

The Independent at Main

Vancouver, BC, Canada (2019)

PRODUCT USED:

Krytol Internal Membrane™ (KIM®)

OWNER:

Ayala Land

DEVELOPER/GENERAL CONTRACTOR:

Rize Alliance Properties

ARCHITECT:

Acton Ostry Architects Inc.

ENGINEER:

Morrison Hershfield

BACKGROUND

A new luxury apartment tower and townhome complex with 258 units was fully built in Vancouver's Mount Pleasant neighborhood in 2019. The 21-story mixed-use development boasts a 2,044-square meter (22,000-square foot) shared backyard that was designed to foster a sense of community.

To provide this community with enough underground space for parking and bike storage, the design included a very deep basement for the whole building footprint, which is a full city block. The construction of this could have been highly time-consuming and costly, so to speed up its construction and cut costs, the construction team decided to use structural shotcrete for the below grade walls.

SOLUTION

To waterproof the below grade walls, the construction team added KIM to the structural shotcrete. Prior to that, the team had considered using an externally applied traditional waterproofing membrane. But they chose KIM because of its superior performance and pricing. As a hydrophilic crystalline admixture, KIM permanently waterproofs concrete, and it does so with the help of Kryton's proprietary Krystol® technology.

Once added to the concrete, the technology chemically reacts with any nearby water and unhydrated cement particles to form insoluble needle-shaped crystals. These crystals then fill capillary pores and micro-cracks in the concrete to block pathways for water and waterborne contaminants. That also gives the concrete a self-sealing ability. Consequently, if water is reintroduced through a rise in hydrostatic pressure or through hairline cracks, the Krystol technology will initiate further crystallization to provide permanent waterproofing protection. It's a feature that works for the life of the concrete. Moreover, by stopping the transmission of water through concrete with this crystallization, KIM adds durability and longevity to the concrete as that protects it from chemical attack and reinforcing steel from corrosion.

