



Sawary Alexandria Foundations Waterproofing

 Ongoing Project

ABOUT THIS PROJECT:

Market Segment:
General Construction

Contractors:
United Construction
(Mohamed El-Sayed
Megahed and Partners),
Nile Delta, Concrete Plus,
Al-Mahager, and Talaat
Moustafa

Owner:
New Urban Communities
Authority

Location:
Alexandria, Egypt

Engineering Consultants:
Prof. Dr. Hisham Seoudi's
office and IDG's office

Products Used:
Admix C-1000 NF
Xypex Concentrate

Applicators:
Black Rhino Trading
& Contracting and A
Build Egypt

DESCRIPTION

In some regions of Alexandria, Egypt, the soil and groundwater exhibit elevated chloride levels, posing a significant threat to exposed concrete and rebar. Preserving the integrity of these concrete elements is paramount to the durability of the structure.

To mitigate the risk of corrosion to the reinforcing steel, the engineering team overseeing the Sawary Alexandria project strategically opted for a dual application of Xypex Admix C-1000 NF and Xypex Concentrate.

This proactive approach not only effectively waterproofed the structure but also provided robust defence against chloride infiltration.



THE XYPEX SOLUTION

The New Urban Communities Authority is overseeing the project with engineering counsel spearheaded by the office of Prof. Dr. Hisham Seoudi in conjunction with IDG's office.

Notable contractors, including United Construction, Nile Delta, Concrete Plus, Al-Mahager, and Talaat Moustafa, have contributed to the project's construction. Black Rhino Trading & Contracting and A_build Egypt, both recognized Xypex applicators, meticulously applied all Xypex waterproofing products, ensuring optimal efficacy.

Xypex Admix C-1000 NF, a crystalline waterproofing admixture, was utilized exclusively in constructing the 170 cm thick raft slab foundation.



Applied to the lowermost 20 cm of the foundation, this admixture chemically interacts with concrete moisture, forming insoluble crystals that impede water ingress.

By combining Xypex Admix into the concrete mix during batching, the raft slab attains impermeability and fortification against chloride-induced corrosion of the reinforcing steel.

This remarkable performance is attributed to the admixture's remarkable capacity to diminish chloride ion permeability within the treated concrete substantially.

To protect the sides of the raft slab foundation, Xypex Concentrate was meticulously applied to the perimeter surface.

Active components within the Concentrate diffuse into the concrete, leading to the same crystalline substance that fortifies the Xypex admix-treated concrete. This crystalline matrix ensures comprehensive protection against water and chloride intrusion along the raft slab's sides.

The engineers at the Sawary Alexandria project devised a meticulous waterproofing strategy to counteract the challenges posed by chloride-rich soil conditions. By harnessing the combined efficacy of Xypex Admix C-1000 NF and Xypex Concentrate, the project attained enduring, impermeable, and corrosion-resistant integrity for the raft slab, ensuring longevity and corrosion protection.

