

# Singhmar Centre for Learning

Edmonton, AB, Canada



## Project Information

**Project category:**  
Public Buildings/Places

**Year of construction:**  
2017

**Year of MAPEI involvement:**  
2017

**MAPEI coordinator:**  
Brent Johnsen

**MAPEI distributors:**  
Golden / Prosol

**Project owner:**  
Government of Alberta

**Project manager:**  
Xu Yao

**Architect:**  
DIALOG

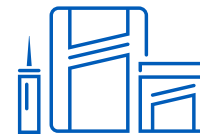
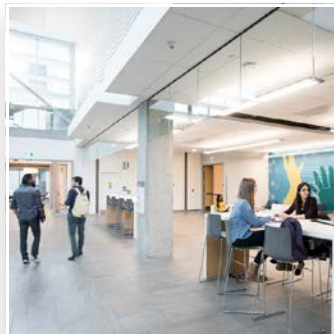
**Installer company:**  
Elite Flooring Ltd.

**Contractor:**  
PCL Construction



## Project Overview

A \$192 million, LEED-Gold-certified project, Norquest College's Singhmar Centre for Learning was built from the ground up using an array of MAPEI products.



## Products Used

**Kerabond® T / Keralastic® System**  
**Kerapoxy® CQ**  
**Mapeguard® 2**  
**MAPEI SM Primer™**  
**Mapelastic® AquaDefense**  
**Novoplan® 2 Plus**  
**Planibond® EBA**  
**Planipatch®**  
**Planipatch Plus®**  
**Primer L™**  
**Ultrabond ECO® 373**  
**Ultrabond ECO 711**  
**Ultracolor® Plus FA**  
**Ultraflex™ LFT™**



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## MAPEI helps provide solid foundation for learning

In 2015, NorQuest College was looking to expand its campus space and drew up specifications for a four-story, 242,188-square-foot (22 500-m<sup>2</sup>) structure in the heart of the college's downtown Edmonton, Alberta, campus. The building would be known as the Singhmar Centre for Learning, named for NorQuest College donors Drs. Prem and Saroj Singhmar.

### MAPEI products on the jobsite

MAPEI sales representative Brent Johnsen, who was the coordinator on the project, assessed the scope of the task at hand.

"We reached out to three different product lines to meet the needs of this \$192 million project," Johnsen said. "Besides a library, the Singhmar Centre for Learning includes 49 classrooms and labs over four floors, covering a 64,580-square-foot (6 000-m<sup>2</sup>) footprint. Its showcase element is a grand atrium with an open, curved staircase. The project was conceived by DIALOG, designers of the Kaye Edmonton Clinic, the new Royal Alberta Museum and the new tower at Edmonton International Airport."

MAPEI's multi-disciplinary expertise in construction products – from surface preparation and floor-covering installation systems to waterproofing systems and tile and stone installation systems – meant that every surface (floors to walls) was covered.

### Surface preparation

MAPEI's work started with the interior concrete slabs. Some areas had defects that were serious enough to require patching, so **Planipatch** polymer-modified, cement-based patching compound was mixed with **Planipatch Plus** high-performance additive to form **Planipatch Plus System**. This system was used both as an embossing leveler and as a patch to fill voids.

Crew members then prepared roughly 73,000 square feet (6 782 m<sup>2</sup>) of floor surfaces with **Primer L**, an advanced-technology, acrylic latex primer. **Primer L** was used to enhance the performance and adhesion of the **Novoplan 2 Plus** high-strength, self-leveling underlayment that was applied afterwards. Both products were crucial in achieving a strict surface flatness of "FF50" as specified, particularly in areas that were to receive porcelain tile.

Another 30,000 square feet (2 787 m<sup>2</sup>) of floor surfaces called for added sound reduction; therefore, contractors turned to a combination of **MAPEI SM Primer** and **Mapeguard 2** sound-reduction and crack-isolation sheet membrane for those spaces

### Spiral staircase

The spiral, open-concept atrium staircase posed a singular challenge. Its steel frame was to be topped

with large-format porcelain tile for the steps; this task required a coating of **Planibond EBA** epoxy bonding agent, with a broadcast of sand to enhance the adhesion of the mortar. Then, installers used **Kerabond T / Keralastic System**, a high-performance, two-part mortar system.

### Interior floors

Resilient sheet flooring was laid out in the labs, classrooms and adjacent hallways. These areas were covered using **Ultrabond ECO 373** super aggressive, pressure-sensitive adhesive. Other areas called for vinyl composition tile (VCT) flooring, which was installed using **Ultrabond ECO 711** premium, clear, thin-spread VCT adhesive. (Use of this product also contributed two points towards 2019 LEED Gold certification.)

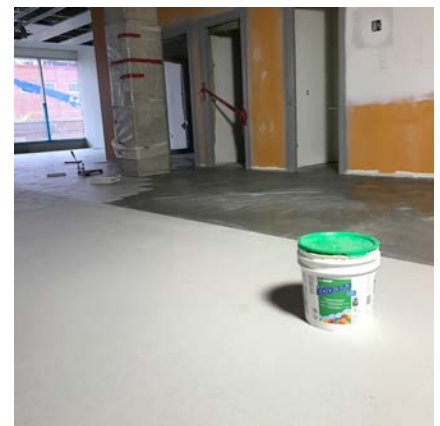
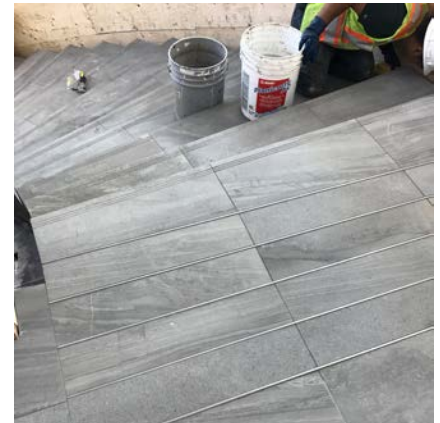
Certain tiled areas required extra attention to ensure a high level of waterproofing, so **Mapelastic AquaDefense** premium waterproofing and crack-isolation membrane was applied before the **Kerabond T / Keralastic**. Unlike other parts of the project, **Kerapoxy CQ** was used for grouting these high-moisture areas, as it is water-cleanable and provides excellent stain and chemical resistance.

### Interior tiled walls

About 3,200 square feet (297 m<sup>2</sup>) of wall was tiled with **Ultraflex LFT** premium, non-sag, large-and-heavy-tile mortar. Additionally, some 76,000 square feet (7 061 m<sup>2</sup>) of **Ultracolor Plus FA** rapid-setting grout was used on the bulk of the tile walls; this grout was chosen for its stain-resistance properties and ease of maintenance.

With the help of MAPEI products, the job was completed efficiently, professionally and economically, allowing NorQuest College to welcome students to its new facility at the grand opening on October 4, 2017. The Singhmar Centre for Learning, with its Centre for Growth and Harmony and new Indigenous Centre, became an instant source of pride for all Albertans.

"We're thrilled that NorQuest College's new campus addition, the Singhmar Centre for Learning, is now open," said Dr. Jodi Abbott, the college's president and CEO. "The feedback has been fantastic; many visitors told me that they were blown away by the building infrastructure."



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