



# SIKA AT WORK

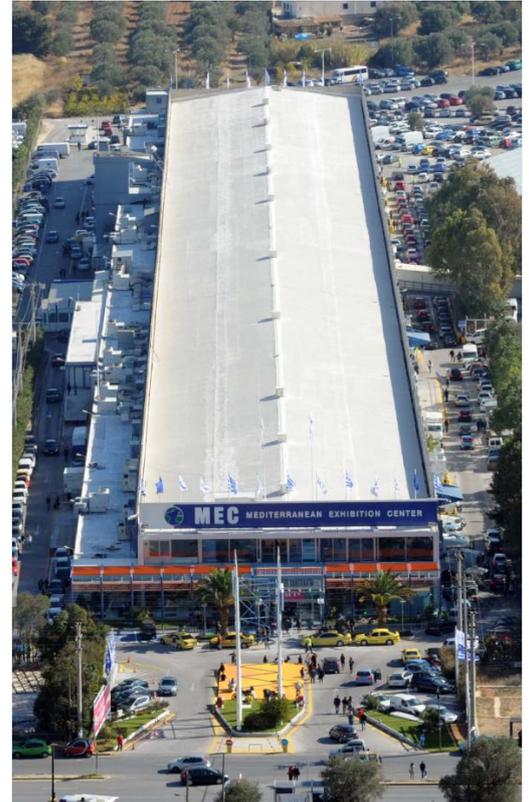
Roof waterproofing, Mediterranean  
Exhibition Center, Paiania, Greece

Waterproofing of existing roof: Sarnafil® TS 77-15

BUILDING TRUST



# WATERPROOFING OF EXISTING ROOF, M.E.C. PAIANIA, GREECE



## PROJECT DESCRIPTION

The Mediterranean Exhibition Center – MEC - has been operating since 1989, hosting numerous trade and consumer exhibitions, as well as conference, corporate, cultural and entertainment events. It is located in Paiania Attica. It has a single exhibition hall of 12.000m<sup>2</sup>, as well as 35.000m<sup>2</sup> outdoor parking spaces.

The exhibition room is on the ground floor, air-conditioned, column-free and featuring high clearance height, it has comfortable loading and unloading entrances, fire protection systems, security lighting, loudspeaker installation, Wi-Fi, exhibition network (electrical, water, sewage) restaurant and telecommunication network.

## PROJECT DEMANDS

Since summer of 2011 to-day, the new MEC Management has undergone a series of building interventions to improve facilities in terms of aesthetics and functionality.

At the same time, it upgraded the services provided to provide flexibility and comfort to its users (organizers, exhibitors, visitors).

In this context, it was necessary to restore the waterproofing of the roof of the building structure. The existing surface was a corrugated sheet metal, on which a thermo-waterproofing system with polyurethane foam and a liquid polyurethane membrane was applied as a final surface, which had deteriorated qualitatively. In addition, a system with a high degree of reflectivity had to be implemented, as the cooling and heating costs of a building of this size had to be limited as much as possible.

The total roof area to be restored was 10,000m<sup>2</sup>.



## SIKA SOLUTION

The FPO synthetic membrane system **Sarnafil® TS 77-15 Ral 9016** was used for the roof waterproofing. **Sarnafil® TS 77-15** (1,5 mm thickness) membrane is reinforced with polyester mesh and glass fiber fleece and is based on high quality flexible polyolefin (FPO) containing ultraviolet stabilizers and fire retardants according to EN 13956. It is suitable for mechanical fastening installation.

**Sarnafil® TS 77-15** can be heat-welded and is designed for direct exposure to UV radiation and use in global climatic conditions. It is produced with a layer of non-woven glass fiber for dimensional stability and polyester reinforcement for high strengths.

For the correct configuration of the designed system using **Sarnafil® TS 77-15**, a wide variety of auxiliary products, such as special pieces, adhesives, circulation passages, etc., are available to obtain a complete functional waterproofing system.

### Product qualities:

FPO membrane **Sarnafil® TS 77-15**: 12.760 m<sup>2</sup>

Vertical gutters **Sarnafil® T Drain**: 100 pcs

Screws **EJOT Dabo Screw SW8 RT 4,8x140mm**: 3000 pcs

Metal washer for spot fastening **Sarnafast® Washer KT**: 40.000 pcs

Metal screws **Sarnafast® SF**: 40.000 pcs

Metal profiles for perimeter support **Sarnabar®**: 63 pcs

Perimeter support cordon **Sarnafil® T Welding Cord**: 100 m'

Metal sheets for perimeter support **Sarnafil® T Metal Sheet**: 80m<sup>2</sup>

Synthetic detail forming membrane **Sarnafil® T 66-15 D**: 20m<sup>2</sup>

PU joint sealant **Sikaflex®-11 FC+**: 120 sausages of 600 ml

Seam preparation and cleaner **Sarnafil® T Prep**: 20 lt

## APPLICATION PROCESS

The corrugated sheet metal substrate had to be evaluated regarding its strength, in order to apply the membrane system with mechanical fastening method.



After the quality of the substrate was evaluated, expanded polystyrene insulation boards were applied to flatten the surface and increase the thermal insulation performance of the building. On this substrate the application of the **Sarnafil® TS 77-15** membrane followed, using all the auxiliary products for linear and point support.



### PROJECT PARTICIPANTS:

Owner: **MEC S.A.**

Contractor: **Pantelis Kostakis Ltd**



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