

2B+G+M+2 Showroom Building

Doha, Qatar (2015)

PRODUCTS USED:

**Krytol Internal Membrane™ (KIM®) Krytol Waterstop Grout™
Krytol Waterstop Treatment™ Krytol Bari-Cote™**

OWNER/DEVELOPER:
Badr Mohamed Yousuf Kafood

CONTRACTOR:
Mohamed Yousuf Kafood & Sons Trading & Contracting Co.

READY-MIX SUPPLIER:
Hassanesco Readymix Concrete W.L.L.

DISTRIBUTOR:
Al Jaber Structural Protection Co.

BACKGROUND

Since 1978, Mohamed Yousuf Kafood & Sons Trading & Contracting Co. has sold quality plumbing materials, sanitary wares, and bathroom tiles to anyone in need around Doha, Qatar. Over time, demand for their products grew, allowing the business to expand. It wasn't long after that when the company became one of the largest suppliers of their kind for the region. By the mid-2010s, they had grown enough to want a showroom so their extensive client base could visit the company and see their products in person.

They decided that this new structure would be located on Old Airport Road, which is a prime area for businesses and retailers to cater to their clients. There, they would construct a building with two basements. It would be surrounded by roads on two sides and a neighboring wall on its other two sides, and it would also have to contend with heavy hydrostatic pressure and a high water table that was around 4 m (13 ft) below ground level. Both could easily lead to water ingress and eventual structural damage if the construction team didn't apply an effective waterproofing solution.

While a torch-applied bituminous membrane would have been a typical choice, its complex and time-consuming application process made it costly for a project of this size. The project team needed a cost-effective alternative.

SOLUTION

The team turned to Kryton's waterproofing solutions for the answer. As a result, they chose 2,200 m³ (77,692 ft³) of Kryton's waterproofing admixture, KIM, to protect the showroom's raft slab, retaining wall, and water tank.

KIM's application only required that the team add the admixture to the concrete mix, giving the concrete itself the ability to react to water chemically in order to block its infiltration. It was a simple application that didn't involve complex steps or take a lot of time to implement. More importantly, it didn't need extra space for application unlike bituminous membranes. All of which allowed the team to maximize the building's footprint and save time, labor, and money.



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For even further waterproofing benefits, the team went on to use Kryton's Krytol® Waterstop System to protect all of the surrounding construction joints.

They did so by preparing the surrounding concrete so that it was in a saturated-surface-dry condition and applying Krytol Waterstop Grout overtop of the center of each joint. Because this solution used the same Krytol® technology as KIM, it ensured that the concrete would gain the necessary chemical properties to halt the flow of water. At the same time, the grout also contained fiber reinforcements, which made it possible to reduce the shrinkage and cracking of that concrete.

To bolster this protection, the team applied Krytol Waterstop Treatment over the grout-treated joint areas, which gave them even more Krytol technology to work with. The team then went on to close off the tie holes of the retaining wall and water-retaining structures with Kryton's Krytol Bari-Cote solution.

The entire process eliminated the need for bituminous membranes and kept the foundation permanently waterproof. That made the multiple screed protection steps that external membranes require unnecessary, saving the team a significant amount of time and money. It also ensured that the showroom for Mohamed Yousuf Kafood & Sons Trading & Contracting Co. remains standing safe and dry for any who enter it.



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