

**Project:**

Fossano viaduct.  
Structural refurbishment and  
waterproofing.

**Location:**

Fossano (Italy)

**Project completed:**

2019

**Owner/s:**

ANAS Spa

**Applicator / Contractor:**

Civelli costruzioni Srl  
Viale Ticino,  
Gavirate (Varese)

**Technical / Commercial  
assistance:**

Frontini Ernesto

**Market sector:**

Civil Engineering

**Products used & quantities:**

MasterSeal 6100 FX – 30,000 m<sup>2</sup>  
MasterEmaco S 444 FR  
MasterEmaco S 950  
MasterSeal 924

## Fossano viaduct

### Waterproofing of viaduct deck with MasterSeal 6100 FX



Our reference project in Fossano (Italy): Waterproofing of viaduct deck with MasterSeal 6100 FX

#### The background

In the last four years, for a variety of reasons, Italy has experienced the collapse of five road bridges. Among them was the viaduct on the ring road in Fossano in northern Italy in 2017.

Luckily, in this case, no vehicles were going across or underneath the structure. The sudden collapse took place without out-of-plane displacements.

#### The challenge

The reconstruction of the viaduct included the casting of a new concrete slab and the installation of barriers.

Additionally, it was necessary to apply a waterproofing membrane to the concrete slab, before the application of the asphalt pavement, to protect the concrete against water damage.

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### Our solution

Considering all the requirements of the project, the following procedure was adopted in accordance with EN 1504 parts 2 and 3.

- Structural refurbishment with MasterEmaco S 444 FR, R4 class, concrete repair mortar reinforced with metal fibres.
- Reprofiling and levelling of the surface with MasterEmaco S 950, R3 class, polymer modified concrete repair mortar reinforced with polyacrylonitrile (PAN) fibres.
- Sealing of movement joints with MasterSeal 924 thermoplastic tape.
- Waterproofing of bridge deck with MasterSeal 6100 FX single-component elastic membrane before application of hot-rolled asphalt.

### Benefits to the customer

- Complete solution including concrete repair, surface waterproofing and joint treatment with compatible products offered by a single supplier.
- Rapid completion of work as the waterproofing membrane could be sprayed on in a single layer.
- Low consumption of MasterSeal 6100 FX, reducing the volume of packaging waste as well as application costs.
- MasterSeal 6100 FX is resistant to asphalt installation up to 160°C and maintains A4 crack bridging class and good adhesion after cooling of the asphalt.
- MasterSeal 6100 FX offers high waterproofing capabilities, even up to 5 bars of positive pressure.

### Project facts at a glance

- Total area waterproofed: approx. 30.000 m<sup>2</sup>.
- MasterSeal 6100 FX applied with a thickness of 2,5 mm and approx. 2,35 kg of product per m<sup>2</sup>.
- The junction for Marene, which is close to the viaduct, was reopened to traffic in August 2019.
- The rest of the Fossano ring road was reopened in August 2020, three years after the collapse of the viaduct.
- The use of MasterSeal 6100 FX instead of traditional cementitious two-component waterproofing membranes saved approx. 30 tonnes of waterproofing material.

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Further information is available at:

[www.master-builders-solutions.com/it](http://www.master-builders-solutions.com/it)