



SIKA AT WORK

Underground car park station, Maroussi,
Attica, Greece

INDUSTRIAL FLOORING: Sikafloor®-3 QuartzTop GR, Sika® Antisol® S

FINAL FLOORING SYSTEM: Sikafloor® MultiDur ES-14



BUILDING TRUST



UNDERGROUND CAR PARK STATION, MAROUSSI, GREECE



PROJECT DESCRIPTION

The completion of the underground car park at the historic center – Efterpis' Square of the Municipality of Maroussi has been the largest project of the Municipality for decades. The project is part of the operation of a "smart square", where the Athens-Piraeus Electric Railway Station is located, which provided for the construction of a modern underground car park with a capacity of 300 parking seats. The purpose of the specification was to form the square as a landmark for Maroussi and the parking lot to alleviate the severe parking problem in the shopping area.

The construction of an underground parking lot to alleviate the traffic congestion has been a demand on behalf of the residents for more than 25 years, when discussions have started to create an underground parking lot at Maroussi's main square, where the Electric Railway Station is located.

This project was vital both for the citizens and visitors, as well as for the commercial world of the Municipality of Maroussi, as its completion normalized and alleviated the issue of traffic and downtown circulation. The project was carried out under the supervision of the technical services of the Municipality of Maroussi, which managed to successfully handle complex technical issues. The three-level car station was commissioned in December 2019. Total area: 6.500 m².

PROJECT DEMANDS

Parking has become a vital part of today's mobile community, especially in metropolitan areas including airports, all of which are growing at an ever faster rate. Successful parking structures are designed to meet the users' demands, which include feeling safe and welcome, plus knowing that their cars are in a secure environment. Given the choice, people always park in a brightly lit car park, where they feel their property is best looked after and safe.

Modern parking structures are essential and integrated into a cities' architecture. In this context, the surface of the newly constructed, three-storey car park had to be harmonized with the aesthetics and sense of a new, secure car park, but also feature the required durability that would prevent the costly reconstruction works that might be required.

SIKA SOLUTION

For the industrial flooring, a system from the **Sikafloor® MultiDur** series has been proposed. **Sikafloor® MultiDur** systems are epoxy floor systems, specially developed for high stress applications, as they feature excellent mechanical & chemical strengths and abrasion resistance. These characteristics are the main reasons for selecting these systems, without implying a compromise in aesthetics and color choices.

In addition to that, a Sika system was also used to form the concrete substrate on which the **Sikafloor® MultiDur** system was applied.

SIKA SOLUTION

Configuration of industrial concrete substrate: **Sikafloor®-3 QuartzTop GR** surface hardener was sprinkled onto the freshly laid concrete. **Sikafloor®-3 QuartzTop GR** is a 1-component, pre-mixed, colored mineral dry-shake floor hardener. It consists of cement, specially selected quartz aggregates and admixtures. **Sikafloor®-3 QuartzTop GR** enables creating a monolithic, wear-resistant concrete floor. By applying and incorporating it onto the surface of fresh concrete, it creates a smooth, abrasion resistant surface. The concrete floor does not produce dust after its application and the final surface is easy to clean and maintain.

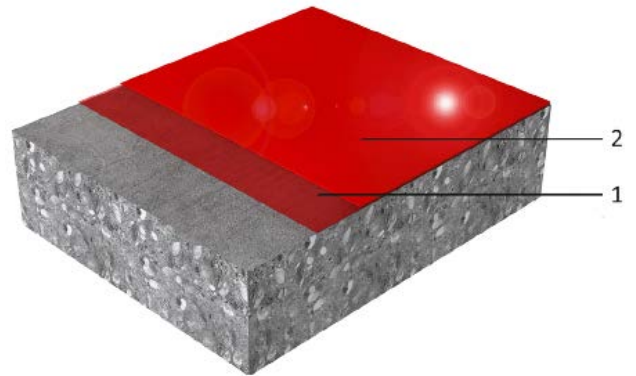
The dry-shake application on the industrial concrete flooring was followed by application of the water-based curing compound **Sika® Antisol® S**. **Sika® Antisol® S** is a ready to use liquid curing compound, that when sprayed onto freshly laid concrete, creates a sealing impregnating membrane, aiming to optimize curing and prevent premature water loss. With its use, concrete surface is protected until complete cementitious content hydration.

Both **Sikafloor®-3 QuartzTop GR** mineral dry shake hardener and **Sika® Antisol® S** curing compound carry a Declaration of Performance & CE Mark.



Final flooring system: The system applied to the surface of all three levels of the parking lot was **Sikafloor® MultiDur ES-14**. **Sikafloor® MultiDur ES-14** is a smooth, colored, rigid epoxy resin flooring system. It is particularly suitable for car parks, as it features good chemical & mechanical strength and good wear and abrasion resistance. It is additionally easy to apply, impermeable to liquids and easy to clean.

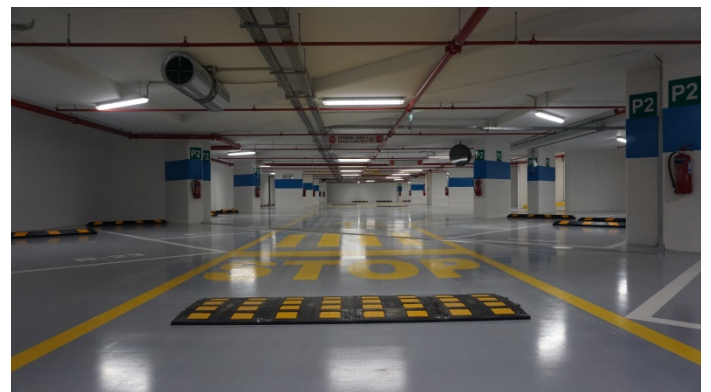
Sikafloor® MultiDur ES-14 system structure:



1. Primer	Sikafloor®-161
2. Final coating	Sikafloor®-264

The final epoxy coating **Sikafloor®-264** complies with the most rigorous and specialized certification in terms of outgassing, particle emission and biological resistance for areas requiring a CleanRoom® Suitable Material.

The epoxy coating **Sikafloor®-264** carries CE marking and Declaration of Performance as a "Protective Concrete Coating" and it complies with the European Directive 2004/42 regarding limitation of VOC. Moreover, it carries a LEED certification, according to US EPA Method 24.



PROJECT PARTICIPANTS:

Owner: **Municipality of Maroussi**
Main contractor: **ERETBO S.A.**
Floor contractor: **POLYCOAT**



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