

Project Profile - Civil Engineering & Infrastructure



PROJECT

**Prill Tower, Fosfertil Urea Plant,
Curitiba, Brazil**

SUMMARY

Reinstatement of cover to steel reinforcements inside Prill tower

PRODUCTS

Cemprotec E942
Monomix HD
Steel Reinforcement Protector 841

CLIENT

Fosfertil S.A.

CONTRACTOR

Maker Engenharia Ltda

BACKGROUND ▶

Fosfertil is Brazil's largest producer of raw materials used in fertilisers.

At this plant, urea is deposited down a tower to form pellets. This results in a hot and chemically aggressive atmosphere which quickly attacks normal concrete to cause spalling and corrosion of the steel reinforcement. The worst areas were recorded in the top 15m of the 100m tower where the concrete cover was almost completely eroded.

THE SOLUTION ▶

The urea deposits which had accumulated on the prill tower were mechanically removed. All exposed steel reinforcement was protected with **Steel Reinforcement Protector 841** and concrete repairs to the heavily damaged areas in the top section of the tower were undertaken with **Monomix HD**, chosen for its high build characteristics. The workers abseiled down the tower in order to spray-apply **Cemprotec E942**, an epoxy cementitious coating, which is applied directly to the concrete. **Cemprotec E942** was selected to give long term protection against abrasion and chemical attack from the urea.



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