

Case study: DuPont site, Spain, BASF Construction Chemicals

DuPont Asturias – MasterSeal M 689

Complete refurbishment of a secondary containment area



Our reference in Carreño (Spain):
DuPont Asturias

Project:

DuPont Asturias

Location:

Carreño (Spain)

Project completed:

2016

Owner/s:

DuPont Asturias S.L.

Applicator/Contractor:

Construcciones JCN S.L. Tvmac S.L.

Designer/Architect/Specifi er:

Sacyr Fluor

Market sector:

Chemical Industry

Products used:

MasterSeal M 689
MasterSeal NP 474
MasterEmaco S 5400
MasterTop 560 RS

The background

DuPont Asturias is a subsidiary of the chemical company DowDuPont Inc.

The plant in northern Spain is a flagship plant for DuPont since the 1990s. The production portfolio includes fibers, tetrahydrofuran (THF) and nonwovens. Besides, the location is a European center for specialty services and corporate finances.

The challenge

Complete refurbishment of the industrial plant's secondary containment area with several pipes and other installations in use.

The slab had moving cracks and the retaining walls showed damages due to concrete cracking and rebar corrosion. Besides, there were some areas with insufficient slopes where rain water could accumulate.

In an industrial plant in full operational mode like DuPont Asturias a fast installation process with the shortest possible downtime was required. Besides, the application process had to be easy in the complicated and congested secondary containment area.

Technical data (Typical values)

- Reaction time (sprayed): 5 – 7 s
- Shore D hardness: 42
- Elongation at break: 425% (DIN 53 504)
- Adhesion on concrete: > 3 N/mm²

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Our solution

After conducting an in-depth analysis of the technical requirements, the ideal solution was to apply a hot spray polyurea waterproofing membrane: MasterSeal M 689.

Previous conditioning works on the substrate were also considered and the solution included the application of MasterTop 560 RS as patch repair mortar on the slab and MasterEmaco S 5400 on the walls. Additionally, movement joints were sealed using MasterSeal NP 474.

MasterSeal M 689 was applied by means of a suitable two component heated, high pressure, proportioning spray equipment. The application was done by an expert company that could solve all technical requirements at the jobsite.

Project facts at a glance

- Total area covered: approx. 7000 m².
- Total sprayed membrane: approx. 14.700 kg.
- Minimized shut-down times due to the fast hardening properties of MasterSeal M 689.

The customer's benefit

- Tailor made solution adapted to specific needs including all required ancillary materials full compatible with the final membrane.
- Application done by a certified applicator.
- MasterSeal M 689 is a durable polyurea membrane with ultra-fast curing properties. It is fully trafficable after only 12 hours, which allowed a quick return to service.
- It could also be easily applied to complicated and vertical surfaces and in the congested secondary containment areas.
- MasterSeal M 689 offers an excellent chemical resistance, thus the ideal solution for waterproofing in a secondary containment area of a chemical plant.
- Excellent long-term chemical resistance combined with very high elasticity of MasterSeal M 689 prevents damages in membrane due to cracks or movements in substrate.