

## **Metro Toronto Convention Centre meets aesthetic, sustainable, durability goals with Rockfon<sup>®</sup> ceiling products**

Metro Toronto Convention Centre, Toronto, Ontario



When the Metro Toronto Convention Centre (MTCC) decided to renovate its South Building, it sought a ceiling system that offered both a modern look and modern performance, and would support its pursuit of LEED<sup>®</sup> Canada certification, a rigorous and internationally recognized certification from Canadian Green Building Council (CaGBC).

### **Products in use**

- Rockfon<sup>®</sup> Koral<sup>™</sup>

Located at 222 Bremner Boulevard in downtown Toronto, the 1.2 million-square-foot MTCC South Building includes 34 meeting rooms and four exhibit halls with a barrier-free, fully accessible floor plan. This world-class, award-winning facility was designed by B+H Architects and opened in 1997. After 16 years, the space was in need of an update and the ceiling panels had begun to show their age.

Addressing the convention centre's essential performance and sustainability goals, Rockfon worked closely with key facility staff of MTCC. Joshua Jaikaran, MTCC's facilities technical coordinator, served as project lead and managed the South Building's renovation from the start to completion, including the product selection.

Amongst the selection criteria for choosing Rockfon Koral products for the project's ceiling system:

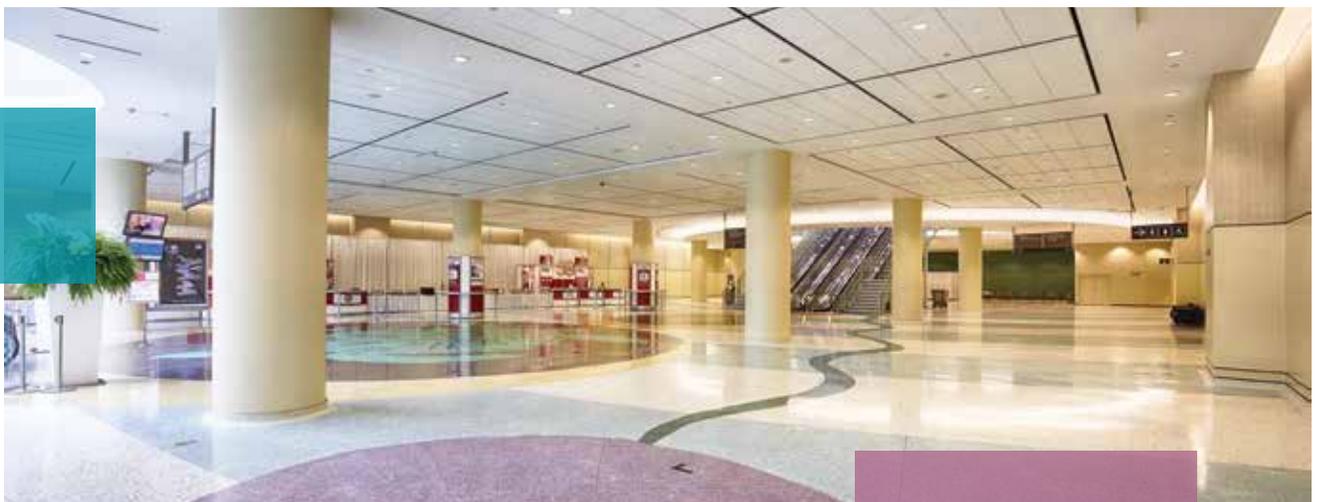
- A lightly textured, white surface
- A high-quality and easily cleanable surface
- A light weight, non-brittle, sag-resistant, high-performance material
- Availability in metric sizes
- A high acoustic performance rating
- A tegular edge
- The potential for energy reduction with high light reflectance
- Low-VOC and good recycled content levels
- Long-term durability, supported with a 10-year limited warranty

Jaikaran's colleagues, Vlaad Zahradnik and Scot Muncaster, provided project support. Sustainability officer, Vivian Fleet, managed the LEED review process. MTCC has been very conscious of the environmental footprint of the events and meeting industry and as such offers event planners sustainable meeting solutions with options for renewable power, zero waste, locally sourced menus and carbon offsets.

"We have had a sustainable procurement policy in place since 2008, which guides us in all purchasing practices," says Jaikaran. "Choosing products that have recycled content and low/no-VOCs is important to the convention centre."

Rockfon products use stone wool as raw material to create beautiful, comfortable, safe and healthy indoor environments, while making a constructive contribution toward a sustainable future. Rockfon Koral ceiling panels contain up to 34% recycled content. Rockfon ceiling panels are made of water-resistant stone wool, which provides no sustenance to harmful microorganisms. Rockfon products supplied in North America are produced in ISO9001/ISO14001 certified factories, and are supported with a 10-year limited warranty.

Demonstrating its environmental practices and commitments, Rockfon's extensive portfolio of acoustic ceiling solutions has earned UL® Environment's GREENGUARD Gold Certification for low-emitting products. Certification includes safety factors to account for sensitive individuals, such as children and the elderly, and helps ensure that a product is acceptable for use in environments, such as schools and healthcare facilities.



Furthermore, certification demonstrates a manufacturer's commitment to the health and well-being of people who use their products. Choosing low-VOC products, like stone wool, can improve indoor air quality.

## Facts

- Rockfon's acoustic ceiling solutions have earned UL® Environment's GREENGUARD Gold Certification for low emitting products
- Rockfon Koral ceiling panels have a light reflectance (LR) of 0.86 and carries a UL Classification for Noise Reduction Coefficient of 0.85 for high sound absorption

Further supporting LEED criteria for energy efficiency, stone wool ceiling panels' smooth surface also is highly reflective and can play a significant role in enhancing energy efficiency through better distribution of light. On MTCC's South Building, the ceiling panels have a light reflectance (LR) of 0.86. This measurement indicates 86 percent of light, both daylight and light from the high-efficiency electronic fixtures, is reflected from the panel's surface. Maximizing the use of natural light may allow the number of light fixtures to be reduced. Lowering electronic light loads may reduce cooling costs by 7%.

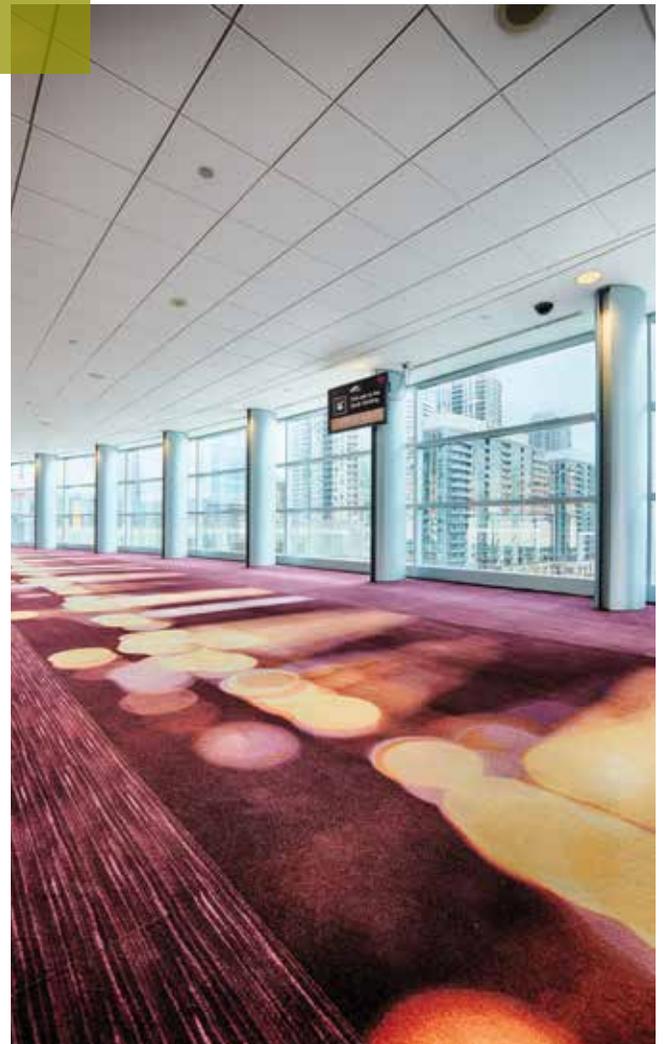
Jaikaran elaborates, "Having a white ceiling tile with a smooth surface and high light reflectance brightens up the space, which could potentially mean energy savings, light reduction and a cooler space."

Excellent sound absorption was another of the MTCC's performance criteria. Rockfon Koral carries a UL Classification for Noise Reduction Coefficient of 0.85 for high sound absorption which was the acoustical category most important to the MTCC.

Rockfon's district manager for Ontario and western Canada, Scott Debenham, adds, "Rockfon Koral's high NRC mitigates what's known as the 'Lombard Effect.' When a large group of people gather in an open space and converse, the noise levels increase. People naturally escalate the volume of their voices, competing

to be heard. This makes it louder and louder. Our ceiling panels' high sound absorption combats this effect, decreasing noise levels and making it easier to be heard without raising your voice. The panels enhance speech intelligibility of speakers too by decreasing reverberance."

As part of creating comfortable, healthy spaces that respect the environment, minimizing repair and maximizing longevity are key considerations in any sustainably designed project. With renovation projects, there is a direct opportunity for comparison and improvement. Jaikaran explains that MTCC's "old tiles were brittle, dirty, broken on some edges" and showed signs of water damage and stains.



Prior to replacing the 16-year-old ceiling panels, MTCC's renovation project team gathered several samples to conduct their own practical experiments regarding cleaning and durability. According to Jaikaran, they wanted to ensure the panels "didn't crumble after rigorous test exercises. The tiles have a tegular edge, so we were looking for how durable the tile would be with constant handling. Do the edges break off easily? How brittle is the tile? Do the tiles hold their texture/scrim after being handled multiple times?"

Dirt or scuffs were applied to the panel samples to examine how easy the marks could be removed. The surface of Rockfon Koral products can be vacuum cleaned with a soft brush attachment or by using a damp cloth. The products successfully passed MTCC's tests. Jaikaran notes some of the many questions they asked: "Does the surface return to its original color? Does the texture rub off? Does the water absorb into the tile? Can the tiles withstand water damage? What happens to the tile if we had a leak?"

In addition, stone wool can withstand temperatures up to 1177 degrees Celsius (2150 degrees Fahrenheit). It does not contribute to the development and spread of fire, giving occupants the extra minutes they may need to escape a fire.

Even when applied in infrequently heated and unheated rooms, or at high humidity levels, these panels retain their intended performance. No acclimatization is needed, which means Rockfon ceiling panels can be installed during the very early stage of the build (when windows are not fully sealed) without any risk of deflection of the panels. Assisting with a smooth installation, Jaikaran says, "The ceiling tiles are easy to cut. The workers find them easy to work with."

"It's gone well," agrees Ralph Scali, Showtech Power & Lighting's manager. Showtech is installing more than 40,600 square feet of Rockfon Koral products in the prefunction areas of the South Building. As MTCC's in-house partner, Showtech schedules its facility improvements between the convention center's events to avoid disrupting the clients and visitors. The on-site team's ceiling replacement project occurred during three months. "The process can be challenging. You get started, then need to clean up and put everything away before the next event, and then start again. We're here to help out and get the job done."

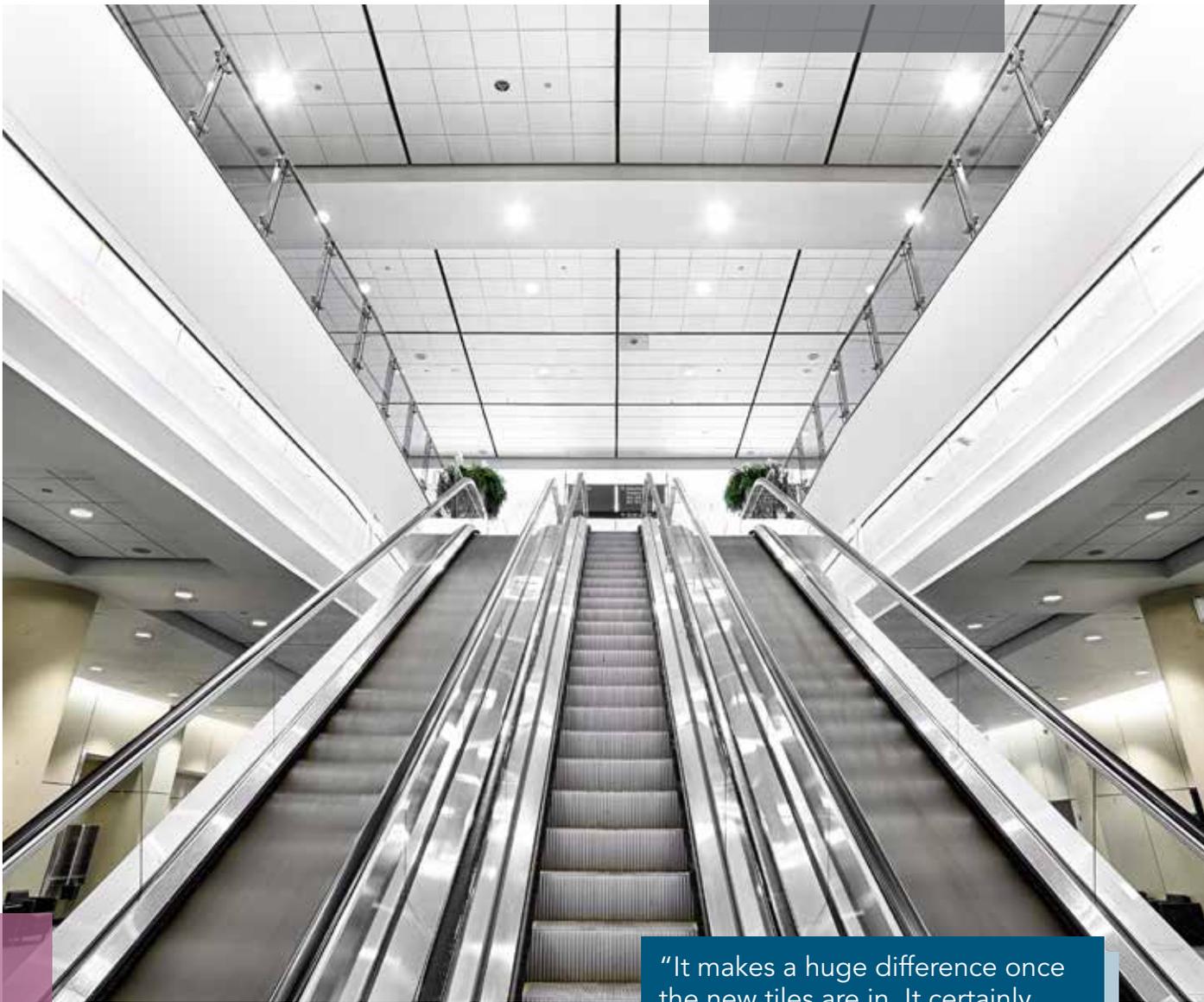
Completed in January 2014 as a Zero Waste project, 100% of the old ceiling tiles removed were recycled/reused. Scali says, "It makes a huge difference once the new tiles are in. It certainly brightens it up."

Pleased with MTCC South Building renovation's ceiling installation and its resulting aesthetic, performance and sustainability qualities, Jaikaran proudly describes the convention centre as offering: "Top-of-class service in a first-class venue in a world-class city. And yes, it's the only facility that has hosted both a G20 and a G7 Summit," as well as Toronto Construction Association's Construct Canada, Canada Green Building Council's national conference and the U.S. Green Building Council's Greenbuild.

In one year alone, conventions and trade shows held at the MTCC generated a direct-spending economic impact of \$523.7 million dollars to the community. This influx of funds into the city of Toronto translates into 6,000 jobs and the total taxes generated are estimated to be \$177.5 million dollars.

Recognizing MTCC's economic impact, exceptional facilities and services, its sustainability efforts have been honored by the Tourism Industry Association of Ontario's Sustainable Tourism Award, the Environmental Commissioner of Ontario, and most recently has become the first conference venue in Canada to be awarded the APEX/ASTM Environmentally Sustainable Event Standard for Meeting Venue, as well as several awards and certifications from the Building Owners and Managers Association (BOMA) of Canada such as Go Green, Building of the Year, and Building Environmental Standards Level 3 Certification for Energy and Environmental Management.

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