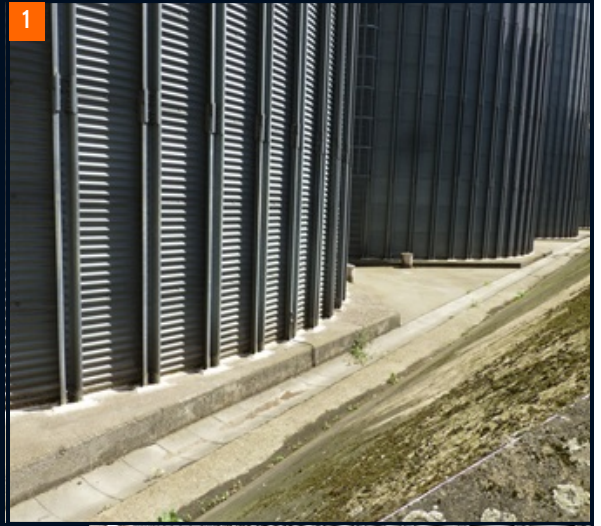


BELZONA REPAIRS AND PROTECTS THE TANK FOUNDATIONS OF NUMEROUS STORAGE TANKS

ID: 10324



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PROBLEM

The concrete foundation of the storage tank had structural issues. Because the concrete was highly porous and sloped towards the tank, water regularly collected around the base and soaked into the old concrete. Over time, this moisture found its way into the tank, causing the stored seed material to clump together into a hard, concrete-like mass. This aggressive material then started attacking the inside surfaces of the tank, leading to increasing damage.

APPLICATION SITUATION

In 2005, the first tank foundation was repaired with Belzona 4111 and protected with Belzona 3111. Twenty years later, in 2025, the customer found that the products were still well bonded to the substrate. However, increasing moisture penetration and continued deterioration of the old concrete had made the underlying structure unsuitable for long-term service.

A full or partial replacement of the foundations was ruled out due to the high cost and downtime involved. In addition, the recurring expense of removing the hardened seed material would have continued to add up over time. As a practical alternative, a new slope was created around the tanks and sealed to prevent water from collecting around the foundations in the future.

APPLICATION METHOD

To repair the foundation, the old waterproofing layer was first completely removed and the concrete surface was abrasive blasted. Temporary formwork was then installed to create a new slope, and the areas were primed with Belzona 4911 before being rebuilt with Belzona 4111. After the formwork was removed, the remaining areas and the upstand around the base were filled and smoothed. The surface was then blasted again and thoroughly cleaned. Finally, the foundation was treated with Belzona 3921 conditioner and coated with Belzona 3111, reinforced with Belzona 9311 reinforcement sheet, to provide a durable, long-lasting waterproof seal.

BELZONA FACTS

A conventional concrete repair was not a practical option in this case, as the amount of work involved would have been disproportionate. Using Belzona's concrete repair products, all areas could be rebuilt and repaired within just a few days, since these materials do not require the 28-day curing period associated with conventional concrete.

The Belzona system used, including Belzona 3111, is microporous. This means that water and moisture cannot penetrate the coating, while water vapour trapped within the substrate can still escape. As a result, the foundation remains dry and is reliably protected against deterioration and corrosion over the long term.

INDUSTRY

Food & Drink

LOCATION

Cargill

APPLICATION DATE

November 2025

PRODUCTS

Belzona 3111 (Flexible Membrane)
Belzona 3921 (GSC Surface Conditioner)
Belzona 4111 (Magma-Quartz)
Belzona 4911 (Magma TX Conditioner)

SUBSTRATE

Concrete

PHOTOS

1. Tanks before the application
2. Condition of the problem areas
3. Application of Belzona 4111
4. All tank foundations repaired and protected with Belzona 3111

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