



## **Luigi Di Geso**President and CEO, MAPEI North America

# Rising to the challenge of the COVID-19 crisis

As I write this, we are in the midst of the COVID-19 crisis. Hopefully, in the few short weeks it will take to be published, we will be back to "business as usual" – except it will never again be business as usual. We will have come out of this experience smarter, stronger and with an even better sense of teamwork.

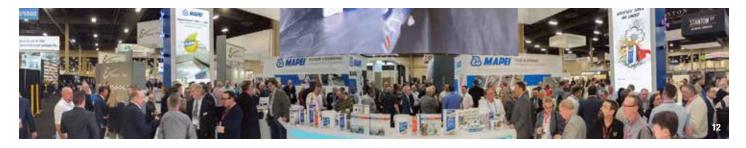
I have always been proud to lead MAPEI North America, but the way that we pulled together during this unprecedented time has solidified that fact. With our existing processes in place, we have been able to shift operations from our corporate locations to individual homes. With strict controls in place, we have been able to keep our research labs and factories running. We restricted travel, turning instead to virtual meetings, conference calls and webinars for our internal and our external meetings and events. The innovative spirit that has always defined MAPEI has been on display during this constantly evolving time.

It is easy to talk about teamwork, and we practice it every day. But now when faced with this aberrant situation, we have had to dig deep and become even more creative while facing real fear. We've kept the business running, which keeps the economy running – not a small fact and one of which we should all be proud.

We started 2020 off with an economic boom, and I am convinced that after we get through this viral situation, we will finish 2020 with the same economic highs as we started it with!

Stay safe. Stay well.

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**ON THE COVER** *Mapeheat* floor-heating systems

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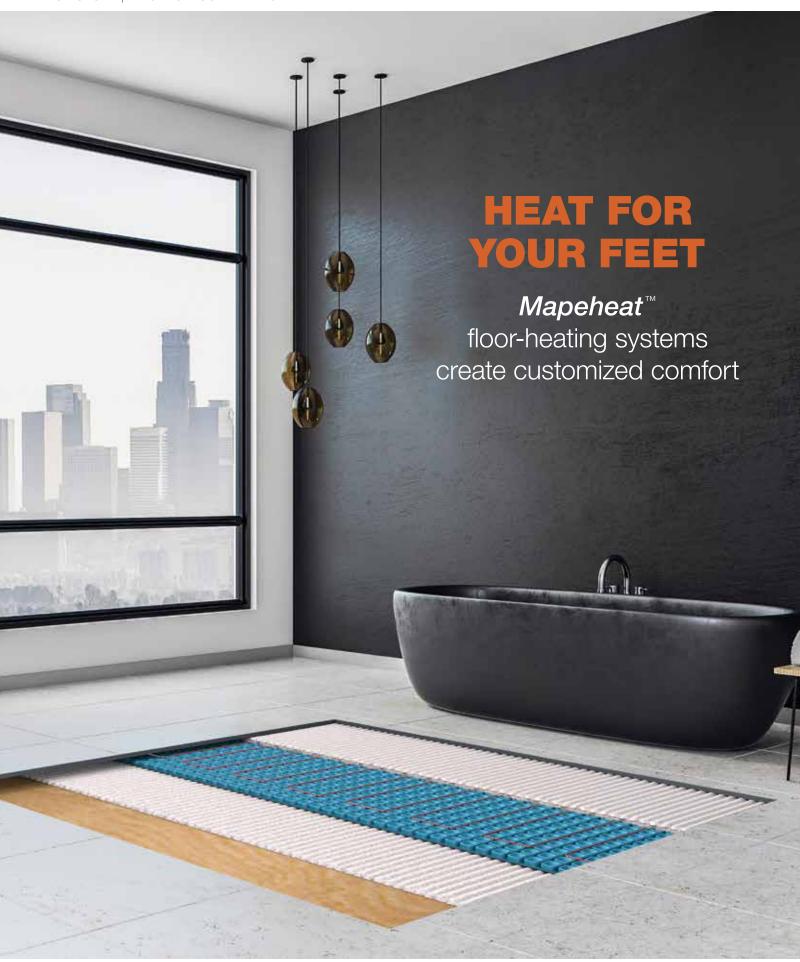
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MAPEI has entered the radiant floor-heating market, partnering with nVent Nuheat to bring *Mapeheat* with "Technology from nVent Nuheat" floor-heating products to the North American flooring market.

nVent's portfolio of leading electrical brands dates back more than 100 years, and nVent brings that electrical expertise to the floorheating venture. And MAPEI is the industry leader in tile installation materials, as well as self-levelers, moisture management products and floor-covering adhesives. Together, the two companies have aligned to offer the most comprehensive array of floor-heating solutions on the flooring market. The icing on the cake is that MAPEI's *Mapeheat* warranty in North America offers the best protection in the floor-heating industry – a 25-year product or lifetime system warranty.

#### A portfolio of system components

The Mapeheat family of products includes:

 Mapeheat Mat: A pre-wired, floor-heating fabric designed for easy installation, guaranteeing even heat distribution and available in both standard and customized sizes

- Mapeheat Membrane: A lightweight uncoupling, crackisolation and waterproofing membrane
- Mapeheat Mesh: A self-adhering, pre-wired, floor-heating mesh
- Mapeheat Cable: Available in 120 V and 240 V
- Mapeheat thermostats: Available in three formats Mapeheat Thermo Connect programmable, WiFi-enabled thermostat that works with such home assistants as Amazon Alexa, Google Assistant, Nest and IFTTT; Mapeheat Thermo Touch 7-day programmable thermostat; and Mapeheat Thermo Basic non-programmable thermostat
- Accessories such as Mapeheat Fault Sensor (which monitors wiring during the system's installation) and Mapeheat Cable Guides (for securing Mapeheat Cable into Mapeheat Membrane)

The mix-and-match components of *Mapeheat* floor-heating systems offer versatility, variety and innovation. And they're not just limited to tile installations. *Mapeheat* systems can be used to heat many types of flooring, including engineered wood and luxury vinyl... and even in wet environments like steam rooms and showers.

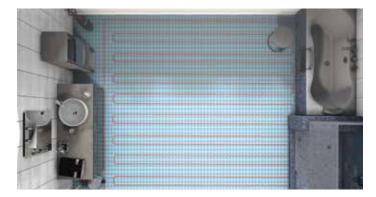
#### Mapeheat Membrane and Mapeheat Cable

Mapeheat Membrane is a lightweight uncoupling, crack-isolation and waterproofing membrane. It comes in varied sizes and features rounded-square reliefs into which Mapeheat Cable floor-heating cable securely snaps. The membrane's thin profile - less than 1/4" (6 mm) - works well with remodeling projects in which a new floor is installed directly over a preexisting one.



#### Mapeheat Mat

Mapeheat Mat is a pre-wired, radiant floor-heating fabric designed for easy installation. Embedded in the fabric, the heating wires are evenly spaced, guaranteeing even heat distribution with no cold spots. Mapeheat Mat is available in more than 70 standard sizes and can also be custom-sized to accommodate curves, angles and obstructions.



#### Working with the science of heat energy

Mapeheat systems provide comfortable, clean, safe and efficient ways to heat any indoor living space. In addition, they make good ecological and economic sense because of how heat energy works.

Heat rises. When heating a room, it is more efficient and effective to start the heating process at the floor and allow the heat to rise rather than to force heat out and down from a ceiling vent or wall unit. Delivering warmth to the exact areas where it is needed most, radiant floor heating delivers enhanced comfort at a lower average ambient temperature, which saves energy.

Speaking of efficiency, direct electric heating is 100% efficient. In other words, all of the energy used by direct heating systems is converted into heat. By comparison, for an older gas furnace that is 80% efficient or a "high-efficiency" gas furnace that is 90% efficient, up to 20% of the energy consumed is not creating heat (meaning that the energy is wasted).

Systems that heat a space with warm air have the additional challenge of using air, a medium with low thermal mass, to heat solid objects in the living space, all of which have greater thermal mass than air. This is why a forced air system needs to keep a home at a higher ambient temperature to deliver an equivalent comfort level.

#### Mapeheat Mesh

Mapeheat Mesh is a self-adhesive, pre-wired, floor-heating mesh that can be adhered onto the subfloor during the layout process. Compatible with all subfloor types and featuring a low profile (3/16" or 4.5 mm), Mapeheat Mesh is ideal for use in renovation projects. Easily installed and configurable to fit any room, Mapeheat Mesh is suitable for use under ceramic and porcelain tile, natural stone, laminate flooring, engineered wood, luxury vinyl tile (LVT) and luxury vinyl plank (LVP).



#### Features that save costs and energy

A well-designed Mapeheat system also offers other benefits that can reduce energy usage, such as:

- Mapeheat systems will provide the desired temperature quickly, enabling on-demand zone heating. And because a separate Mapeheat thermostat governs the floor heat of for each area, the homeowner can pay to heat only the spaces that are in use.
- The programmable thermostats Mapeheat Thermo Touch and Mapeheat Thermo Connect allow the user to schedule the heating system to be on only when the home is occupied. Both of these premium products also track energy use over time, allowing homeowners to understand how their usage patterns and settings are affecting their electricity use.
- Both programmable *Mapeheat* thermostats have a feature called "Early Start" with an embedded self-learning feature. By enabling Early Start, the thermostat will activate the system early, with the goal of being up to the desired temperature at the scheduled time.
- The WiFi-enabled Mapeheat Thermo Connect enables remote operation and smart-home connectivity. By integrating the Mapeheat system with Alexa, Google Assistant, IFTTT or another home assistant, users can optimize energy use with home routines or apps that account for home occupancy, the owners' geolocation, home security status, and many other conditions that enable the system to be automatically turned down or off for maximum efficiency.
- Mapeheat Cable and Mapeheat Mat systems enable variable watt density for the desired heat output.
- Installing a thermal barrier, such as MAPEI's *Mapesonic*™ **RM**, under the *Mapeheat* floor-heating system ensures that most of the energy use goes into heating the floor and the living space.

In summary, a Mapeheat system from MAPEI offers an outstanding combination of energy efficiency, high-tech convenience and luxurious comfort. It's truly a treat for feet.

#### **Mapeheat** thermostats

Every Mapeheat floor-heating system is available with the option of three thermostats: Mapeheat Thermo Connect, Mapeheat Thermo Touch and Mapeheat Thermo Basic. Allowing users to easily control the settings of the Mapeheat floor-heating system, each thermostat senses floor and ambient temperatures. However, each thermostat offers different features and advantages:

- Mapeheat Thermo Connect is a WiFi-enabled, floor-sensing thermostat designed to interact with today's smart home. Homeowners can program and control their Mapeheat Thermo Connect via a free smartphone app (iOS and Android) or any Web browser. Plus, this thermostat works with Nest, Google Assistant, Amazon Alexa and IFTTT home assistants. It allows 7-day programmability and shows energy usage.
- Mapeheat Thermo Touch is a 7-day programmable thermostat that has touchscreen display and shows energy usage.
- Mapeheat Thermo Basic is a non-programmable thermostat with a physical on/off switch.





About the author: Sonya Moste

Sonya has been launching products for more than 20 years. Her career in manufacturing began in plastics where she launched several lines of food service packaging product for Dart

Container Corporation. Sonya began working at MAPEI in 2015 and led the resurgence of the North American Adhesives brand. Today, Sonya is the product manager of crack-isolation and sound-reduction (and floor-heating) membranes.







As population density increases in urban centers, growing numbers of people are living in multi-family residences. Although these multi-story buildings solve many urban planning issues, they are not without their own challenges. Residents often complain about sound transmission from their upstairs neighbors.

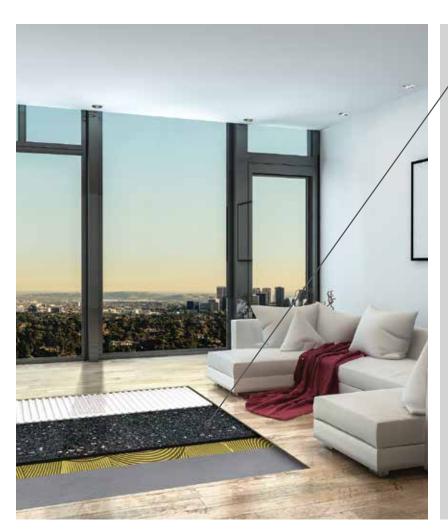
MAPEI has developed several solutions for mitigating such noise. We sat down with Jeff Johnson, MAPEI's Business Manager for Floor Covering Installation Systems, to discuss some of the options.

What new technologies or developments in adhesives and installation products are suited to installations in multifamily buildings? In terms of adhesives, there is not much new with a specific focus on multi-family applications. What does seem to be more important these days is sound control as the housing market swings away from single-family residences to more multi-family/apartment living conditions.

The ceramic tile market has had to deal with acoustic dampening for years, but now we are seeing the need for sound control under LVT as that flooring material continues to take market share and customer preference. When you deal with acoustic dampening, this can sometimes be addressed by a single-step adhesive application but most commonly involves some form of sound mat. Generally speaking, double-stick-type sound mat installations will have better ability to reduce sound transmissions over single-step adhesive installations.

MAPEI has recently introduced new installation materials for acoustic dampening in the form of *Mapesonic™ RM* and *Mapecontact™ SRT*. Mapesonic RM is a proprietary reground rubber membrane that is provided in several thicknesses useful for a wide variety of flooring types. *Mapecontact SRT* is a high-moisture-resistant, sound-reducing, double-sided foam-core tape that provides immediate utilization of the floor once installed and excellent sound reduction.

What different requirements, if any, do multi-family building installations warrant from the installation products used (compared with another commercial or residential project, for instance)?





Mapesonic RM is a high-performance, acoustic underlayment designed to reduce ambient and impact sound transmissions in installations of ceramic and porcelain tile, natural stone, wood flooring, luxury vinyl tile, luxury vinyl plank, sheet vinyl and carpet tile. Mapesonic RM is ideal for applications in apartments, condominiums, college dormitories, classrooms and office buildings.



## **Product Focus**

Mapecontact SRT is a double-sided, foamcore, dry-film tape for rapidly and permanently installing solid vinyl sheet, vinyl tile and vinyl plank flooring, as well as prefinished engineered or solid wood. Providing sound reduction for multifamily living, it has also been specifically designed for instant bonding and instant utilization in residential and commercial floor installations. Mapecontact SRT is unaffected by high moisture conditions in concrete and can be installed without moisture testing. Plus, it provides subfloor moisture protection for wood and bamboo flooring.



In my experience, multi-family housing installation projects are driven by one thing primarily - cost. For example, commercial flooring applications need durability under extreme traffic or some other highperformance application, whereas multifamily housing is all about a nice visual at the best possible installation cost. Don't get me wrong, installation materials for multi-family flooring have to perform, but in general, you will find that the decisions around which the adhesive or installation system used will be driven by how much it costs per square foot.

Keep in mind also that most multi-family housing could be considered transitory in nature. In other words, the property gets turned over more often than single-family residences. As such, some contractors are looking for installation systems that are easily replaced and do not require a ton of effort to remove. That's the bottom line.





#### LIVING SPACE **FLOOR**

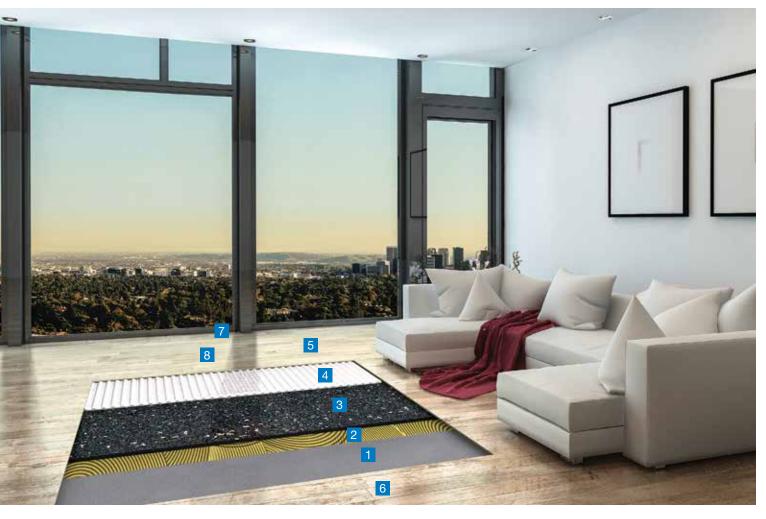
WOOD-LOOK TILE AND SOUND REDUCTION OVER CONCRETE

- Concrete
- Ultrabond ECO® 420
- Mapesonic™ RM 5
- Ultraflex™ LFT™ Rapid
- Wood-look porcelain tile
- Ultracolor® Plus FA
- Mapesil™ T
- *UltraCare*™ Penetrating Plus Stone, **Tile & Grout Sealer**

Living areas must combine beauty, durability and utility. A multitude of surface coverings are available to obtain this level of performance and aesthetics, including tile that looks like wood. Woodlook tile is available in natural wood-grain patterns and many colors to look as if they are stained, aged or white-washed. Porcelain and ceramic plank tiles range from narrow- to large-format.

Challenges: Aesthetics, durability, efflorescence and sound reduction

Solution: A complete system of selfleveling (if needed), sound-reduction product, large-format-tile mortar and efflorescence-free grout





occupants. On average, people spend 90 percent of their time indoors. According to the Environmental Protection Agency, indoor air can be up to five times more polluted than outdoor air.

MAPEI is committed to the environment and human health and wellness. We understand the potential impact of our products and are purposeful in making improvements in our products, our workspace environments and our community. Voluntarily validating volatile organic compound (VOC) emissions through credible third-party testing plays an important role in human health and wellness, and it takes our commitment a step further.

VOCs are chemicals that are emitted as gases from several products including adhesives, sealants and other chemical products buildings. Third-party certification involves an independent assessment declaring that specified requirements have been met; products are tested for 35 individual VOCs specified by the California Standard Method for VOC Emissions Testing and Evaluation (California Department of Public Health [CDPH] Standard Method v1.2 or greater), otherwise known as CA Section 01350. Testing our products to ensure that they meet CDPH Standard Method v1.2 or greater

demonstrates our commitment to the health and well-being of our end-users and the environment. We strive to meet the most stringent human health and environmental standards, including Green Label Plus from The Carpet and Rug Institute (CRI) and Indoor Advantage Gold certification for indoor air quality from SCS Global Services. By offering both certifications, MAPEI can offer timely assurance that products and systems meet requirements for low VOC emissions.

Third-party VOC emissions certification is also required in green-building standards and certification systems. MAPEI provides Sustainability Product Reports to help our customers recognize the health and environmental benefits of using MAPEI products in LEED, WELL, Living Building Challenge and other green-building certification projects.

To learn more about MAPEI's products with low VOC emissions, e-mail: sustainability\_USA@mapei.com (in the USA) or sustainability-durabilite@mapei.com (in Canada).

To learn more about the SCS Indoor Advantage program, visit: https:// www.scsglobalservices. com/services/indoorair-quality-certification

To learn more about the CRI Green Label Plus program, visit: https://carpet-rug.org/ testing/green-labelplus/



About the author: Brittany Storm

Brittany is the Sustainability Manager for MAPEI Corporation. Her background as a

sustainable building consultant and background in construction allow her to speak to audiences about both the big picture and the technical aspects of a project. Brittany is a LEED Accredited Professional (AP) with BD+C and ID+C specialties, as well as a WELL AP and Fitwel Ambassador. In addition, she is active on several sustainability committees.

## **READY, SET, CLICK!**

After much hard work, MAPEI's new Website and app are finally launching



MAPEI's new Website and app feature all the useful tools that you've come to rely on from the previous incarnations, as well as powerful new enhancements. We will be rolling out a series of articles, videos and industry ads explaining the new site and its benefits in the coming months, but here's a quick look at some of the highlights.

The first difference is obvious: Its appearance. The new site has an updated, fresher interface that offers a friendlier user experience. But the Website's "beauty" is more than skin deep. The site is optimized, which helps with our Search Engine Optimization (SEO), meaning we'll organically appear higher during Internet searches. The site also features a responsive design, which means that it can be used interchangeably on a desktop, a tablet and a cellphone, without loss of functionality.



#### Out with the old (app), in with the new

MAPEI's new app launched simultaneously with the new Website. Be sure to uninstall the old app and install the new app.

Available for free download on the App Store or Google Play, MAPEI's new app puts the power of MAPEI in the palm of your hand. Solutions to a wide range of problems are just a click away – from product data sheets, to technical bulletins and guides, to MAPEI's extensive video library – the app brings MAPEI's vast technical resources to your phone.

The app also features MAPEI's 11 product calculators to help you estimate how much product you'll need. And it includes a "Where to Buy" section that lets you look up the closest distributor to you. It even includes *Realtà MAPEI North America*, MAPEI's popular magazine, to help you keep up-to-date with industry information, the latest product technology and more.

Be sure to uninstall your existing MAPEI app and install the new MAPEI app to stay current and informed with our latest information.

#### **Featured highlights**

<u>Product calculators</u>: If one product calculator is useful, why not add 10 more? That's right, we now offer 11 calculators to help determine the approximate amount of product necessary – that's the most product calculators in the industry. Not only can users calculate the amount of product that they need in both U.S. and metric measurements, they can also calculate the percentage of overage with which they are comfortable. The calculations can then be printed, shared or saved to the user's MyMAPEI account.

<u>Customized portal</u>: MyMAPEI is a custom portal within the Website that allows users to register for *Realtà MAPEI North America*, *Realtà MAPEI International* and MAPEIMail, as well as track and save calculations, products, solutions, videos and reference projects that they have searched. Any scheduled training can also be tracked through MyMAPEI. Users only have to sign up and provide their information once and they remain signed in. It is a powerful, time-saving tool.

<u>Product line hubs</u>: Each of our product lines is now featured on its own hub. This means that when users click on a product line page, they will only see information related to that specific product line. The search bar is prominently displayed at the top of these pages, allowing users to search not only by product, but also by keyword.

<u>Architect tools</u>: The Tools for Architects page has become a one-stop destination for anyone writing a specification, bidding a job or trying to find the tools for successful project completion. This page houses links to CAD drawings, grout and caulk color palettes, system solutions and the health/environment page, among others.

These are just some of the new and enhanced features found at www.mapei.us and www.mapei.ca. We are conducting a "soft launch" throughout the month of May, with our targeted campaigns beginning in June and continuing throughout the year. Stay tuned!

## MAPEI AND MASTERSPEC

The MasterSpec library simplifies finding and specifying MAPEI solutions for waterproofing and concrete restoration

Productions and concrete restoration

Productions are all as a second and a second

MAPEI has long included our products in SpecMaestro, which is our specification writing tool, and our products are featured in ARCAT, a popular directory that includes a specification writing tool favored by architects. "But it is important to be visible on all fronts," explained Etiene Frett, the Western Regional Manager for MAPEI's Concrete Restoration Systems (CRS) line. Thus, began an effort to have MAPEI products included in MasterSpec, the third-party specification writing tool that CRS and MAPEI Technical Services agree is favored by specifying engineers.

Produced by The American Institute of Architects (AIA), MasterSpec is a peer-reviewed library containing building and construction specifications. It allows architects, engineers, landscaping architects and interior designers to find helpful documents, including CADs and sustainability information, in one centralized location.

Users of this helpful tool know that product listings typically include any available information on product testing, and codes and standards set by the industry as well as by manufacturers and municipalities. The library is also a repository for leading-edge environmental, LEED and green information.

MasterSpec's content libraries consist of more than 900 sections, covering the following categories:

- Architectural
- Building Architecture + Engineering
- Civil/Site
- Commissioning
- Electrical + Communication
- Historic Preservation
- Interiors
- Landscape
- Mechanical
- Structural

Further, the technical specifications in MasterSpec are available in three formats:

- Full-length specifications: These specifications are for typically used for complex, large-scale projects that feature a variety of bidders.
- Short-form specifications: These specifications are abridged versions of the spec sections that contain the most commonly used products.
- Outline specifications: These specifications are in outline form and are designed to be used during a project's design development phase.



#### **MAPEI and MasterSpec**

MAPEI products are now featured in the MasterSpec library. "We are listed as 'Basis of Design Product," explained Andrew Fulkerson, MAPEI Corporation's CRS Technical Manager. "This means that in each section in which we are listed, our contact information as well as our product name and information can be found."

Our below-grade waterproofing and concrete restoration systems products are included in several full-length specifications. In fact, MAPEI can be found in Section 030130, Maintenance of Cast-in-Place Concrete; Section 0330000, Cast-in-Place Concrete; Section 071326, Self-Adhering Sheet Waterproofing; and Section 071416, Cold-Fluid-Applied Waterproofing.

This is a huge time-saver for specifiers and a significant plus for MAPEI, as it means that whenever MasterSpec users search for those types of projects, our system solutions will appear. They can then click on a pre-compiled specification that has been uploaded to the site in the form of a Word document. This specification includes all of the necessary MAPEI products to complete a successful installation. For example, the full-length specification for the Self-Adhering Sheet Waterproofing contains the specifications for:

 Modified Bituminous Sheet Waterproofing (Mapethene™ HT, Mapethene LT)

- Auxiliary Materials (Primer: Mapebond<sup>™</sup> 710, Mapebond 720)
- Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel with Polymeric Film (*Mapedrain*<sup>™</sup> 25)
- Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel without Polymeric Film (Mapedrain 20, Mapedrain 40)
- Woven-Geotextile-Faced, Molded-Sheet Drainage Panel with Polymeric Film (*Mapedrain 35*)
- Woven-Geotextile-Faced, Molded-Sheet Drainage Panel without Polymeric Film (*Mapedrain 30*, *Mapedrain 50*)
- Molded-Sheet Collector-Panel System Wrapped with Geotextile (Mapedrain TD Drainage Composite)

That same specification also recommends that users observe the guidelines that include pre-installation meetings and follow the installation process per the Technical Data Sheets, including quality assurance, quality control and inspection, as well as repair and maintenance cleaning after the installation.

Participating in MasterSpec brings another element of quality and service to MAPEI's industry-leading commitment to customer and technical service: Now engineers have another tool with which to specify MAPEI's system solutions. For more information, visit the Tools for Architects section at www.mapei.us and www.mapei.ca.

## **SUPERB SUBSIDIARY**

## For 25+ years, Vinavil has innovated polymers for MAPEI Group

This article is reprinted from Realtà MAPEI International magazine, Issue #78.

The industry of Italian chemicals has undergone significant and not always painless changes during the course of the past century. That history is closely entwined with the story of Vinavil, a subsidiary of MAPEI Group that manufactures vinyl acetate polymers. As the company celebrates more than 25 years in MAPEI Group, this is a chance to take stock and plan new strategies for the future in a rapidly evolving market.

With revenue of 181 million Euros in 2018 (with 47% in Italy and 53% abroad) and 500 employees worldwide, Vinavil S.p.A. is a global company. And its manufacturing-business structure and technical assistance service are expanding: The company is focusing on long-term partnerships with other operators in the chemicals industry, supplying products for miscellaneous sectors ranging from textiles to the chewing-gum industry.

The brand has actually been famous for decades thanks to Vinavil's universal adhesive, the famous "white glue" in its distinctive red and white packaging. There is also considerable focus on environmental sustainability: The manufacturing plants in Ravenna (Central Italy) and Villadossola (Northern Italy) manufacture solvent-free solid or water-based dispersions guaranteeing extremely low emissions of volatile organic compounds. In every industry in which it operates, Vinavil manufactures products complying with the regulations in force in all those countries to which they are supplied. The Research & Development sector also plays a key role in formulating innovative products.

Vinavil's story continues today in a mix of tradition and innovation.





#### Stepping stones in a 100-year business venture

A production facility is opened by SET (Società Elettrochimica del Toce) and SIPS (Società Italiana di Prodotti Sintetici) in Villadossola (Italy) to produce calcium carbide. Over the next few years, the facility starts producing rayon acetate.

1922



Production of vinvl acetate commences on a semiindustrial scale, which is transformed into polymers and polyvinyl alcohol for applications in the adhesives sector.

1936

The so-called "white glue" is created, which 10 years later becomes known as Vinavil "universal adhesive."

1942



Left: The Vinavil plants in Ravenna and Villadossola manufacture solvent-free solid or water-based dispersions guaranteeing extremely low emissions of volatile organic compounds.



#### Not just "white glue"

Vinavil's manufacturing can be broken down into the following areas of production:

- Vinylic and acrylic binding agents for waterbased paints
- Vinylic and acrylic dispersions for adhesives and the textiles industry
- Redispersible polymer powders
- Solid polymers for the chewing-gum industry
- Polymers in pearls for special uses
- Vinyl adhesives for the "do-it-yourself" market
- Vinylic and acrylic polymers tailor-made for miscellaneous uses (from cementitious additives to suspending agents for polymerization, etc.)



#### 1946

#### 1952

#### 1966



The French company Rhòne Poulenc, through the company Rhodiatoce, launches a joint venture with Montecatini. Over the next few years, the acquisition contributes valuable know-how originating from large German industrial groups.

Reactors to produce polyvinyl acetate in emulsion are installed. At the same time, the name Vinavil is born (an abbreviation of "Vinyl Acetate at Villadossola"). This white latex will invade the Italian market and soon become synonymous with glue.



Montecatini merges with Edison to form Montecatini Edison S.p.A., which in 1974 becomes Montedison. This new colossal company carried with it the seeds of the successive industrial crisis. In 1972 Rhòne Poulenc leaves the joint venture.

#### **Celebrating the anniversary**

In 2019, Vinavil celebrated being part of the MAPEI Group for 25 years. This important landmark was recognized during the Vinavil Global Meeting, where teams from Vinavil S.p.A., Vinavil Americas and Vinavil Egypt took stock of the company's achievements, planned customer-intimacy strategies and enjoyed evening festivities. After meeting at the MAPEI headquarters in Milan, attendees moved on to Vinavil's plants in Villadossola and Baveno (Northern Italy) for two days of technical-business meetings. The global meeting closed in the town of Stresa on Lake Maggiore with a gala dinner and concert at the Stresa Festival, a live music event that Vinavil has sponsored for 13 years in a row.



**Above:** A moment from the gala evening celebrating Vinavil's 25th year with MAPEI Group. From left are Marco Squinzi, president of Vinavil S.p.A. and Director of Research & Development for MAPEI Group; Laura Squinzi, Member of Vinavil's Board of Directors; and Taako Brouwer, Managing Director of Vinavil S.p.A.

Below: A group photo of guests at the Vinavil Global Meeting held on Lake Maggiore in Baveno, Italy.



#### 1979

The cost of running the vinyl acetate plant is no longer sustainable and it closes down, followed shortly after by the closure of the calcium carbide plant in 1983.



#### 1990

All Montedison's chemical operations are passed over to EniChem. The plant in Villadossola comes under the umbrella of the operations company EniChem Synthesis, along with the facility in Ravenna (Central Italy) which produces similar products.

#### 1991

EniChem presents a business plan that foresees the closure of the facility in Villadossola. After strong pressure from politicians and trade unions, it is decided to sell the company.

#### 1994

MAPEI buys the vinyl acetate production business from EniChem Synthesis, and the purchase includes the Villadossola and Ravenna facilities. The new company is renamed Vinavil S.p.A. Following the acquisition, a restructuring and redevelopment process is launched.





#### **Customer intimacy and foreign markets**

An interview with Taako Brouwer, Managing Director of Vinavil S.p.A.



#### What is Vinavil's business strategy focused on?

As presented during our celebration of 25 years with MAPEI, the core of our strategy is focused on customer intimacy. This strategic concept is not new to Vinavil, as Vinavil has followed this approach unconsciously for a long time.

New is the decision to consciously build a strategy toward customer intimacy, ensuring that all departments in our organization actively contribute to this concept. This will allow Vinavil to become the most customer-intimate polymer producer in our market and to do this more efficiently. With this approach we aim to differentiate ourselves from our main competitors and target customers that value being understood by the supplier, customers that look for long-term partnerships instead of the lowest price only.

The technical assistance that Vinavil offered in the past is a nice example of the way we have been close to our customers. We will continue offering this great value to our customers, while focusing a little more on partners that really value this service.

Are there areas in which you plan to invest more heavily? We will also widen our hunting grounds. Today we are the real market leader in the whole of Italy, even in the west part of Sicily, while in Switzerland, Austria and France (which are much closer to our plants than Sicily) our position is not so strong. Our aim is to use our customer-intimacy strategy to increase our presence in the countries around us. Meanwhile, we will heavily defend our home turf by offering service and new products, like coatings for metal and pressure-sensitive

adhesives, to our local customer base.

#### 1997

#### 2000

#### 2007



Internationalization of the company commences with the foundation of Vinavil Corp. (USA) and Vinavil Inc. (Canada) in North America (where Hemant Shah is now Business Director). Since 2001, there has been a joint venture in Egypt (Vinavil Egypt).

Production of redispersible powders used in cementitious products by MAPEI commences. The following year, a line of acrylic emulsions is launched.



A new line of copolymer solutions from a 30 m³ reactor is launched. In the same year, the company is awarded EN ISO 14001 certification.



January 27 to 30, 2020 The Mandalay Bay Convention Center Las Vegas, Nevada

## ALL EYES ON MAPEI

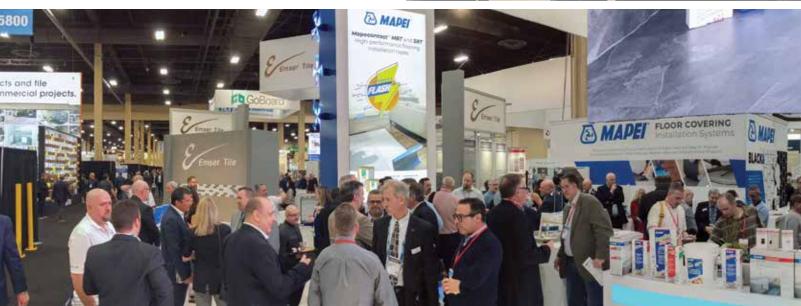
From holograms to a lively demo stage, MAPEI's booth was the center of attention at TISE

The International Surface Event (TISE) drew approximately 25,000 industry professionals from 78 countries. Comprising three trade shows – SURFACES, StonExpo/Marmomac and TileExpo – TISE featured 600 manufacturers and suppliers of tile, stone, marble, resilient, laminate, hardwood, carpet and rugs.

It was a busy and successful show for MAPEI. The MAPEI Demo Team, led by National Technical Presenter Sam Biondo, debuted our *Mapeheat* radiant floor-heating line to large interested crowds each day. The crowds also gathered around a mock shower installation featuring our *Shower System 4 LVT*. Other new products that were demonstrated included *Ultracolor® Plus Max* (Jet Black and Pure White colors), *Ultrabond ECO® GPT*, *Ultraflex LHT® SG*, *Mapelastic® Turbo*, *Keraflex™ Super*, *Ultrabond* adhesive sprays, *Ultrabond ECO 907*, *Primer X™* and *Novoplan® DPL*.

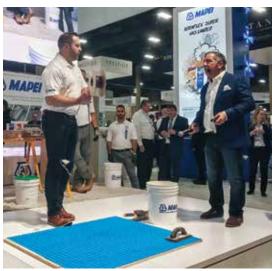
On the final day of the show, we held a very successful press conference at which we introduced our new products and thanked the press for their continued support. That evening we held an in-booth VIP reception to thank our valued clients.



















February 4 to 7, 2020 Las Vegas Convention Center Las Vegas, Nevada

## THE WORLD OF MAPEI AT THE WORLD OF CONCRETE

The action revolved around MAPEI at the popular show



More than 54,000 industry professionals from around the world attended the 45th edition of World of Concrete (WOC). The event featured 1,310 companies - both domestic and international exhibiting across more than 700,000 net square feet (65 032 m²) of space. In fact, in spite of the threat of coronavirus, the international presence remained strong with 237 companies from 29 countries outside the United States exhibiting this year.

Centered around a demonstration stage and filled with innovative system solutions, MAPEI's two-story, 40 ft. x 90 ft. (12.2 x 27.4 m) booth dominated the convention floor. For a second year, MAPEI's product demonstrations were emceed by Kevin O'Connor, the host of the award-winning home improvement television show "This Old House." As emcee, O'Connor interacted with the MAPEI team and with the gathered crowd, asking perceptive, real-world questions that drew people to the booth. Products demonstrated included Planitop® 18 TG, Planiseal® CR1, MAPEI LMR Fabric, Mapebond™ 720, Mapedrain™ 30, Planitop 11, Planigrout® 350, Planigrout 712, Primer T<sup>™</sup>, PlaniLevel<sup>™</sup> 420, Primer SN<sup>™</sup> and **Planitop EL**.

MAPEI also participated in two charity events at WOC, donating product to auctions to benefit Concrete Cares and Concrete Industry Management (CIM). Concrete Cares is a charity that supports research into curing childhood cancers, as well as supporting families dealing with the disease by helping with rent and other living expenses. CIM is a program that works with colleges to enroll students in concrete industry degree programs.

In addition, we held an in-booth VIP event to thank our valued clients. It was highly anticipated and well-attended.

From demonstrations and education, to industry support and networking, MAPEI covered both shows, successfully capitalizing on every ability and opportunity.





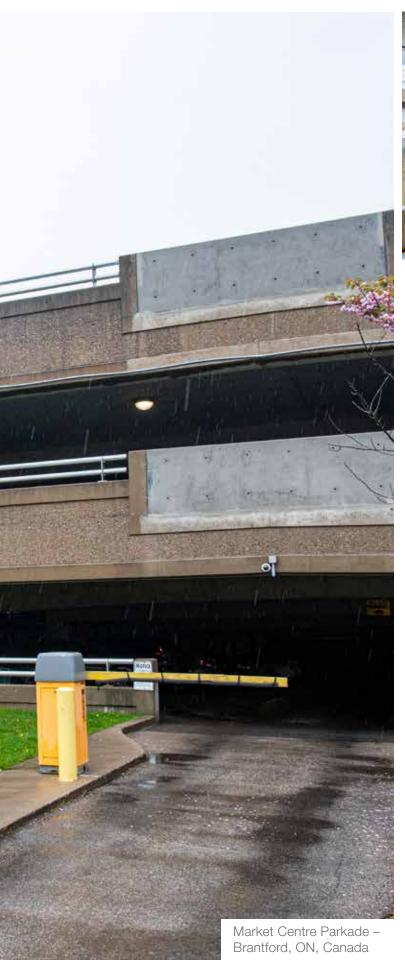














**Overview**: When access and climate were of concern during the repair of the largest parking structure in Brantford, ON, the city turned to the experts at MAPEI Inc. for help.

Since its original construction in 1986, the Market Centre Parkade has been a hub for public parking in downtown Brantford, ON. The 950-stall, three-level parking garage structure is approximately 344,445 sq. ft. (32 000 m²) in area. Multiple businesses utilize the structure, including the Brantford Public Library, Market Square, Laurier Brantford YMCA, Wilfrid Laurier University and others. Over time, the increasingly busy parkade faced deterioration due not only to wear, but also to weathering, salt and freeze/thaw cycles.

When the city determined that the structure needed to be repaired, it was faced with a significant problem. A total demolition would take too long and be too much of an inconvenience for the downtown businesses and visitors. Totally closing down the structure for remodeling would also be a severe burden.

There was also the looming problem of weather: Winter was coming. Brantford needed a repair option that would allow it to keep the parkade open (in sections) during remodeling work, and that would not be affected by extreme cold (or extreme humidity, as the job would encompass both winter and summer months). The city turned to MAPEI Inc. for help.

#### MAPEI products on the jobsite

"This project itself was essentially very straightforward – the rehabilitation of the existing structure," explained Lee Cuthbert, the Business Development Leader for Concrete Restoration Systems in Central Canada and one of MAPEI Inc.'s coordinators on this project.

Because the parkade could not be closed, the remodel was conducted in two phases; the section under construction was blocked off from public access. In addition to the challenges of working around the public and from Mother Nature, the deadline could not be extended. This project was paid for with government funds, which meant extremely tight deadlines. It also meant that all operations were a "go" seven days a week, rain or shine.

The concrete substrate was in fragile condition. Consequently, the specification called for all of the weak, friable concrete to be removed from the deck and columns, and to be repaired with



**Product Focus** Planitop X is a onecomponent, fiber-reinforced, shrinkage-compensated, high-early-strength, fastsetting, polymer-modified, high-build cementitious repair mortar with a corrosion inhibitor. Planitop XS is an extended-working-time variation of *Planitop X* and features the same outstanding workability and versatility.

MAPEI repair materials. "Due to the condition of the concrete within the parkade, MAPEI's carbon fiber reinforcement system [CFRP], MapeWrap, was utilized as a reinforcement," Cuthbert explained.

A 10-man crew from Macdero Construction worked on all concrete restoration work prior to the CFRP installation. Freyssinet Canada worked to install all CFRP items with a 6-man crew.

The repair process involved the following: First, the surface was prepared through abrasive blasting, through grinding or with chipping guns, depending on the location and condition of the concrete in question. After the surface preparation, "the crew applied MapeWrap Primer 1, a low-viscosity, 100%-solids epoxy resin primer designed for use with MAPEI's MapeWrap composite system and addressed saturated surface-dry [SSD] conditions with Planitop 18 and Planitop X. Planibond 3C was used for all form-and-pour applications, as well as form-and-pump repairs," Cuthbert stated. Planitop 18 repair mortar hardens rapidly, and Planitop X one component, fast-setting, fiber-reinforced repair mortar is designed for use on vertical and overhead repairs.

The rest of the 40,000-square-foot (3 716 m<sup>2</sup>) project fell into the following applications:

- 200 columns were repaired with trowel-applied *Planitop X*.
  - o These same 200 columns were reinforced with 9,186 feet (2 800 m) of Carboplate E 170 (0.055" x 3.94", or 1.4 x 100 mm), a carbon fiber plate that is preimpregnated in an epoxy-based resin, providing high resistance and flexibility to pre-stressed concrete.
  - These 200 columns were wrapped with 5,577 feet (1 700 m) of MapeWrap Uni-Ax 1200, a high-strength, uni-directional carbon fiber fabric. The fabric is used

with epoxy adhesives to provide part of an engineering solution that allows increased strength of structural elements without increasing the dead load supported by the structure.

- o The same 200 columns were coated with *Elastocolor* **Paint** high-performance protective coating in Japanese Pearl to provide UV stability and aesthetic value.
- 100 soffit repairs were formed and pumped with *Planitop* 15 cementitious, fiber-reinforced repair mortar.
- 50 expansion joints were installed, filled and resloped using Planitop 18.
- Over 1,000 linear feet (305 m) of rebar was coated, before installation, with Mapefer 1K one-component, anticorrosion coating.
- 75 columns, end caps and piers were formed/poured or formed/pumped using Planitop 11 SCC, a onecomponent, cementitious, self-consolidating concrete mix with silica fume and a corrosion inhibitor.
- 200 top deck column caps were grouted with *Planigrout* 712 high-performance, nonshrink, nonmetallic, onecomponent, cement-based grout.

MAPEI Inc.'s Concrete Restoration Systems team and Technical Services Department were involved with this project from the very beginning - working on the specification, on the CADs and on site, and answering all questions during the 10-month installation process. And by all accounts, the project was a huge success. The City of Brantford is pleased with its "new" parkade, and businesses and visitors were not inconvenienced during the repairs. "This was a great project, and it shows the importance of industry relationships and teamwork," Cuthbert said.









#### **TECHNICAL DATA**

**Market Centre Parkade** – Brantford, ON, Canada

Year of original construction: 1986 Year of MAPEI involvement: 2018

Where MAPEI products were used: Concrete Restoration Systems were used to repair the dilapidated concrete substrate of the parking garage including concrete columns, beams, soffits, new expansion joints, rebar and suspended decks.

Project owner: City of Brantford

**Contractors:** Macdero Construction (concrete restoration) and Freyssinet Canada (CFRP installation)

Main Architect: Moon-Matz Ltd.

MAPEI coordinators: Lee Cuthbert and

Jason Zeppieri

**Challenges:** The Market Centre Parkade needed to remain open (in sections), which required the remodel to be conducted in two phases on a tight deadline. In addition to working around the public, the rehabilitation could not be affected by extreme cold or extreme humidity.

#### **MAPEI Products**

Carboplate® E 170 Elastocolor® Paint Mapefer™ 1K MapeWrap 12

MapeWrap 21

MapeWrap C Uni-Ax 1200

MapeWrap® Primer 1

Planibond® 3C

Planigrout® 712

Planitop® 11 SCC

Planitop 15

Planitop 18

Planitop X



## **HOMES FOR HEROES**

## Supporting foundation's efforts to build homes for wounded veterans









Gary Sinise, the namesake founder of the Gary Sinise Foundation, always says, "While we can never do enough for our defenders and their loved ones, we can always do a little more." In that spirit, MAPEI Corporation is proud of our ongoing work with the Foundation's R.I.S.E. (Restoring Independence Supporting Empowerment) program, which builds 100% mortgage-free, specially adapted smart homes for the brave men and women who have been wounded in the service of our country.

Since the most recent Realtà MAPEI North America article on the subject - "Homes, Sweet Homes" (RMNA #29), which featured U.S. Army Captain (Retired) Jake Murphy and his family - MAPEI has contributed to the following homes:

- U.S. Army CW5 Gary Linfoot, May 2019, in Clarksville, TN
- U.S. Marine Corps CPL Chad Watson, October 2019, in Manhattan, IL
- U.S. Marine Corps SSGT Jesse Cottle, November 2019, in Eagle, ID
- U.S. Army SGT Stefan LeRoy, December 2019, in
- U.S. Army MAJ Jeremy Haynes, January 2020, in Clifton, VA

As of this writing, the following homes are under construction and nearing completion:

- U.S. Air Force TSGT Matthew Slaydon, in
- U.S. Army SSG Casey Jones, in Sevierville, TN
- U.S. Army SSG Rico Roman, in Brush Prairie,

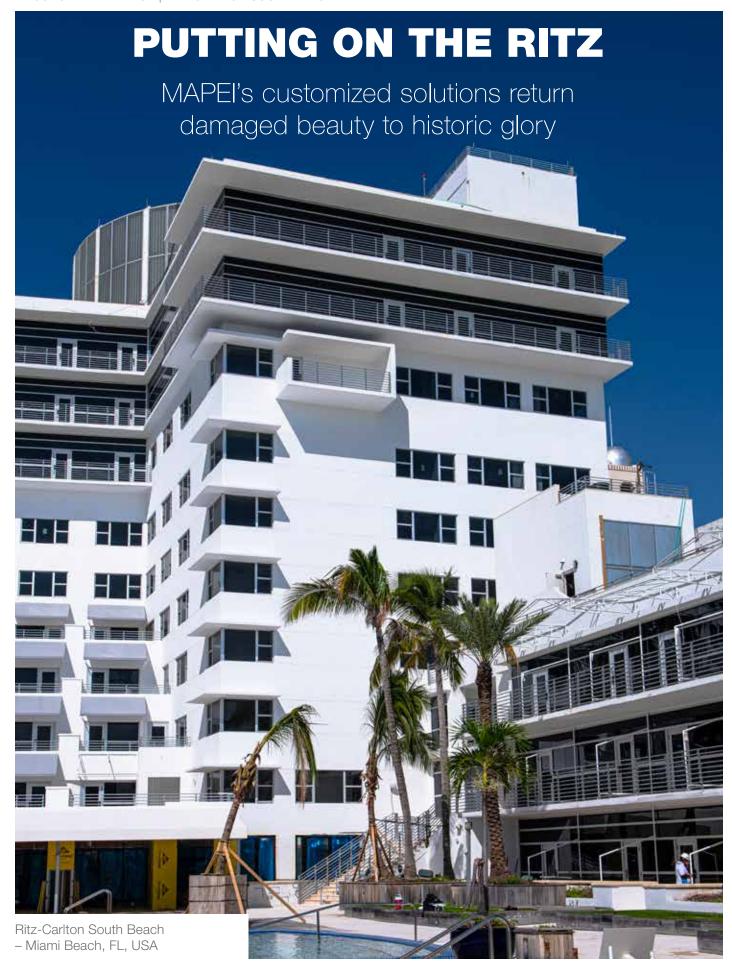
To learn more about the R.I.S.E. program, visit www. garysinisefoundation.org/specially-adapted-smarthomes/















**Overview**: When time and Mother Nature took a toll on the iconic structure, the specialty restoration team working on the Ritz-Carlton South Beach turned to MAPEI's concrete repair products and *Elastocolor Coat* high-performance coating to return the famed building to her full architectural glory.

The Ritz-Carlton is synonymous for luxury and style, and the famed hotel's location in Miami Beach, Miami, is among the top of the hotel chain's iconic international properties. Situated in the historic Art Deco district, the area's pastel palette has captured the imaginations of artists, authors, tourists and locals alike.

Designed in 1953 as a "postmodern interpretation of art deco" by renowned architect Morris Lapidus, the hotel sits right on the beach – a romantic location, to be sure, but one that also presents quite a few challenges for the structure itself. In fact, like many an aging beauty to be found in Miami, the building was in need of an "intervention" – a spa day of its own, as it were – to halt the ravages of time and tide.

"The effects of the seaside location were found in the all areas of the



hotel, including the facade," explained Carlos Hernandez, MAPEI's coordinator for this project. Just steps away from the sand, the building's facade was severely deteriorated by the aggressive salt air and sea spray. Unfortunately, its prime beach location also meant that the iconic property had been damaged and patched following Hurricane Irma in 2017.

An extensive stucco repair was in order. The challenge for selecting the coating for this 165,000-square-foot (15 329-m²) "facelift" included finding a coating able to hide the multiple repair areas, while preserving original architectural details.

The owners were specific: The coating must provide waterproofing and protection against the harsh coastal environment, and it must match the exclusive palette of coatings that the Ritz-Carlton specifies for use on all its hotels. "They not only wanted to protect the structure, they wanted to maintain its historic integrity," Hernandez said. "The original historic architectural details had to remain unchanged."

The owners turned to MAPEI for help. They needed to protect their building from the elements as well as from the loss of its historic beauty.

#### **MAPEI** products on the jobsite

"Working closely with IBA Consultants, the consulting engineer, we were able to demonstrate to the ownership of the Ritz the superior performance of *Elastocolor Coat*," Hernandez added. "After doing more than 10 mockup samples on site with different combinations of products of the *Elastocolor System* (including *Mapeflex EMC-1*, *Elastocolor Texture*, *Elastocolor Coat Smooth* and *Elastocolor Coat Fine*), the owners decided to use *Planitop 200*, *Mapeflex EMC-1*, *Elastocolor Primer AR* and *Elastocolor Coat Fine* as the facade coating."

"The stucco was highly delaminated from all of the chloride exposure, as well as sun exposure and the beating from the storms," Hernandez said. The contracting crew from Contracting Specialists Inc. (CSI) began by replacing the extensively damaged stucco. *Planitop 200* was used to flush the edges of the repaired areas with the surrounding facade.

Minor cracks and imperfections were filled with *Mapeflex EMC-1*, a smooth, brush-applied, elastomeric patching compound. Larger cracks and any failing joints were repaired or replaced with *Mapeflex P1* elastomeric, non-sag, polyurethane sealant.





Next, Elastocolor Primer AR was roller-applied to a wet film thickness (WFT) of 5 mils. Elastocolor Primer AR is alkaliresistant, protecting the new coating from the damaging effects of any high pH present in the concrete substrate. It also creates a uniform porosity across the whole facade, minimizing the appearance of the new stucco repairs.

This primer coat was followed by two coats of Elastocolor Coat Fine, a fine-textured, water-based, high-build, 100%-acrylic coating that provides an effective barrier against chlorides, winddriven rain and damaging UV. The waterproof coating is available in an unlimited number of custom colors, which is "how we precisely matched the historic stark white for which the Ritz is known," explained Rankin Jays, MAPEI's Business Develop Leader - Coatings. "And the cleanliness of the building be ensured due the coating's unmatched pick-up resista

The Ritz was returned to her former glory. "The hotel's ow were so happy with the exterior repairs, that they a MAPEI and CSI to do additional waterproofing and co works not included in the original scope," Hernandez

And that is how MAPEI quite literally helped the Ritz "put on the

#### TECHNICAL DATA

Ritz-Carlton South Beach - Miami Beach, FL. USA

Project category: Infrastructure - Tourism and Wellness

Year of construction: 1953

Years of MAPEI involvement: 2018-2019

Where MAPEI products were used: Planitop 200 as skimcoating, Mapeflex P1 on joints, Elastocolor Primer AR on concrete and masonry, Elastocolor Coat Fine as a facade coating

MAPEI coordinator: Carlos Hernandez

and Rankin Javs

Project owner: Ritz-Carlton

General contractor: Plaza Construction Contractor: Contracting Specialists Inc. (CSI)

Original Architect: Morris Lapidus

**Waterproofing consultant:** IBA Consultants

Photographer: Raul Ballester

Challenges: Maintaining brilliant white of Ritz color palette; jobsite location meant constant sea spray and

high chloride content on substrate

#### **MAPEI Products**

Planitop® 200

Mapeflex™ EMC-1

Mapeflex P1

Elastocolor® Primer AR Elastocolor Coat Fine



#### Keraflex™ Super

#### Premium, Extra Smooth, Large-and-Heavy-Tile Mortar with Polymer

Keraflex Super is a highly versatile, non-sag/ nonslump, large-and-heavy-tile mortar and thin-set mortar for tile and stone for installations on floors, walls and countertops. This polymermodified mortar has a high content of a unique dry polymer, resulting in excellent adhesion to the substrate and tile, with enhanced resistance to freeze/thaw environments.

#### **Features and Benefits**

- High-Transfer Technology<sup>™</sup> for superior mortar-wetting properties
- · Extra smooth, creamy consistency for ease of application
- Easy mixing, handling and troweling properties
- · Highly resistant to extreme freeze/thaw conditions
- Ideal for lippage control systems applications
- Non-sag formula for large-format and heavy tile/stone in wall applications
- Nonslump formula for large-format and heavy tile/stone in floor applications
- For bond coats up to 1/2" (12 mm) in embedded thickness
- Approved for interior/exterior water immersion applications
- For water features, fountains and pools
- Polymer-enriched for high performance
- · For use over plywood and a variety of membranes

#### Uses

- Interior/exterior residential and commercial installations on floors, walls and countertops in dry and wet areas
- · Installation of most types and sizes of gauged porcelain tiles; most large and heavy tile and stone; all types of ceramic and porcelain tile and Saltillo tile; and most marble, granite and natural stone

See full product details at www.mapei.com.



#### ISO 13007 Classification

Classification Code	Classification Requirement
C2 (cementitious, improved adhesive)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
T (vertical slip resistance)	≤ 0.019" (0.5 mm)
E (extended open time)	≥ 72.5 psi (0.5 MPa) after 30 minutes
S1 (normal deformation of mortar)	≥ 0.1" (2.5 mm)
P1 (normal adhesion to plywood)	≥ 72.5 psi (0.5 MPa)

#### **ANSI Specification\***

Test Method	Specification Standard	Test Results
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1.03 MPa)	200 to 275 psi (1.38 to 1.90 MPa)
ANSI A118.15H – mortar for large and heavy tile	ASTM C627 Robinson Floor Test Lippage change < 1/64" (0.4 mm)	Pass
ANSI A118.15T – sag on vertical surfaces	$\leq$ 0.02" (0.5 mm) at 20 minutes	Pass
ANSI A118.15E – extended open time	≥ 72.5 psi (0.5 MPa) at 30 minutes	Pass
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics	> 400 psi (2.76 MPa) at 28 days	425 to 550 psi (2.93 to 3.79 MPa)
ANSI A118.15 – shear strength, glazed wall tile	> 450 psi (3.10 MPa) at 7 days	450 to 550 psi (3.10 to 3.79 MPa)
ANSI A118.15 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	400 to 550 psi (2.76 to 3.79 MPa)

<sup>\*</sup> Anything that meets A118.15 by definition exceeds A118.4.

#### **Shelf Life and Application Properties** before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) and 50% relative humidity
Colors	Gray; white

#### Application Properties at 73°F (23°C) and 50% relative humidity

Open time**	30 to 50 minutes
Pot life**	4 hours
Time before grouting (walls)**	8 to 16 hours
Time before grouting (floors)**	24 hours
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
Application temperature range	40°F and 95°F (4°C and 35°C)
Embedded thickness range	3/32" to 1/2" (2.5 to 12 mm)

<sup>\*\*</sup> Cold temperature or high humidity may alter these properties.

#### **Packaging**

#### **Size and Color**

Bag: 44 lbs. (20 kg), gray

#### Approximate Coverage\*\*\* per 44 lbs. (20 kg)

Typical Trowel	Coverage
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm), square-notch	100 to 115 sq. ft. (9.29 to 10.7 m <sup>2</sup> )
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notch	74 to 83 sq. ft. (6.88 to 7.71 m²)
1/2" x 1/2" x 1/2" (12 x 12 x 12 mm), square-notch	50 to 58 sq. ft. (4.65 to 5.39 m²)
3/4" x 9/16" x 3/8" (19 x 14 x 10 mm), U-notch	34 to 38 sq. ft. (3.16 to 3.53 m²)

<sup>\*\*\*</sup> Trowel dimensions are width/depth/space. Actual coverage will vary according to substrate profile and tile type.



High transfer: Amazing transfer of mortar to tile backs while keeping tremendous non-sag/nonslump properties.

- Endurance: Unbelievable resistance to freeze/thaw conditions, water and frost.
- · Strength: Incredible adhesion to the substrate and tile.
- · Speed: Lightning-fast mixing and troweling, thanks to an extra creamy consistency.
- · Coverage: High yield, which means high rate of coverage

Designed for interior/exterior use on floors and walls, over plywood and over a variety of membranes, this powerful mortar has your tile back covered. For details on *Keraflex Super*, visit www.mapei.com.







### Novoplan® DPL

#### Deep-Pour, Self-Leveling Compound

Novoplan DPL is a self-leveling, calciumaluminate-based underlayment and repair mix for interior concrete and engineer-approved floors and is capable of being placed up to 4" (10 cm) in a single lift.

#### **Features and Benefits**

- Up to 4" (10 cm) application thicknesses in a single lift over concrete substrates
- Good flow properties

#### Uses

- For leveling, smoothing and repairing interior floors before the installation of flooring systems and coverings
- Interior residential installations (apartments, condominiums and homes)
- Interior commercial installations (office buildings, hotel rooms/hallways, restaurants and cafeterias)
- Interior heavy commercial installations (hotel lobbies, convention centers, airports, shopping malls, grocery stores and department stores)
- Interior institutional installations (hospitals, schools, universities and libraries)

See full product details at www.mapei.com.



#### **Product Performance Properties**

Laboratory Tests	Results	
Cured density	128 lbs. per cu. ft. (2.06 kg per L)	
рН	11	
VOCs (Rule #1168 of California's SCAQMD)	0 g per L	
Compressive strength – ASTM C109		
7 days	> 2,500 psi (17.2 MPa)	
28 days	> 3,500 psi (24.1 MPa)	
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)		
28 days	> 700 psi (4.83 MPa)	

#### **Shelf Life and Product Characteristics** before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) and 50% RH	
Physical state	Powder	
Color	Gray	

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

#### **Application Properties**

Mixing ratio	4.3 to 4.6 U.S. qts. (4.07 to 4.35 L) of water per 50 lbs. (22.7 kg) of powder
Mixing time	2 to 3 minutes
Application temperature range	50°F to 85°F (10°C to 29°C)
Flow time	8 to 10 minutes
Time to accept light foot traffic	6 hours
Single-lift application range	1/4" to 4" (6 mm to 10 cm)
Minimum thickness over highest point in floor	1/4" (6 mm)
Waiting time for secondary applications of patches and skimcoats at 4" (10 cm) depths	24 hours
Drying time before installation of tile and stone flooring at 70°F (21°C) at 4" (10 cm) thickness	24 hours
Drying time before installation of moisture-sensitive floor coverings at 70°F (21°C) at 4" (10 cm) thickness	2 to 3 days after application is complete

#### **CSI Division Classification**

Cast Underlayment	03 54 00

#### Approximate Coverage\* per 50-lb. (22.7-kg) bag

Thickness	Coverage
1/4" (6 mm)	24 sq. ft. (2.23 m²)
1/2" (12 mm)	12 sq. ft. (1.11 m²)
1" (2.5 cm)	6 sq. ft. (0.56 m <sup>2</sup> )
2" (5 cm)	3 sq. ft. (0.28 m²)
4" (10 cm)	1.5 sq. ft. (0.14 m²)

<sup>\*</sup> Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions, type of equipment, thickness applied, and application methods used.

#### **Packaging**

Size
Plastic bag: 50 lbs. (22.7 kg)

# SUSTAINABILITY: WELL TO DO

Connecting wellness with environmental stewardship

Wellness and sustainability have very different definitions but are often tied together in green-building standards and certification systems. Research shows that the indoor built environment directly influences human health, well-being, and productivity. Whether it is in the pursuit of a green-building standard or certification system or simply in concern about indoor air quality, wellness is the next frontier of sustainability – connecting human health and wellness with environmental stewardship.

Since its inception in 2000, the Leadership in Energy and Environmental Design (LEED) green-building rating system has grown to encompass more than 96,000 registered and certified projects in more than 167 countries and territories around the world. The U.S. Green Building Council (USGBC) introduced LEED to promote sustainability, and to reward design and construction practices that lead to both environmental stewardship and economic benefits. More recently, emerging green-building standards and certification systems have taken occupant health and wellness to a whole new level, each with varying approaches.

In 2014, The WELL Building Standard, pioneered by Delos and administered by the International WELL Building Institute, was the first standard to focus solely on how a building impacts human health and wellness. The WELL institute now has over 4,000 registered and certified projects in more than 60 countries. Other certification systems, such as the Center for Active Design's Fitwel standard, have followed in the WELL institute's footsteps. Furthermore, pioneering green-building certification systems such as LEED and International Living Future Institute's Living Building



Challenge certification system have since launched supplementary credits, programs and labels that incorporate environmental impacts as well as occupant health.

Designing and constructing for wellness can include such considerations as optimizing daylight; providing access to healthy food; indoor air quality; promoting movement or exercise; connection to the outdoors; selecting healthy materials; and thermal, visual and acoustical comfort to support the health and wellness of all who inhabit or visit a building.

At MAPEI, our commitment to human health and the environment is built into everything we do. For example, MAPEI Corporation's headquarters in Deerfield Beach, FL, is pursuing Fitwel certification. To this end, MAPEI has incorporated evidence-based design and policy strategies that support physical, mental and social benefits for its employees and visitors.

Fitwel measures the following aspects when determining certification:

- Impacts community health
- Reduces morbidity and absenteeism
- Supports social equity for vulnerable populations
- Instills feelings of well-being
- Provides healthy food options
- Promotes occupant safety
- Increases physical activity



Impacts community health

Pale

Reduces morbidity and absenteeism



Supports social equity for vulnerable populations



Instills feelings of well-being



Provides healthy food options



Promotes occupant safety



Increases physical activity

Notable features of MAPEI's headquarters are the main staircase, which is visible from the main entry and accessible for employees and visitors alike, as well as active workstations, an onsite fitness center, and access to an outdoor walking trail to promote physical activity. MAPEI has also actively established policies to create healthy indoor and outdoor environments for employees, including tobacco-free indoor air quality, and green purchasing policies on products whenever possible.

For the benefit of its customers, MAPEI has a growing number of products that contribute to WELL, Fitwel and other greenbuilding standard's indoor air quality credits. Customers can now choose from a wide range of low-emitting products that are free of harsh chemicals and meet stringent third-party indoor air quality standards. By selecting MAPEI's low-emitting products, project teams can help to improve the indoor air quality of their projects while reducing their environmental impact. For more information, contact sustainability\_USA@mapei.com (in the USA) or sustainability-durabilite@mapei. com (in Canada).



**About the author:** Brittany Storm

Brittany is the Sustainability Manager for MAPEI Corporation. Her background as a

sustainable building consultant and background in construction allow her to speak to audiences about both the big picture and the technical aspects of a project. Brittany is a LEED Accredited Professional (AP) with BD+C and ID+C specialties, as well as a WELL AP and Fitwel Ambassador. In addition, she is active on several sustainability committees.

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## **SPORT** UTILITY

Team Sassuolo's Manager De Zerbi plans to give young players a chance

About Team Sassuolo: Unione Sportiva (U.S.) Sassuolo Calcio, also known as Sassuolo, is MAPEI's football (soccer) team based in the town of Sassuolo, Italy. Founded in 1920, the team played in Serie C, but advanced to Serie A under MAPEI ownership. The team plays in MAPEI Stadium - Città del Tricolore in the Italian city of Reggio Emilia, a stadium that features MAPEI's sports products.

Roberto De Zerbi, age 40, is in his second season as team manager of Sassuolo. As he explained in this interview, he expected more from the team's performances over the first few months of the 2019-2020 championship: "We could have more points and have not been consistent enough, but I think there are plenty of good reasons (not excuses) why we are a little bit further down the table than we were this time last season."

#### What has changed compared to the first part of the 2018-2019 season?

"In summer 2018 I had the entire squad available right from the first day of the pre-season training camp. Considering all the new players who joined us this summer and the long list of injuries, we are slightly lower down the table than we were this time last year. Not all years are the same. This year's league is much more evenly balanced than it was last season. All those teams that have had players injured during autumn have really struggled."

#### In certain matches, Sassuolo really got going only after conceding a couple of goals. Why is that?

"We still haven't found the right mental approach. We have not played consistently right through any of our games so far. This is partly due to changes



in the starting Eleven: When you change lots of players, you will inevitably struggle to get back to the level you were at the previous year."

Regarding your matches against the top teams, you lost 4-3 against Inter Milan at MAPEI Stadium, but the team finished really strongly and almost had a tie.

"Without ignoring the fact that we should have been more focused during the first 70 minutes, the team played really well after that."

Which was your best match during the first part of the season: The 4-1 win against Sampdoria, your 1-0 away win at Verona or the 3-1 win at home in the derby against Bologna?

"The matches against Sampdoria, Verona, Bologna and also Spal were all good performances. But I would also like to focus on how well we played in matches we lost against Torino, when we had lots of players out injured, and also Roma when, unfortunately, our comeback began too late. As regards our worst performances, I would say they were the defeats against Atalanta and Parma."

This season Berardi has scored more goals and, generally speaking, played better than last

"Berardi is scoring more freely and thinking more clearly, but I was also pleased with how he played last season when he was tight in the thick of things. People always remember goals, but he actually performed at a high level last season. Berardi is an exemplary player who has always worked really hard. He went through a bad patch last season, but he kept on training hard and is now playing well again."

How has Obiang been playing in midfield?

"Whenever he has played well, the whole team has

MADE



performed well. It is only when he has underperformed slightly that the team

has suffered."

You have Locatelli, the captain of the Italian under-21 team, in midfield. Do you think he is ready to be a key player for Sassuolo when the team, hopefully, qualifies for Europe or do you think he will make his mark internationally playing for some other big club?

"He is not ready for that yet. Our job is to make sure he will be soon. Locatelli joined the club in summer 2018 from A.C. Milan, a great team, but it has not been all smooth sailing and he has had some disappointing moments with his new club too. He has ups and downs in most games; Locatelli must become a more complete player and he will because he is intelligent. Sassuolo invests in young players like Locatelli, helping them to improve so they can move on to big clubs. That is what we did with Sensi, Lirola and Demiral."

#### Duncan was Sassuolo's best player for at least two months last season. What about now?

"He has performed at a very high level this season too, particularly in the games we have won. He needs to be more consistent right through the entire season."

## Is Traorè really an attacking midfielder, more comfortable when he pushes forward?

"Traorè is talented but rather wild. But he really is talented. He will eventually become a complete midfield player; we want to help him get there, so that he can make a real contribution both in attack and defense. As regards strikers, we have four and I cannot play them all at the

same time. We are already an attacking team, so if I played them all, it would cause chaos. Caputo began the season really well and I think he will continue to play well for the rest of the season. Berardi and Boga have both improved, and Defrel is an incredibly skillful player, but the injury he got in the autumn has slowed him down."

## Your new defender Toljan comes from an important club like Borussia Dortmund. Has he fitted in well?

"He also won the Scottish League Championship with Glasgow Celtic. After a few initial problems with the language, Toljan is now From top: The Greek defender Giorgos Kyriakopoulos; Pedro Obiang, 27, a midfielder from Equatorial Guinea; and Filippo Romagna, who also plays defense

fitting in really well. He scored against Lecce and is getting more involved in the matches, as he realizes what great skill and athletic ability he has. Müldür and the other youngsters we have in the squad are also very important. It is my job and that of my assistants to help them improve. Let's not forget that we lost Rogerio, Ferrari and Bourabia due to injuries. If Ferrari and Rogerio had been available, I could have rotated the team more and let Tripaldelli and Kyriakopoulos progress in their own time."

## Are there any Sassuolo players you would describe as having been revelations toward the end of 2019?

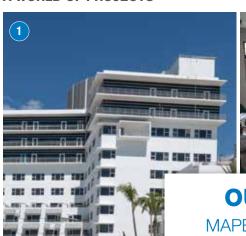
"Various players could be described as revelations: Romagna is just 22 years old but already has the head of a veteran; Magnanelli keeps on getting better as he gets older, just like fine wine; Boga has been getting more consistent since the start of the season. Last year Boga was a rather rough diamond, but now he is really shining. Djuricic is also doing well and has been called up for the Serbian national team again after four years and is delighted about that; Consigli is always the first name on the team sheet and Kyriakopoulos is also playing well."

## Do the Sassuolo players and staff feel they have improved after tying 2-2 against Juventus?

"Definitely not: Thinking we are suddenly better than we were before the match and that all of our problems have been solved would mean a real lack of ambition. Consistently showing the same spirit, concentration and buzz it took to get a point in the away game at Juventus Stadium would, on the other hand, be a sign that we are making progress."

Imagine you are the Italian national teammanager Roberto Mancini: Which Sassuolo players would you call up to play for Italy in the European championships?

"Mancini has already shown an interest in a number of our players, including Berardi, Locatelli and our goalkeeper Consigli. Ferrari was also in the frame until he got injured. Italy has qualified for the finals of the European championships, so it is unlikely the team manager will make any changes to his squad now."







#### **OUR BEST PROJECTS**

MAPEI's internal contest rewards creative project solutions

The judges have spoken for MAPEI North America's annual "Show! Place! Win!" competition, which represents the best reference projects in the United States and Canada. Each submitted project showcases the development, renovation and/or restoration process, including architectural design, challenges faced (weather, time constraints, etc.) and the solutions provided by MAPEI's high-performance products.

Each project is then hand-selected by the senior leadership committee for submittal to the International Reference Grand Prix, MAPEI's international competition in Italy. Characteristics of a winning submission include innovative construction, technical details, step-bystep photography and impressive beauty shots. The judging panel at the MAPEI Group headquarters in Italy reviews hundreds of projects in specialized categories and chooses who will receive the honor of recognition and a monetary reward.

Grand Prix winners reflect the best of the best, whether it be highquality historical renovations, urban residential designs, high-rise hotels, sports arenas or significant structures that are vital to the community (as was the case of the Oroville Dam Spillway solution that saved an entire community). It is an outstanding accomplishment for a MAPEI sales representative to be notified that their project was selected from over 450 entries from around the world.

Here are just 8 of the 23 projects that won in 2019. Each of these projects demonstrated innovation, teamwork, aesthetic design and quality construction.

- The Ritz-Carlton South Beach Miami Beach, FL. USA
- Ronald McDonald House Baltimore, Maryland, USA
- Oroville Dam Spillway Oroville, California, USA
- Market Center Parkade Brantford, ON, Canada
- Milwaukee Bucks Stadium Milwaukee, WI, USA
- Hospital de Gatineau Gatineau, QC, Canada
- St. Augustine's Parish Dundas, ON, Canada
- Downtown Moncton Centre-ville Moncton, NB, Canada







## **MTI NEWS**



The **MAPEI Technical Institute** (MTI) provides the highest-quality, basic product knowledge with demonstrations and hands-on education to architects, contractors, installers and distributors in 9 locations: Deerfield Beach (FL), San Bernardino (CA), Garland (TX), Dalton (GA), West Chicago (IL) and Swedesboro (NJ), all in the USA; and Laval (Quebec), Brampton (Ontario) and Delta (British Columbia), all in Canada.







#### MTI and the MAPEI Online program

As a precaution against the coronavirus, all MTI in-person trainings have been canceled for the foreseeable future. However, we at MAPEI USA and MAPEI Canada want to continue to reach our industry customers, partners and associations by sharing our online education and training resources. These online tools are designed to provide our customers and partners with all the necessary resources to continue utilizing, specifying and installing MAPEI products during this rapidly evolving time.

MAPEI's continued focus is to educate and grow with the industry. As we all adapt to our changing reality, MAPEI North America is committed to providing the same best-in-class information and support through enhanced accessibility to online tools and resources, with personalized follow-up if requested.

We are excited to offer online experiences including:

 <u>CEU Programs</u> – Our CEU program covers a variety of topics designed to support product knowledge, industry standards and guidelines. We have more than 30 AIA and IDCEC courses. These presentations have been vetted and approved by the leading industry organizations. Approved attendees will qualify for and receive continuing education units.

Topics include:

- Tile and Stone gauged porcelain, exteriors, surface prep, etc.
- o Vinyl Flooring
- o Waterproofing
- o Decorative Toppings
- o Corrosion Protection
- o Paints and Coatings
- o Moisture Management
- o Sustainability
- <u>Webinars</u> Register for our upcoming webinars and recorded sessions.

These webinars are a mix of live and recorded events, including partner events with the Ceramic Tile Distributors Association

(CTDA) and the National Tile Contractors Association (NTCA). Containing the latest industry information distilled into short informative sessions, these educational seminars and discussions are ultimately designed to reduce jobsite downtime and increase productivity. Explore the latest tile and stone trends, learn about industry standards from the experts involved in shaping them, and understand best practices for a wide variety of topics, including sustainability and surface preparation. If you have an industry interest, MAPEI has a webinar.

Sample webinar topics include:

- o Understanding Industry Standards, TCNA Handbook
- o Understanding Sustainability
- o MAP054: Exterior Tile Installations
- o MAP044A: Protecting Concrete Surfaces
- Poor Substrate Conditions / Environmental Conditions and Best Practices
- o MAP005: Gauged Porcelain Tile Systems
- o Concrete Restoration and Protection Systems
- o Structural Strengthening Using FRP (Fiber-Reinforced Polymers) and Other Composite Systems

<u>YouTube Videos</u> – Our dedicated YouTube channels, MAPEIUSA and MAPEICanada, include a wide selection of videos intended to further product knowledge and training. Featured videos include:

- o Product spotlights
- o Case studies
- o System solution videos
- o Corporate videos
- o MTI-TV videos

For more information, to schedule a CEU program or to attend a U.S. webinar, please contact us at MapeiDigital@mapei.com. And to see the full calendar of webinars, visit online at https://www.mapei.com/us/en-us/training-and-technical-service/mapei-technical-institute/onlinetraining.

For information on Canadian seminars, contact Marie-Christine Mercier at (450) 662-1212 or visit our page at https://www.mapei.com/ca/en-ca/training-and-technical-service.



#### **Merger of MAPEI and GRT is final**

As of January 1, 2020, General Resource Technology (GRT) and MAPEI Corporation have completed their merger and are now known as MAPEI Admixtures. The merger joins two strong, wellrespected companies with highly complementary geographic footprints. It also brings together more than 20 manufacturing and shipping locations across North America. Customers can continue to expect the same high quality of service to which they are accustomed; however, it is now backed by a stronger corporate infrastructure.





#### First advanced MTI training for engineers

The last week in February was a busy one in Deerfield Beach, Florida, as MAPEI Technical Institute (MTI) hosted its first advanced training for engineers. The topic was "Understanding Industry Standards, Sustainable Solutions and Submittals," and the standards discussed included TCNA, ANSI and ISO. In addition to engineers and specification writers, general contractors, subcontractors, owners, estimators, field supervisors and project managers attended. "It was a big success," said Jim Whitfield, MAPEI Corporation's Director of Technical Services for the U.S. and Caribe. "We are planning to hold this training twice a year in the U.S."



#### A fond farewell to Tom Lundgren

With great sadness, we share the news of the passing of Thomas Lundgren, Business Development Manager for MAPEI's Concrete Repair Division. He worked in the field of concrete restoration for more than 25 years in both North and South America – 20 of those years with MAPEI.

Tom received his MA from the University of Colorado and his MBA from the American Graduate School of International Management, Glendale, Arizona. He was a valued presenter at a variety of tradeshows throughout North and South America, including World of Concrete, and played a key role in several unique construction projects, including the new Panama Canal.

Tom's daughter, Alisha Drinkwater, graciously shared these insights about him: "My dad was a great man and father. He was a vehicle enthusiast and worked diligently on his Harley-Davidson motorcycle and truck. He loved to ride his motorcycle, play basketball (big fan of the Los Angeles Lakers), fish, hike, travel, camp and to body-build (at one point he had 18" biceps). I personally will never forget our many camping trips in our family trailer. We would hit the road and venture all over British Columbia, Washington, Oregon, Montana and Idaho. One of his most important trips was the time he went to Honolulu, Hawaii, on business and met the love of his life, Barbara Herman. They shared a special night out on the dance floor and that led to 22 happy years together and so many wonderful memories."







We will never forget Tom either. The Lundgren family has requested that in lieu of condolences, donations be sent to The Humane Society of the United States in his name: http://bit.ly/ HumaneSocietyDonation\_TG

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MAPEI's new *Ultracolor® Plus Max* grout comes in Jet Black and Pure White.

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- $\cdot$  Fine aggregate for use in joint widths 1/16" to 3/4" (1.5 to 19 mm)
- · Rapid-setting, allowing light foot traffic in 3 to 4 hours

For details, visit www.mapei.com.







