with the support of ADESILEX P4 (C2F adhesive class and type). This fast-setting, high-performance and full contact mortar is particularly recommended for buildings exposed to heavy traffic.



Grouting works of the stone covering's joints were executed with KERACOLOR FF (CG2 WA class and type). In the back-up facilities, in all damp areas, before the tiles installation, MAPEGUM WPS - a ready-for-use, fast-drying waterproofing membrane was applied. Prior to MAPEGUM WPS application, all surfaces with increased absorbency were efficiently treated with PRIMER G, a synthetic-resin-based, concentrated primer. Such prepared substrate could be covered with ceramic tiles, installed with high-performance cementitious mortar ADESILEX P9 (C2TE class and type). In other areas where the waterproofing insulation wasn't required, the surface was simply treated with PRIMER G. The tiles' bonding in the back-up and technical facilities was done with cementitious adhesive MAPEKLEJ EXTRA (C1 class and type).

The final stage related to grouting joints in all zones covered with ceramic tiles was executed with KERACOLOR FF, a water-repellent, high-performance mortar with DropEffect®. The properties of this technology cause a decrease of absorbency and susceptibility to dirt, and effectively make a grouted joint more durable. Sealing expansion and sanitary ware joints was performed with silicone, sealant MAPESIL AC.

MAPEI PRODUCTS: ADESILEX P4, ADESILEX P9, KERACOLOR FF, MAPEBAND, MAPEGUM WPS, MAPEKLEJ EXTRA*, MAPELASTIC, MAPESIL AC, PLANITOP 400, PRIMER G.

*product manufactured and distributed locally.





TECHNICAL DATA

- **Name of building intervention:** Lech Wałęsa Airport / Gdańsk / Poland
- **Type:** TRANSPORT (AIRPORT)
- **Designer:** JSK Architekci
- **Period of construction:** 2010-2012
- **Period of MAPEI intervention:** 2011
- **Intervention by MAPEI:** waterproofing of concrete structures and ceramic tiles installation
- **Customer:** Port Lotniczy Gdańsk Sp. z o.o.
- **General contractor:** Budimex SA, Korporacja Budowlana Doraco Sp. z o.o.
- **Mapei Distributor:** DagoTech Dariusz Górak
- **MAPEI Coordinators:** Piotr Kuglin, Ireneusz Ropel, Piotr Dawidowicz.

MAPEI PRODUCTS	MATERIAL INSTALLED	SUBSTRATE	QUANTITY OF PRODUCT	SURFACE	INSIDE/ OUTSIDE	NEW/ RENOVATION	PRODUCT LINE
	DO NOT COMPLETE FOR BUILDING PRODUCTS						
MAPELASTIC		CONCRETE	25 750 kg	5 000 m ²	INSIDE/OUTSIDE	NEW	WATERPROOFING
PLANITOP 400		CONCRETE	600 kg		INSIDE	NEW	PRODUCTS FOR BUILDING
PRIMER G		CEMENTITIOUS SCREED	850 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
MAPEGUM WPS		CEMENTITIOUS SCREED	1 650 kg		INSIDE	NEW	WATERPROOFING
MAPEBAND			180 m		INSIDE	NEW	WATERPROOFING
ADESILEX P4	STONE TILES	CEMENTITIOUS SCREED	72 000 kg	20 000 m ²	INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
ADESILEX P9	CERAMIC TILES	CEMENTITIOUS SCREED	46 000 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
MAPEKLEJ EXTRA	CERAMIC TILES	CEMENTITIOUS SCREED	18 000 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
KERACOLOR FF	CERAMIC TILES		2 200 kg		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE
MAPESIL AC			1 300 pcs		INSIDE	NEW	PRODUCTS FOR CERAMICS & STONE



