



Celebrating the Past, Innovating Solutions for the Future

The late Dr. Giorgio Squinzi, past President of MAPEI Group, had a motto born from his love of cycling that has become our informal company motto: "Never stop pedaling." That catchphrase guides MAPEI on a global level to always pursue excellence, to strive for the most leading-edge solutions to real-world problems in the construction industry – and beyond. Because of this, in most scenarios, MAPEI stands in front as the leader, the main innovator in our field, and sometimes we see glimpses of innovation from "the outside world."

Luigi Di Geso President and CEO, MAPEI North America

It is truly fitting that this year, as we celebrate the 85th anniversary of our company, a glimpse of innovation from "the outside" led to the creation of *Planitop® 3D*, our newest and most innovative product. It also led to a strategic partnership and a project that unites technology and compassion.

Black Buffalo 3D, our strategic partner in the creation of *Planitop 3D*, had exactly that – a flash of innovation that drew our attention and led to this partnership, as well as to a relationship with the builder/printer Alquist 3D. Both innovative companies share our goals of reaching out to our communities and of pushing beyond boundaries, using innovation to improve not only processes and products, but also the world around us.

Planitop 3D is the latest in a long line of MAPEI's products, stretching back to 1937, that provide not only the strongest and most durable solutions for the construction industry, but that are also the most creative and technologically advanced

We also have a large distribution network. Our aim is to reach our clients on their own territory, with custom-tailored system solutions because every project is unique and requires systems adapted to it. We innovate solutions to those unique problems, and *Planitop 3D* is proof of that fact.

Printed in rural areas and at a fraction of the construction costs of traditional construction methods, these 3D-printed homes are designed to provide affordable houses to Americans who might previously not have been able to own a home. Given this, *Planitop 3D* not only answers our company's drive for innovation, it also fulfills our directive to reach out and help our communities – allowing us to play a real role in the drive to help fix the nation's housing crisis. It is truly fitting that this innovative product would debut during our company's 85th anniversary year when we look back at our past in celebration, but also ahead to a future filled with unlimited possibility.

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ON THE COVER

2022 marks MAPEI Group's 85th year in business. In this issue, we look back at the very beginning, celebrate the milestones, and look forward to a bright future.

EDITOR

Jennifer Kramer

EDITORIAL CONTRIBUTORS

Giulia De Maio, Jeffery B. Johnson, Amber Kelley, Maurizio Luccarelli, Scott Murray

PRODUCTION EDITORS

Brian Hedberg, Corey Siggins

GRAPHIC DESIGNER Stephen Gil

CONTRIBUTING PHOTOGRAPHER

Raul Ballester

PRODUCTION MANAGER

Jeremy Mitchell

DIRECTOR OF OPERATIONAL

MARKETING Steven Day

PRESIDENT AND CEO

Luigi Di Geso

PUBLISHER

MAPEI Corporation Headquarters of North America 1144 E. Newport Center Drive Deerfield Beach, FL 33442

MAPEI GLOBAL CORPORATE **HEADQUARTERS**

Mapei SpA Via Cafiero, 22 – 20158 Milan (Italy)

1-800-42-MAPEI (1-800-426-2734)

www.mapei.com

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Celebrating 85 Years of MAPEI

The multinational group on the cutting edge of chemical products for the building industry was founded on February 12, 1937, in Milan.

MAPEI: 85 years old and looking to the future

It was 1937 when Rodolfo Squinzi founded his building materials business in the outskirts of Milan with seven staff members and the support of his wife, Elsa. That is how MAPEI – Materiali Autarchici Per Edilizia e Industria – was first established, setting off on a path that would lead it to become a multinational company championing Italian excellence all over the world.

Now, 85 years later, the facts and figures about MAPEI tell the story of how it has evolved: Three generations of entrepreneurs, with business operations in 57 countries, over 20 product lines to meet all the needs of the building trade, 84 production plants, revenue of about \$3.1 billion USD and about 11,000 staff members.

The farsightedness and passion of Giorgio Squinzi, at the helm of the company from 1984 to 2019; the constant support of his sister, lawyer Laura Squinzi; and the insight of his wife Adriana, head of marketing and communications strategy, laid the foundations for what are now the pillars of MAPEI Group: Internationalization, research & development, specialization and sustainability. Support for culture and sport has also helped secure close ties between business operations, the surrounding region and the company itself. These bonds are still the company's most distinctive trait worldwide.

Since 2019, Laura Squinzi has been Chairman of the Board of Directors, which also includes Veronica and Marco Squinzi as Group CEOs, and Simona Giorgetta.

"We are treating this important milestone more like a starting line. We are ready to face new challenges, knowing that we can count on a team of the highest caliber," Veronica Squinzi stated. "MAPEI is a company with its heart in Italy and its eyes looking out across the globe. Since our grandfather took that historic first step in 1974 and built the athletics tracks for the Montreal Olympics, we have never stopped investing in new markets. Today we have 91 subsidiaries in 57 countries, and we have no intention of stopping here. We recently acquired the French company Resipoly, and we are currently building five new factories everywhere from the United States to China."

Marco Squinzi went on to add, "Our deep commitment to innovation and research is still a major part of the entire Group strategy. We are a chemical company manufacturing products for the building industry, and the aim of our 32 research laboratories is to come up with cuttingedge products to make building increasingly sustainable by focusing on durability and quality. We believe that extending the life cycle of existing buildings is the best way to consume fewer resources and produce less waste for landfills. We are also committed to making increasing use of raw materials with low environmental impact or secondary raw materials to help boost the circular economy, simultaneously striving to reduce the use of hazardous substances to a minimum in order to protect not only the environment but also workers' health."

Luigi Di Geso, President and CEO of MAPEI North America, stated, "MAPEI is known throughout the industry for excellence – not only for excellent products, but also for the excellence of the philosophies and practices that lead to the creation of those products. That excellence is rooted in our firm connection to Italy and to the passion for innovation with which this company was founded. MAPEI is an historic company with new ideas because of that passionate drive for innovation."







Countless projects and initiatives have seen MAPEI play a leading role in helping communities grow all over the world. They include the upgrading of iconic buildings, such as the Guggenheim museum in New York City, La Scala opera house in Milan and the Colosseum in Rome. They also encompass the construction of large infrastructures like the Panama Canal and the company's involvement in major futuristic projects such as the "Arena del Futuro," an innovative green-mobility project – following the route of the A35 BreBeMi motorway in Italy – that is based on dynamic-induction electric recharging.

As it blows out 85 celebratory candles, MAPEI is retracing its own history. But, above all, it is looking to the future, choosing to take on new challenges with the commitment, passion, high specialization and professionalism that have always distinguished the company and its people.



1. In 1937 Rodolfo Squinzi set up M.A.P.E.I. – Materiali Autarchici Per Edilizia e Industria (Autarchic Materials For Building and Industry) – in Milan's Bovisa district. MAPEI began producing a silicate-based paint, *Silexcolor*, as an alternative to a French product. This was the beginning of the legendary company.

The Story of a Great Italian Company with a Global Vision



- 1. The official 1984 opening of MAPEI's first North American manufacturing plant in Laval, Canada. Left to right: Adriana Spazzoli, Veronica Squinzi, Dr. Giorgio Squinzi and Rodolfo Squinzi celebrate the grand opening.
- 2. In 1983, Nick Di Tempora and Dr. Giorgio Squinzi established the first MAPEI factory in the United States in Phoenix. Arizona.



The early days

When Rodolfo Squinzi founded MAPEI (Materiali Autarchici Per Edilizia e Industria) in Milan in 1937, the company focused on manufacturing paints for the building industry. The old headquarters on Milan's Via Cafiero, which once employed seven people, is now the home of the Corporate Research Centre for the research and development of new MAPEI products.

MAPEI's first product was *Silexcolor*, a silicate paint destined to become one of the most popular products in the entire MAPEI range. Next, the company focused on manufacturing adhesives and products for the installation of resilient materials. Research, which has always been in the company's DNA, led to the creation of *Adesilex*, an adhesive for installing linoleum that was an improvement on Italeum.

From these modest beginnings, through hard work and a commitment to innovation, MAPEI began to grow.

Giorgio Squinzi paves the way to internationalization

In 1984, after Rodolfo passed away, his son Giorgio Squinzi, an industrial chemist, took over the reins of the family business, leading it onto a new stage in its development. After initially breaking into the Canadian market by supplying products for laying the athletic track for the 1976 Montreal Olympics, MAPEI opened its first factory outside Italy in an industrial area in Laval close to Montreal, Canada. Giorgio Squinzi's brilliant idea of building company factories close to consumers on every continent, meant that MAPEI expanded internationally – enjoying exponential growth over the next few years as it opened up new plants on every continent.

Giorgio was supported by his sister, Laura Squinzi (a lawyer), and his wife, Adriana Spazzoli, who led the management of the MAPEI Group's marketing and communication operations. This was combined with constant investment in research for the main purpose of supplying users with safe, innovative products for even the most complex and demanding building projects.

Looking to the future

"Never stop pedaling," Giorgio Squinzi's famous motto, has remained firmly engraved in MAPEI, instilling strength even in the most difficult times. In 2019, the passing of both Giorgio and Adriana marked a change in leadership: Veronica and Marco Squinzi, who had been with MAPEI since the early 1990s, become joint CEOs of the company, guided by a Board of Directors chaired by Laura Squinzi. The Board also includes the architect Simona Giorgetta.

Despite the difficult state of affairs caused by the COVID-19 pandemic in the early 2020s, MAPEI proved to be a solid but flexible company, quite capable of adapting efficiently to change, while remaining true to its own corporate strategy.

Today MAPEI Group operates in 57 countries, with 84 production plants based in 35 countries. Thanks to a range of products meeting all the needs of the building trade with a particular focus on sustainability, durability and high-quality products, growth has been constant.

Six new factories are currently being built all over the world – China, India, Egypt, Canada and two in the United States – so as to be able to work even more closely with customers.

Sport and culture: An inseparable partnership

The family's passion for the world of sport, and cycling in particular, took on concrete form with the sponsorship of a professional cycling team from 1993 to 2002. This team was at the very top of all the international rankings for many years, with a total of 654 races won. As time has passed, MAPEI's commitment to cycling has continued, including the support of youth teams and other events, including the "Re Stelvio Mapei" mountain road race. MAPEI has also been the Main Sponsor of the UCI Road World Championships since 2008.

However, the Group's main investment in sport is currently Sassuolo Football Club. Initially envisaged as a commitment to the local ceramics district, Sassuolo, this project is now more alive than ever. Owned by MAPEI since 2003, the men's first team has gone from the Italian Serie C2 to Serie A and even played in the Europa League in 2016.

The love of art and culture has also been the basis of an enduring partnership with Milan's La Scala opera house. After initially signing up as an "Officially Registered Supporter," MAPEI reinforced close ties with this world-famous Milanese institution by the company's contribution to the restructuring and restoration of the Opera House using MAPEI technology and research. In 2008, MAPEI became a "Founding Partner" and from 2016 to 2019 Giorgio Squinzi was a member of the Board of Directors. Using this same approach, MAPEI has long supported various other prestigious projects to support art and culture.

















Dr. Giorgio Squinzi: Tile Person of the Year

At the Coverings 2022 Expo, Dr. Giorgio Squinzi was honored with the Tile Council of North America (TCNA) Tile Person of the Year award. This award may recognize him posthumously for 2022, but in reality, it stands as a testimony for a lifetime of work and to the fact that the actions of one man can truly influence the world. The award was accepted on Dr. Squinzi's behalf by his children, Marco and Veronica, at a reception held on April 7. In tribute, we are proud to share the text of our official press release from that event:

Dr. Giorgio Squinzi was a chemist and a forward-thinking businessman with great humanitarian and entrepreneurial qualities.

Born in 1943 in Cisano Bergamasco, where his family had been displaced by the war, Dr. Squinzi was raised in Milan where, in 1937, his father Rodolfo founded MAPEI, a small company that manufactured auxiliary materials for construction and industry.

In 1969, Dr. Squinzi graduated from the University of Milan with a degree in Industrial Chemistry. He immediately joined his father at MAPEI, contributing to the innovative and revolutionary development of adhesives and chemical products for the building industry.

After initially breaking into the Canadian market in 1976 by supplying products for laying the athletics track for the Montreal Olympics, MAPEI opened its first factory outside Italy in Canada in 1978 within the industrial district of Laval near Montreal.

In 1984, after the death of his father, Dr. Squinzi took over the reins of the family business and guided it into a new phase in its growth: Internationalization. MAPEI Group decided to enter the United States market by opening a plant in Tempe, Arizona, in 1984 and creating the subsidiary MAPEI Corporation. The Arizona plant was quickly followed by a facility in Chicago, IL, in 1985.

Dr. Squinzi's idea of building a number of manufacturing facilities that were located close to consumers on every continent led to a period of international expansion for MAPEI, which, over the years, would see exponential growth as the company opened new plants on five continents. In this endeavor, Dr. Squinzi had the backing of his sister, lawyer Laura Squinzi, and his wife, Adriana Spazzoli, who led MAPEI Group's marketing and communication operations.

In the United States, Dr. Squinzi's vision led to the creation and strategic growth of the leading manufacturer of setting materials for the construction industry. MAPEI has locations and four state-of-the-art labs strategically placed in the U.S. to best serve customers (Deerfield Beach, FL, headquarters and Fort Lauderdale factory; Calhoun, GA; Dalton, GA; Fredericksburg, VA; Swedesboro, NJ; Eagan, MN; San Bernardino, CA; Garland, TX; and Wildwood, FL). Dr. Squinzi also expanded the growth of the corporation itself with the acquisition of L&M (1996), North American Adhesives (1996), VINAVIL (2002), Polyglass (2008), GRT (2014) and, in the 2000s, being awarded the business of both Lowe's and Floor & Decor.

Under the leadership of Dr. Squinzi, MAPEI's commitment to research also continued, earning him an honorary degree in Chemical Engineering from Politecnico di Milano in 2002.

MAPEI's great contribution to the chemical industry also helped get Dr. Squinzi elected as president of Federchimica (from 1997 to 2003 and from 2005 to 2011) and president of the European Chemical Industry Council – Cefic (from 2010 to 2012). His commitment to innovation was contagious and both organizations benefited from his drive for excellence.

Thanks to his commitment to industry and business, Dr. Squinzi also served as president of Confindustria from 2012 to 2016

Dr. Squinzi was awarded numerous honors both abroad and in Italy. In 1998, he was made a Cavaliere del Lavoro (Order of Merit for Labour). In 2013, he was awarded the title of "Knight of the Order of Merit of the Republic of Italy" by the President of the Italian Republic.

1. The framed, handcrafted TCNA 2022 Tile Person of the Year mural was created by AD Studios in Elgin, Texas

2. Veronica Squinzi and Marco Squinzi accept the TCNA 2022 Tile Person of the Year award on behalf of their late father, Dr. Giorgio Squinzi.

3. From left: Eric Astrachan, TCNA's Executive Director, joins Veronica Squinzi and Marco Squinzi with Dr. Giorgio Squinzi's 2022 Tile Person of the Year award.

4. From far left, counterclockwise: MAPEI Corporation's President and CEO, Luigi Di Geso; Regional Finance Director, Alessandro Biondi; Operational Marketing Director, Steven Day; Strategic Marketing Director, Real Bourdage; National Sales Director, Carol Hould: General Manager MAPEI Caribe, Francisco Sanchez; General Manager MAPEI Canada, Marco Roma.

5. After a video celebrating Dr. Squinzi's life and accomplishments, TCNA's Executive Director, Eric Astrachan, presented the award.









Like his father Rodolfo, Dr. Squinzi was passionate about cycling. He established a professional MAPEI cycling team from 1993 to 2002, which was at the top of all the international rankings for many years.

In 2003, Dr. Squinzi took over Sassuolo Football Club and brought the same values to football that are such an integral part of MAPEI's DNA: Talent, teamwork, enthusiasm, determination and perseverance in taking on new challenges. Under his guidance, this football-club sponsorship has become a larger project continuing even today and focusing on sporting and personal development involving not just the professional Sassuolo men's team, but also women's and youth teams.

A firm believer in "clean" sport, Dr. Squinzi contributed to the fight against doping by setting up the MAPEI Sport Centre. Still involved in scientific research, the Centre provides assistance to athletes of all abilities to help them improve their performance through training programs and personal biomechanical assessment.

"Never stop pedaling," Dr. Squinzi's famous motto, has remained firmly imprinted in MAPEI's DNA and has continued to instill strength in the company even after his death in 2019.

Upon notice of this year's TCNA's Tile Person of the Year award, Veronica and Marco Squinzi provided the following statements:

"It is a great honor for us to receive this recognition on behalf of our father Giorgio, who loved the United States and always considered it the land of opportunity. He approached the U.S. market in the 1980s, finding from the beginning a strong and real support from institutions and the economic environment. After having grown both organically and through local acquisitions, today MAPEI Group has an important footprint in America with 16 MAPEI facilities and 6 Polyglass facilities all over the country, and we'll keep on investing." – Veronica Squinzi, Corporate CEO and Global Development Director for MAPEI Group

"Staying with our strategy, we have some new ongoing projects in the U.S. for the development of products with high-quality standards that meet the needs of the local market, a market that rewards excellence. Beyond establishing and updating strategic manufacturing and distribution facilities, our business strategy aims to grow customer distribution and product-line offerings, positioning MAPEI as a system solution and complete-project provider." – Marco Squinzi, Corporate CEO and Research & Development Director for MAPEI Group

Luigi Di Geso, President and CEO of MAPEI North America, stated, "It was a great privilege that TCNA took time to honor Dr. Squinzi and to reflect on his contributions to the industry – in the U.S. and around the globe."

Thanks to Dr. Giorgio Squinzi's far-reaching vision, MAPEI Group is now a multinational company operating in 57 countries, with 91 subsidiaries and 11,000 employees.

Building a SUSTAINABLE future together

Sustainability is part of everything we do. MAPEI has always been fundamentally committed to sustaining the environment for today and tomorrow. We invest in R&D to ensure that our products are safe, reliable, durable and have the lowest impact possible on human health and the environment.

For more details, visit www.mapei.com.





Your **single-source provider** for restoration, strengthening and corrosion protection

MAPEI offers a full range of products for concrete restoration, waterproofing and structural strengthening. Globally, MAPEI's system solutions have been utilized for such structures as bridges, highways, parking garages, stadiums and high-rises.

Visit www.mapei.com for details on all MAPEI products.







Concrete Repair Mortar Solutions

Difficult problems demand a wide variety of problem-solving products

All around the world, responsible proprietors of concrete structures large and small comprise the unsung heroes of the construction world. They are the ones who quietly get the job done, taking proper care of their structures with regular inspection, and use tested solutions to repair – and guard against – corrosion, pitting, spalling, cracking and, in worst-case situations, exposed and possibly rusting reinforcing steel. With its 85 years of experience and innovation, MAPEI offers a wide variety of locally manufactured concrete restoration products for the North American market, including an extensive selection of concrete repair mortars as part of its Concrete Restoration Systems product line.

Products for horizontal concrete repairs

Whether your concrete floor needs a single cavity filled or a major concrete restoration, you can choose from a variety of MAPEI concrete repair products to meet the needs of your specific job. Contractors might appreciate the ease of use and extended working time afforded by *Topcem*™ *Pronto*. Concrete restoration experts will be impressed with *Mapecem® 202*'s fast setting time for external applications needing a corrosion inhibitor, or the shrinkage-compensated flowability of *Planitop® 25*.

- · Topcem Pronto extended-working-time screed mortar
- · Topcem Premix accelerated-cure screed
- Mapecem 102 medium-build, one-component, fast-setting mortar
- Mapecem 202 medium-build, two-component, fast-setting mortar
- Mapecem Quickpatch high-performance concrete patch
- · Planitop 25 two-component resurfacing mortar
- Planitop EL self-leveling, Portland-cement-based topping

Products for form-and-pour applications

Pumpable, flowable concrete repair mortars are a long-time specialty of ours. Concrete restoration professionals needing a deep-fill pour for large repairs may want to use *Planitop FD* for example, or the pre-extended *Planitop 11*. If you're looking for a form-and-pour mortar with corrosion inhibitor, *Planitop 11 SCC* is also self-consolidating, which is good for full-depth structural concrete repairs in above-, below- and on-grade applications and cavities that contain congested reinforcing steel.

- · Planitop FD full-depth repair mortar
- Planitop 11 pre-extended, pumpable and pourable concrete mix
- Planitop 11 SCC self-consolidating concrete mix with corrosion inhibitor
- Planitop 15 form-and-pour, one-component repair mortar

Products for vertical and overhead concrete repairs

Concrete deterioration doesn't only happen to horizontal surfaces, of course. MAPEI offers a variety of concrete repair mortars specially formulated for vertical and overhead applications. There is the sulfate-resistant *Planitop 12 SR* and the machine-applied *Planitop Shotcrete* for industrial concrete repair applications, among others.

- Planitop X one-component, fast-setting, fiberreinforced, vertical and overhead repair mortar
 - Planitop XS one-component, fast-setting, extendedworking-time, vertical and overhead repair mortar
 - Planitop 12 SR sulfate-resistant, vertical, overhead and horizontal repair mortar with silica fume
 - *Planitop 23* vertical and overhead, two-component repair mortar
 - Planitop Shotcrete silica-fume-enhanced shotcrete mix

Rapid-hardening concrete repair mortars

When high-traffic areas need to be repaired with limited downtime, these concrete restoration products provide rapid hardening to get the affected areas back in service or ready for further coverings quicker than others. For example, *Planitop 18* is very rapid-hardening, providing compressive strength of > 2,500 psi (17.2 MPa) just an hour after setting, whether neat or extended by aggregate up to 8" (20 cm). And if you need extended working time, *Planitop 18 ES* is specially formulated for that, while *Planitop 18 TG* is trowelgrade and extends strength so quickly that areas can be opened to vehicular traffic in as little as two hours, under optimal conditions.

- · Planitop 18 very rapid-hardening repair mortar
- Planitop 18 ES very rapid-hardening repair mortar with extended working time
- Planitop 18 TG very rapid-hardening, trowel-grade, highearly-strength repair

For detailed information on all the above products, including their extensive testing with data on shear strength, be sure to download the respective Technical Data Sheets from www.mapei.com.

VOC content and emissions

A product labeled "low-VOC" or "zero-VOC" does not mean it is safe or good for your health, nor does it mean that it contains no toxic chemicals. VOC content (what's in the product) doesn't correlate to VOC emissions (what the product emits). Products with zero or low VOCs can still emit VOCs. To that end, all the above MAPEI products were third-party tested and third-party certified for low VOC content and low VOC emissions, achieving Indoor Advantage Gold certification from SCS Global Services to meet California Department of Public Health (CDPH) Standard Method v1.2-2017.

Concrete restoration is a serious business, and MAPEI takes the formulation and production of its concrete repair products just as seriously. As an ISO 9001-2000 certified company that employs exacting standards to ensure quality and consistency from batch to batch, MAPEI also offers an in-house technical services team that responds to customers' telephone inquiries in real time and can even offer field support for on-site problem resolution. When it comes to repair and maintenance of concrete structures, look no further than MAPEI's Concrete Restoration Systems.





MapeLevel EasyWDG System provides greater quality and consistency in tile finishes by reducing the effects caused by slight variations in substrates and tiles. Unlike most of the lippage-control systems currently available on the market, MapeLevel EasyWDG System has been designed to be applied entirely by hand.

Features and benefits

- MapeLevel EasyWDG System can be installed entirely by hand for a faster installation.
- The MapeLevel EasyWDG wedge is made of recycled plastic (polypropylene) and is reusable.
- MapeLevel EasyWDG Spacer M recyclable breakaway clips, made from high-density polyethylene, are available in sizes from 1/16" to 3/16" (1.5 to 5 mm) wide.
- · The system is convenient and easy to use.

- The system provides greater quality in the finished tile installation.
- Thanks to thin milling of the wedge surface, the MapeLevel EasyWDG wedge increases precision during the leveling of tile edges. This also enables an easier insertion of the wedge inside the clips.
- Easy wedge removal allows for the cleaning of fresh mortar from around the clips.

Uses

MapeLevel EasyWDG System is for lippage control of tiles varying in thickness and size, especially for large-format tiles. The wedge can be used with ceramic and stone tiles with thicknesses from 1/8" to 1/2" (3 to 12 mm).

Packaging

Product		Width	Packaging
MapeLevel EasyWDG wedges		N/A	Box: 12 bags, 100 wedges per bag
MapeLevel EasyWDG Spacer M clips		1/16" (1.5 mm), gray	Box: 14 bags, 250 clips per bag
		3/32" (2 mm), black	Box: 14 bags, 250 clips per bag
	G	1/8" (3 mm), white	Box: 14 bags, 250 clips per bag
	a	5/32" (4 mm), yellow	Box: 14 bags, 250 clips per bag
		3/16" (5 mm), red	Box: 14 bags, 250 clips per bag
MapeLevel EasyWDG Pliers	7	N/A	Box: 15 pliers

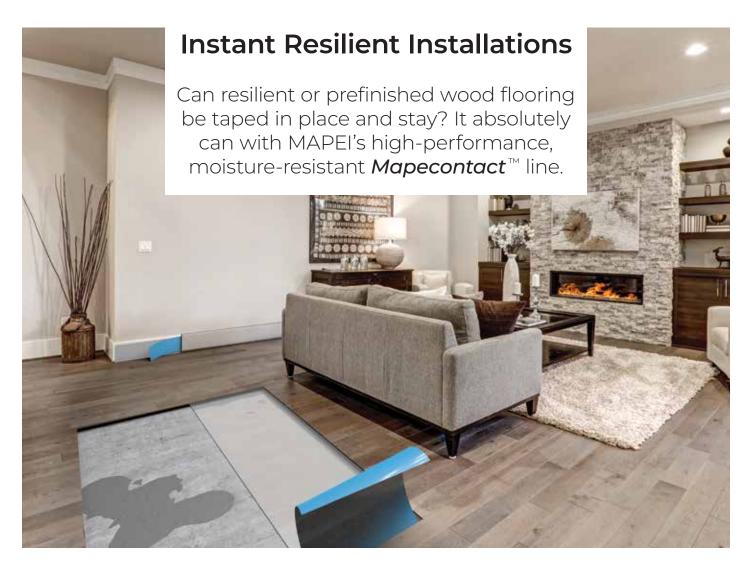


Finished concrete looks are a significant trend for retail spaces. While polishing existing concrete can be an option, existing concrete may not always be up to the task. MAPEI's *Ultratop* products are engineered to provide fast, effective solutions for resurfacing a variety of surfaces. *Ultratop SP* is a high-performance, polishable, self-leveling, cementitious topping that provides a fine-aggregate exposed finish.

Challenges: Soft, damaged or uneven concrete

Solutions: High-quality, compatible products from a single source for decorative topping

- 1 Concrete subfloor
- 2 Primer SN™
- 3 Sand broadcast
- 4 Ultratop® SP
- 5 Mapecrete[™] Hard LI
- 6 Mapecrete Protector FF



There is really nothing that can compare to the speed and functionality of MAPEI's *Mapecontact MRT* and *Mapecontact SRT* double-sided, moisture-resistant tapes for resilient floor installation. They are the answer for controlling subfloor moisture emissions. Each provides a super-aggressive bond, allowing for instant heavy traffic conditions once the floor is installed.

Mapecontact MRT is a "no-limit" moisture-resistant product, which means no subfloor moisture testing is required before installation. There is also no need to install epoxy moisture barriers, which require a lot of surface preparation, time and labor to install. All that is needed is a clean, dry substrate and then installation can begin. Mapecontact MRT even works extremely well on highly polished concrete slabs – with no surface profiling necessary. This represents a huge savings in time and costs over liquid-applied adhesive systems, because polished concrete normally requires profiling to create porosity prior to installing liquids.

Further, once the moisture-resistant tape is properly placed on the subfloor, flooring installation can proceed immediately – and there is no limit to working time. In fact, the only requirement is that the adhesive film remain covered by the blue release liner until the floor is ready to be placed. The release liner can also act as a floor protection film. When the flooring is installed, it is ready for immediate occupancy and can be opened to all levels of surface traffic.

Mapecontact SRT includes all of the same properties as Mapecontact MRT, as well as providing the added benefit of sound reduction, perfect for interior residential or interior commercial use – any place where people must live or work on multiple floors. Whether used on a subfloor or on a raised access floor, Mapecontact SRT provides a unique flooring installation solution that offers sound reduction, moisture resistance and quick turnaround times.

Other benefits of both *Mapecontact MRT* and *Mapecontact SRT* are environmental. First, this line of double-sided tapes represents a true zero-VOC product. Because these are both ready-to-use products – and not liquids – they contain no hazardous components and do not require a Safety Data Sheet (SDS). There are no harmful chemicals to evaporate. Next, both *Mapecontact MRT* and *Mapecontact SRT* feature a release liner that is 100% recyclable, as is the fiber-wrapped paper core. When it comes to super-sensitive working environments, such as medical facilities, *Mapecontact MRT* and *Mapecontact SRT* are perfect for clean installations.

Both Mapecontact MRT and Mapecontact SRT are suitable for use with a wide variety of flooring types including luxury vinyl plank and tile, vinyl composition tile, solid vinyl and rubber sheet flooring, prefinished cork flooring and underlayment, and all types of carpet tile. For "floors in a flash," look no further than MAPEI's Mapecontact MRT and Mapecontact SRT high-performance, moisture-resistant, double-sided tapes.





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 polymer-modified 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. It is formulated with Easy Glide Technology™ for ease of application and with a consistency that allows adjustability when used with lippage control systems. Keraflex Super can also be used as a mortar over uncoupling, crack-isolation, sound-reduction and waterproofing membranes.

Features and benefits

- High-Transfer Technology[™] for superior mortar-wetting properties
- Extra smooth, creamy consistency for ease of application

- · Easy mixing, handling and troweling properties
- 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

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, glass tile and Saltillo tile; and most marble, granite and natural stone

See full product details at www.mapei.com.

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)	

^{*} Cold temperature or high humidity may alter these properties.

Packaging

Size and Color	
Bag: 44 lbs. (20 kg), gray	
Bag: 44 lbs. (20 kg), white	

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

Typical Trowel	Coverage
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm),	100 to 115 sq. ft.
square-notch	(9.29 to 10.7 m²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm),	74 to 83 sq. ft.
square-notch	(6.88 to 7.71 m²)
1/2" x 1/2" x 1/2" (12 x 12 x 12 mm),	50 to 58 sq. ft.
square-notch	(4.65 to 5.39 m²)
1/8" x 3/16" x 1/8" (3 x 4.5 x 3 mm),	125 to 150 sq. ft.
U-notch	(11.6 to 13.9 m²)
3/4" x 9/16" x 3/8" (19 x 14 x 10 mm),	34 to 38 sq. ft.
U-notch	(3.16 to 3.53 m²)

^{**} Trowel dimensions are width/depth/space. Actual coverage will vary according to substrate profile and tile type.



and in inventory.

Properties of this extra smooth family of mortars include:

- · Amazing transfer of mortar to tile backs while keeping tremendous non-sag/nonslump properties.
- · Unbelievable resistance to freeze/thaw conditions (with Keraflex Super).
- · Incredible adhesion, perfect for installing porcelain as well as large and heavy tiles.
- · Lightning-fast mixing and troweling, thanks to an extra creamy consistency.
- · Fast-setting, allowing for grouting in as little as 3 to 4 hours (with Keraflex RS).

For details on how MAPEI's innovative *Keraflex* technology can help build your business, visit **www.mapei.com/us/keraflex-mortars**.





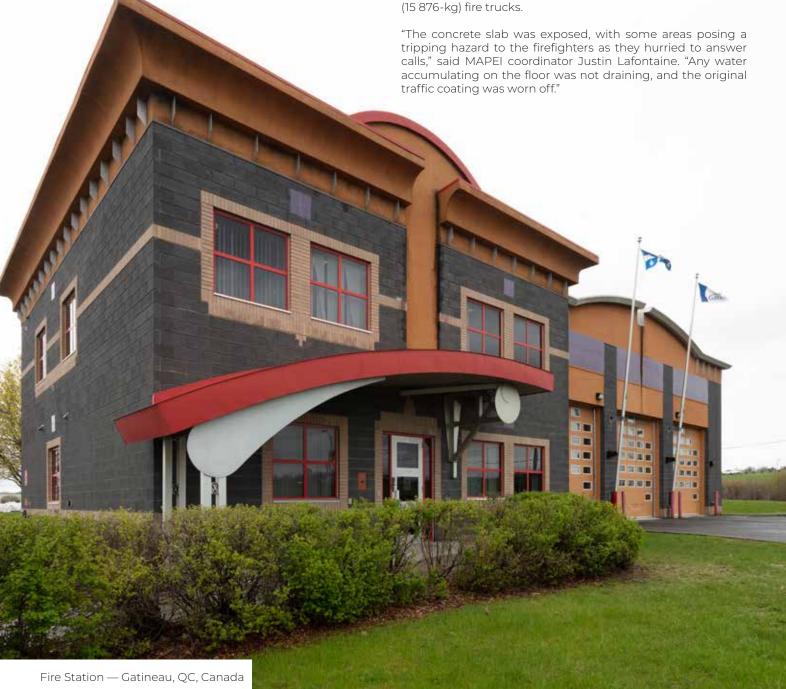
Fixing a Five-Alarm Floor

MAPEI products protect the foundation under first responders

Planners for the city of Gatineau, Quebec, knew that the concrete floor of their Fire Station #3 was in dire need of repair. With MAPEI products, they were able to make those repairs and then apply a rugged industrial-flooring solution that is designed to be more resilient than what was previously used at the station.

As first responders, the team of firefighters serving the city of Gatineau, Quebec, from its Fire Station #3 often ventures to the scenes of accidents that might have been avoided with a little foresight. The team could not practice what they preached, though, due to a fire-station floor that was itself an accident waiting to happen. The floor had taken a beating over the years under the punishing weight of three 35,000-lb. (15 876-kg) fire trucks.

"The concrete slab was exposed, with some areas posing a tripping hazard to the firefighters as they hurried to answer



















MAPEI products on the jobsite

The two-part project began with three products from MAPEI's Concrete Restoration Systems line of products, followed by application of MAPEI's epoxy resin flooring system that is formulated to provide excellent resistance to chemicals and abrasion.

To begin, however, the reinforcing steel that was exposed in places needed attention to sustain its strength. Contractors from BTM Construction addressed the issue by applying *Mapefer 1K* as an anti-corrosion coating to inhibit oxidization and rust formation. They repaired the cracks using *Epojet LV* deep-penetrating epoxy injection resin. *Planitop FD* cementitious, flowable repair mortar with corrosion inhibitor was then used to fill larger defects in the 5,000-sq.-ft. (465-m²) concrete slab, bringing it to a concrete surface profile (CSP) of #3 per the International Concrete Repair Institute (ICRI) specification.

With the slab now ready to take on its new resin-based floor, installers from Ideal Epoxy started on edge work using *Mapefloor CPU/COVE* polyurethane/cement-based coving and detailing screed. They then applied the new main coating – *Primer SN* filled epoxy primer with a full saturation of sand – to increase mechanical bond.

Next, the Ideal Epoxy team applied *Mapefloor Finish 450*, a solvent-free, aliphatic, polyurethane topcoat that is specifically designed to provide a protective wear coat for concrete surfaces in areas exposed to direct sunlight. Finally, they used *Mapefloor I 302 SL* epoxy resin to create yellow demarcation lines.

Now when crew members from Gatineau's Fire Station #3 rush to answer calls, they can rest assured that their own fire-station floor will not become a tripping hazard — thanks in large part to MAPEI. The city can count on a tested, resilient, epoxy resin flooring that is ready to meet the station's needs well into the future.

TECHNICAL DATA

Fire Station – Gatineau, QC, Canada Project category: Public Buildings/ Places

Year of construction: 2018
Year of MAPEI involvement: 2018
MAPEI coordinator: Justin Lafontaine
Project owner: City of Gatineau
CRS distributor: Masonry Depot
Contractors: BTM Construction and
Ideal Epoxy

Challenges: Repairing the floor in a working fire station was a huge challenge in and of itself. But the old floors needed to go. Water accumulation, exposed rebar and corroded concrete made the slab a trip hazard as the first responders rushed to save the citizens of Gatineau.

MAPEI Products

- Epojet™ LV
- Mapefer™ 1K
- Mapefloor™ CPU/COVE*
- Mapefloor Finish 450*
- · Mapefloor I 302 SL*
- Planitop® FD
- Primer SN™

^{*} Canada only







A family-owned tofu business needed to expand its operations with a new, modernized production plant. It was so impressed by MAPEI's Cementitious & Resin Flooring Systems products that it went a step further – opting for a new, decorative resinous floor for its offices and cafeteria to go with thermal-shock-resistant industrial flooring for the new factory. (Note: In North America, this product line is primarily Canadian-based and, as of publication, many of the products mentioned in this article are available in Canada only.)

The Beaulieu family has been growing its own GMO-free soybeans and making them into Unisoya tofu for over 30 years. The company sources its products locally and has recently enjoyed booming business, as evolving consumer attitudes towards soybeans and soy-based products have driven up demand for its product in recent years.

In 2019, the company embarked on a new-build factory to double its floor space and expand production capacity. As a result, they sought modernized facilities with a durable floor designed to withstand the heavy-load industrial equipment – and the chemical and thermal shocks – that their processes require.

When MAPEI coordinator Alain Pomerleau took the owners on a tour of an existing food-production facility that featured MAPEI's *Mapefloor* industrial-flooring systems, the Beaulieu family was quickly convinced that the flooring was exactly what they were looking for to cover the new 17,000-square-foot (1 579-m²) concrete slab of their new factory floor, as well as the building's logistics areas. But that was not all. Seeing the solution's design flexibility and ability to provide a high aesthetic with broadcast *Mapeflakes* decorative vinyl flakes, the owners went a step further and installed the resinous solution in 3,000 square feet (279 m²) of office, stairs and cafeteria space as well.





MAPEI on the job

The surface preparation of the new factory floor's concrete slab was the first step. Contractors from Precision Restauration and Protecsol used "blast-track" shotblasting equipment to bring the slab to a concrete surface profile (CSP) of #4 per International Concrete Repair Institute (ICRI) standards.

With that job complete, the contractors first applied MAPEI's *Primer SN* two-component, filled epoxy primer and then used *Mapefloor CPU/SB* polyurethane/cement-based screed, which features a high level of chemical resistance. *Mapefloor CPU/SB* is formulated to cover industrial floors that are subject to medium- to heavy-traffic flow, aggressive chemicals, and thermal shock in compliance with the rigorous standards applied in the food and beverage industries. Its sister product, *Mapefloor CPU/COVE*, was used for detailing and coving, joint repair, and fixing of drains. As a topcoat, *Mapefloor CPU/TC* polyurethane/cement-based coating was applied as a durable protective finish.

For the non-production areas, such as the cafeteria and stairs (where both a high aesthetic and an easy-maintenance solution was sought), Protecsol contractors used MAPEI's *Mapefloor I 302 SL* epoxy resin into which they broadcast decorative *Mapeflakes* to attain surfaces that were flat and seamless. Finally, they added *Mapecoat Universal* high-gloss epoxy resin, which served as a clear binder in these areas.

Now, in full operation, the modernized factory is turning out tofu in quantities that the Beaulieu family previously never experienced. Maintaining the production area has never been easier either, and worker safety is not a problem with a durable, non-slip flooring solution that is specifically tailored for the food and beverage industry. Plus, the glossy decorative flooring in the non-production areas serves notice that this is a company where quality presentation and attention to detail matter.

TECHNICAL DATA

Unisova -

Saint-Isidore-de-Laprairie, QC, Canada Project category: Production Facilities Year of construction: 2019 Year of MAPEI involvement: 2019

MAPEI coordinator: Alain Pomerleau Project owner: Unisoya 1986 Inc. Contractors: Restauration Precision /

Protec Sol

Project manager: Tony Barone **Photographer:** Olivier Gariépy

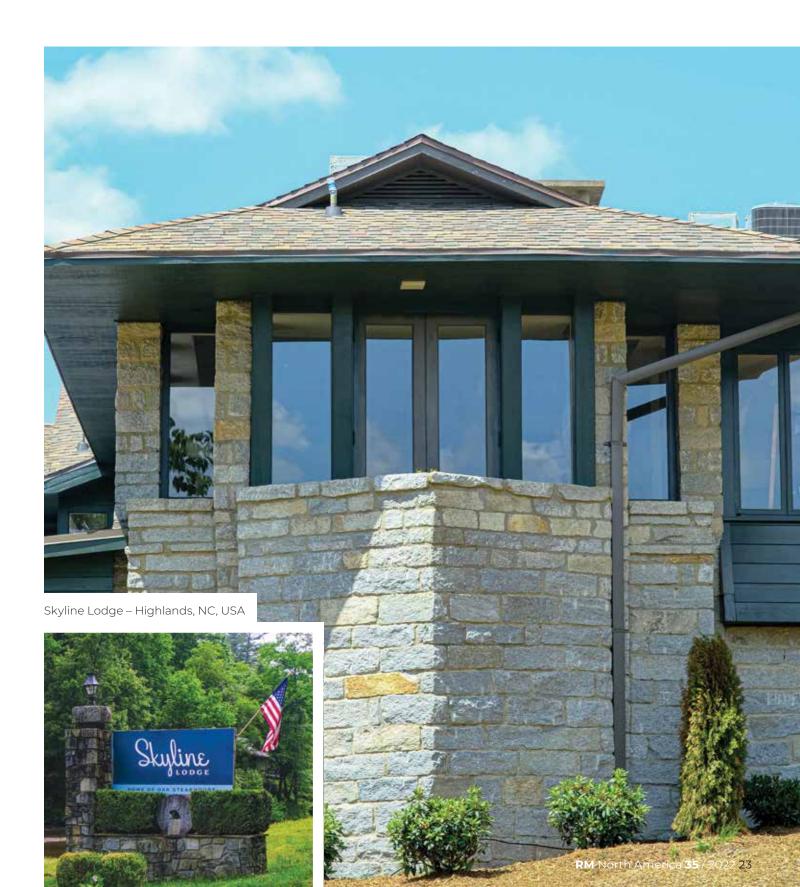
Challenges: The floor had to be durable enough to withstand heavyduty industrial equipment found in the food processing plant — as well as the chemical and thermal shocks that come with the processes of cleaning and food-making. It also had to be slipresistant, food-grade and attractive.

MAPEI Products

- Mapecoat[™] Universal
 - Mapeflakes™
 - Mapefloor™ CPU/COVE
- · Mapefloor CPU/SB
- Mapefloor CPU/TC
- Mapefloor I 302 SL
- Primer SN™

Jazz-Age Design and Modern-Age Luxury

MAPEI's *Mapeheat* brings warm floors to cool design









MAPEI's *Mapeheat* radiant floor-heating system adds an extra touch of luxury to a five-star lodge.

High among the mountains of North Carolina's Highlands, the Skyline Lodge nestles among the pines like a cool run of jazz on a hot day. The instant that you see the lodge, you know that you are looking at a piece of history – a design from an era when discoveries seemed to happen every day, optimism was boundless and Ella Fitzgerald's smoky voice filled the air (along with the scent of bootleg gin).

Built in 1929, the lodge's long, angular lines were designed by the famed architect Arthur Kelsey, who was one of Frank Lloyd Wright's Taliesin Apprentices. And Wright's design influence echoes not only in the exterior lines, but also in the interior design.

"The owners, The Indigo Road Hospitality Group, are known for five-star hospitality, and this property is no exception. Set in a picturesque location with the ability to provide guests with off-property experiences such as scavenger hunts and off-road excursions, this will be a crown jewel in their portfolio," explained MAPEI sales representative David Kocienda.

In fact, the property is in the process of a remodel to bring the nearly century-old wooden structure up to The Indigo Road Hospitality Group's exacting standards. "The interior is being built out and decorated with pieces that are period-correct, right down to the fittings," Kocienda said.

Just as Frank Lloyd Wright designed furniture to fit his properties, so too do the furniture and accessories in the Skyline Lodge match the design ethos: "Jazz Age" meets "Modern Luxury." Sleek lines and lots of wood abound. "But the one period-correct element that was giving them pause was the tile floors in the bathrooms," Kocienda stated.

Each of the 40 guest rooms features a bathroom with heated tile floors – a period-correct design that is combined with modern comfort. "Unfortunately, the heat mats that were originally specified could not be used with the penny-round tiles that the owners wanted to install. Penny rounds are not typically used with uncoupling membranes," Kocienda





continued. "That is when Derrick Hipp, the owner of Tile-it, Inc, the installing contractor, reached out to MAPEI. He knew about our *Mapeheat* system and wanted to know if it would work with the penny rounds."

"A tisket, a tasket, MAPEI is in your basket..."

The owners of the Skyline Lodge want their guests to experience Jazz-Age luxury with all the modern amenities, and they were unwilling to forego either point – the penny rounds or the heated floors. But, as Mike Granatowski, MAPEI Corporation's Director of Architectural and Commercial Projects, always says, "MAPEI has never met a job for which we could not devise a solution." And, this was a perfect case in point.

Hipp reached out to Kocienda, and they sent the specification to MAPEI's Technical Services Department to find the exact solution. As expected, MAPEI provided a system solution to keep the project moving forward and to keep the bathroom installations as specified – penny rounds with heated flooring.

"The system that was specified was designed to address not only the situation with the penny rounds, but also the wood-floor substrate, which was not in great condition," Kocienda stated. "In fact, as some of the floors were removed, there were unexpected damages that were discovered. But remember, we're talking about 100-year-old wooden bathroom floors."

A 10-man crew from Tile-it, Inc, addressed the bathroom-flooring issues by first applying *ECO Prim Grip*, a multipurpose, bond-promoting primer that is designed to enhance the performance of self-leveling underlayments. Next, they applied *Mapelath*, a lightweight, non-corroding, alkaliresistant synthetic lath.

On top of the primed wood and the lath, the crew applied *Ultraplan Easy*, a high-performance, quick-setting, easy-preparation, self-leveling underlayment. "The great thing about this SLU is that it only needs a clean, primed substrate before it is applied," Kocienda said. "It is designed to be used with or without surface profiling, is low-VOC and is very quick-setting. Tile can be installed in as few as three hours."

With a flat, even surface, the crew used *Keraflex Plus* – a professional, extra smooth, large-and-heavy-tile mortar with polymer – to install *Mapeheat Membrane*. Part of MAPEI's *Mapeheat* radiant floor-heating system, *Mapeheat Membrane* is a lightweight uncoupling, crack-isolation and waterproofing membrane that is designed for electrical floor heating. Each membrane is cut to size to fit the parameters of the room. The membrane features rounded square reliefs into which the *Mapeheat* heating cable snaps.

"Once the heating cable was snapped into place, the crew applied *Ultraplan Easy* at least 1/4" [6 cm] above the membrane," Kocienda stated. Once the SLU cured, another level of *Keraflex Plus* was installed on top of the *Ultraplan Easy* along with the penny rounds and grout. This installation featured the *Mapeheat Thermo Touch* thermostat, a 7-day programmable thermostat that includes a 3.5" (9 cm) color touchscreen display for accessing the super-intuitive user interface and energy use monitor.

"It was a real Dagwood sandwich of a solution," Kocienda explained, using a term popularized in the comic strips of the 1920s. (Note: A Dagwood sandwich is named for Dagwood Bumstead from the "Blondie" comic strip. Dagwood always enjoyed a sandwich comprised of a half-dozen meats and cheeses, as well as pickles and vegetables. In short, a lot of ingredients make a delicious sandwich.)

Using a few products in a precise series of steps, MAPEI's Technical Services had created the perfect system solution to the heated-flooring dilemma.

Now, when guests return to the Skyline Lodge, the sounds of Ella Fitzgerald will once again waft through the halls. The clink of ice cubes and the splash of gin (albeit legal now) will accompany the guests' laughter as they enjoy the gorgeous mountain views. And, when the mountain air starts to bite, the chill will leave the penny-round tile flooring and be replaced with warmth and comfort, thanks to *Mapeheat* radiant floor heating and MAPEI.

TECHNICAL DATA

Skyline Lodge – Highlands, NC, USA **Years of construction**: 2021 and

ongoing

Years of MAPEI involvement: 2021 and

ongoing

MAPEI coordinator: David Kocienda

Project owner: Derrick Hipp **Architects**: Mey & Co.; David Thompson

Architect

General contractor: Beverly-Grant

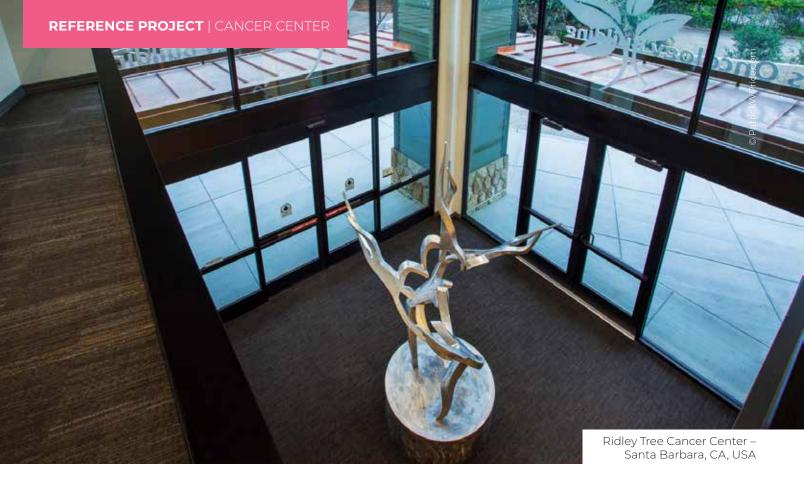
Tile and stone installer: Tile-it, Inc Project manager: Jared Hipp Photographer: Joseph Kocienda Project size: 8,000 sq. ft. (743 m²)

Challenges: The historic building featured "historic" bathroom subfloors that had seen better days. MAPEI's self-leveling underlayment and primer, however, made the application of the heating system easy. And, the system's membrane added a layer of uncoupling,

crack isolation and waterproofing to the floors, as well as provided a locking grid for the heating cables.

MAPEI Products

- ECO Prim Grip™
- Keraflex™ Plus
- Mapeheat™ Cable
- Mapeheat Membrane Mapeheat Thermo Touch
- Mapelath™
- · Ultraplan® Easy



A River Runs Almost Through It

MAPEI solves cancer center's soggy situation

Plagued with moisture issues the concrete slab needed its own cure before the medical facility could open. The contractor turned to MAPEI for a solution to the soggy situation.

"The Ridley Tree Cancer Center was constructed during the course of 22 months as a new, built-from-the-ground-up facility," explained Mike Bogna, Vice President of Construction with G.L. Bruno Associates, Inc. and the Project Manager for this project. It is a comprehensive cancer center, which means that the facility offers all phases of oncological treatment, from wellness, surgery and radiation to a host of cutting-edge therapies – all offered on-site.

In addition to the innovative treatment center, the campus also includes a three-story parking structure and an auditorium; both structures were also new builds on the site. "The entire project was completely funded through community donations," Bogna continued. With that amount of community involvement, this was bound to be a high-profile project even before construction began. It was also a relatively straightforward project – until Mother Nature got involved.

The jobsite had to be located near the Sansum Clinic, a world-renowned hospital in Santa Barbara, California, because the center is affiliated with that hospital. It is a physically stunning location, with mountains, trees and a seasonally active creek nearby. Not to mention the town of Santa Barbara itself.

Santa Barbara is known for many things, two of which happen to be landmark architecture and, more recently, being part of California's drought. Both of these elements would come into play on the jobsite.

"As on any jobsite, we were sensitive to the local residential area in and around the construction site," Bogna stated. In this case, they were located near a preschool, so added precautions were taken to mitigate construction noise and to control dust.

"There were also two historically significant houses. Those were relocated," Bogna continued. What could not be relocated was the seasonally active creek.

In drought-stricken California, seasonally active creeks are taken into consideration in the design phase of any construction project, but they are not necessarily something that comes into play on the average jobsite – or in normal life in general. That changed with this job, especially when it came time for the flooring installation.

"There was a river running about 20 feet [6.10 m] from the first-floor concrete slab," explained Ozzie Amparan, owner of Amparan Flooring, Inc., the contracting company brought in to install the flooring. As it turns out, 2017 (the year of this project) was also the year that the famed "California drought" ended – great news for the state, but not such great news for the state's construction projects. Fortunately, the cancer center project also involved MAPEI.

MAPEI on the job

"This was a three-story project involving 47,822 square feet [4 443 m²] of concrete preparation, moisture control/vapor emission control and resilient installation," explained Adam Amparan, Ozzie's son and co-installer on the project. "The moisture and vapor emission control became paramount."

The specification called for MAPEI's *Planiseal VS*, an alkaliresistant, epoxy moisture-reduction barrier, to seal the newly poured concrete on each of the building's three floors. With a six-man crew and eight weeks to finish the project, there was no time to waste. "The walls and the cabinets were already up," Ozzie said.

"Following the GC, we started on the third floor and went from room to room, working our way down the floors," Adam said as he described the process. Using Blastrac equipment, the Amparan Flooring crew shotblasted the floors to a concrete surface profile (CSP) of #2 using a grinder to grind around the edges.

"There was a lot of chatter left over from the concrete pour," Adam continued. Dust-control measures on the shotblasting equipment whisked most of the debris and dust away, but anything that remained was swept and vacuumed up.

Next, the crew used rollers to apply the *Planiseal VS* – sealing and creating a moisture-resistant barrier on top of the

concrete. This was followed by roller application of *Primer WE*, a water-based, epoxy primer designed to enhance the adhesion of self-levelers.

The self-leveler that was used for the project was MAPEI's *Ultraplan 1 Plus*, a quick-setting, self-leveling, self-drying underlayment and repair mix for interior concrete and engineer-approved floors. Within a matter of hours, the crew was able to begin applying the adhesive, *Ultrabond ECO 711*, and begin installing the resilient flooring.

Rain, rain go away – unless you have MAPEI

"When we first arrived on the jobsite, it had been raining so hard, the water table had risen. There was no place for all of the water to go. The joke was, 'Is there a river running through it?' because there was suddenly a river racing seemingly 20 feet [6.10 m] from the first-floor slab," Ozzie explained. "It was unforeseeable and unprecedented. But, we were able to shotblast, seal and prime with MAPEI."

The project opened on time. And, by all accounts, this is one of the foremost treatment centers in the United States – if not the world. Innovative products helped one of the most innovative treatment centers open. Who knows? Perhaps one day the center's cutting-edge programs will benefit us all. In the meantime, it provides the best care and comfort to all who enter.







TECHNICAL DATARidley Tree Cancer Center –

Santa Barbara, CA, USA

Project category: Public Buildings/

Places

Years of construction: 2016 – 2018 Year of MAPEI involvement: 2017 MAPEI coordinator: Patrick Cooney Photos: PatrickWPrice.com Architects (works): Brian Cearnal, Lisa Liles, Mike Fields and Jose Vaca

Architects (main): The Cearnal Collective LLP and Boulder Associates

General contractor: G.L. Bruno

Associates, Inc.

Installer contractor: Amparan Flooring, Inc. (Ozzie and Adam Amparan) Project manager: Mike Bogna

Project size: 47,822 square feet (4 443 m²) in total: 18,856 sq. ft. (1 752 m²) for the 1st floor, 14,285 sq. ft. (1 327 m²) for the 2nd floor and 14,681 sq. ft. (1 364 m²) for the 3rd floor

Challenges: The flooring installation crew faced a tight deadline to install resilient flooring on three newly

poured concrete slabs in a threestory building. To that moisture was added the ambient moisture from a suddenly raging river resulting from unseasonable rains and located right outside the front doors.

MAPEI Products

- · Planiseal® VS
- Primer WE™
- · Ultrabond ECO® 711
- · Ultraplan® 1 Plus



In April, MAPEI Corporation and Black Buffalo 3D Corporation announced a strategic partnership at the future site of the first 3D-printed homes in Virginia. These homes will be printed by 3D contracting group Alquist 3D using *Planitop® 3D* construction ink/mortar. The event also marked *Planitop 3D*'s official launch.

The first collaboration between MAPEI Corporation and Black Buffalo 3D, *Planitop 3D* is designed to work with Black Buffalo 3D's NEXCON printers to provide enhanced performance at a fraction of the cost of existing building materials.

According to the Website for Black Buffalo 3D, the company is a leading provider of large-scale 3D construction printers. Through innovation in sustainable construction and infrastructure creation, Black Buffalo 3D has reduced build time, labor costs, site waste and material costs. The company has joined MAPEI Corporation in a strategic, research, development and manufacturing partnership for the 3D construction-printing industry.

Held to the strictest quality standards, each layer of *Planitop 3D* is designed to quickly set up and support every layer that is printed above it – saving time, reducing materials and increasing jobsite efficiency.

The official launch of *Planitop 3D* occurred at the site of a housing project in Virginia, in which Alquist 3D will use NEXCON printers and the innovative new mortar to begin 3D-printing 200 new homes throughout Virginia. Alquist 3D is an innovative builder that is committed to helping rural communities through the use of leading-edge technologies.

Alquist 3D aims to use 3D-printed technology to create single-family, multifamily, mixed-use and senior-living homes. The company builds houses that are lower in cost to help economically distressed and underserved communities – especially in rural areas that often do not have access to the same amenities that are commonplace in cities and suburbs. The 3D-printed homes will feature the latest sustainable advances, including rating "net zero" for harmful carbon emissions because the homes are constructed using environmentally friendly materials. The homes will each feature solar panels and a rechargeable battery.

"MAPEI has always been known for innovation and for helping communities around the nation," said Luigi Di Geso, MAPEI Corporation's President and CEO. "These 3D-printed homes and other structures printed with *Planitop 3D* and Black Buffalo 3D's NEXCON printers represent technology at its most compassionate and at its highest level of innovation."

Michael Woods, COO/CEO of Big Sun Holdings, Black Buffalo 3D's parent corporation, remarked, "The Black Buffalo 3D team recognized the need for standardization in materials to drive the next phase of growth in the 3D construction industry. MAPEI was able to enhance the formula that our team developed and take it to the next level, outclassing every product on the market – at a cost that makes 3D-printing homes, buildings and infrastructure feasible on nearly every level."

Planitop 3D is available across North America through MAPEI. The cement-based construction ink/mortar was developed through years of research, testing and evaluation by





independent and in-house material scientists at MAPEI, Black Buffalo 3D and various third-party labs, including Intertek, which is based in York, PA.

Kevin Smith, MAPEI Corporation's National Sales Director – Concrete Restoration Systems, stated, "We were very confident that we could partner with Black Buffalo and their full range of 3D printers to provide an exceptional solution, as this technology is well within our wheelhouse. Black Buffalo 3D met with our R&D team, and we quickly developed the correct solution for this project – it's called *Planitop 3D*."

Planitop 3D is currently in the verification process for meeting the ICC-ES AC509 standard for 3D-printed walls. Black Buffalo 3D is the first company in the world to submit material for proving its ability to meet this globally recognized criteria. Milestones that have already been achieved include several 13-hour+ printing sessions on NEXCON printers by the Black Buffalo 3D team in Elizabeth, NJ, and a multitude of successful tests for strength, usability, resilience and longevity. The verification process follows the stringent testing requirements of the ICC-ES AC509 guideline for 3D-printed walls. More than 50 countries recognize this guideline for 3D-printed walls. The official results and reporting are expected to be released in the near future.

"MAPEI is proud to be involved in this evolution in construction and the housing market," Di Geso stated.

1. MAPEI Corporation's President and CEO, Luigi Di Geso (right), and Michael Woods, COO/CEO of Big Sun Holdings, Black Buffalo 3D's parent corporation, with a super-sack of *Planitop 3D*.

2. At the groundbreaking ceremony, Alquist 3D banners marked the Black Buffalo 3D NEXCON printer, while the super-sack of *Planitop 3D* proudly sat in front of the MAPEI Corporation banner.









Back to In-Person Shows

We are back! It was good to see familiar and friendly faces at all the trade shows again. After a little over a year, trade shows are slowly returning to in-person shows after a hiatus because of COVID-19. From our large demo stage to product samples in our two-story booth, we are glad to be able to share our innovative solutions, as well as our goals of sustainable practices, with you in person.

Following are some of the trade shows that we've recently attended.

World of Concrete

With an in-person event more full-scale this year than last, MAPEI's booth once again commanded attention in the exhibit hall. Held on January 18-20 at the Las Vegas Convention Center in Las Vegas, Nevada, MAPEI exhibited in our iconic two-story booth with an interactive stage at the center.

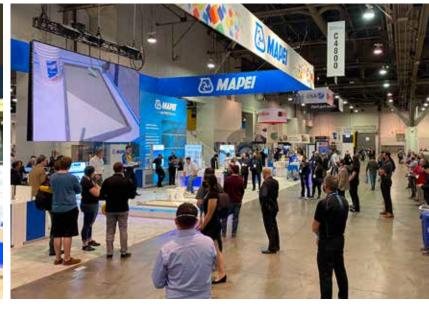
This year, Sam Biondo, MAPEI's National Technical Presenter, held product demonstrations with our technical experts highlighting the latest system solutions for the concrete industry. Drawing crowds in front of the booth, demonstrations and products featured included: Decorative Cementitious Toppings (*Ultratop® SP, Ultratop* Natural System and *Ultratop* Terrazzo System); Decorative Cementitious Waterproofing (*Planiseal® 288*); Acrylic Deck Coatings (*Mapecoat™ Deck S* and *Mapecoat Deck T*); Underground Tunneling Technology (injection systems); Structural Systems (*MapeWrap®* and *Carboplate®*); Chemical Admixtures (*Re-Con Zero Evo US*, a sustainable product for recovering "returned concrete"); Building Envelope Solutions from Polyglass (the *Mapeproof™ AL* family); and Form-and-Pour Concrete (*Planitop® 15* and *Planitop FD*).



















The International Surfaces Event (TISE)

The International Surfaces Event took place in Las Vegas, Nevada, on February 1-3. This year's expo featured products from every corner of the residential and commercial sectors of the flooring industry.

Known for mixing information and entertainment, MAPEI's demonstrations always draw large crowds. This year was no exception. Led by Sam Biondo and MAPEI's demo team, the demos included:

- Advances in waterproofing, hybrid adhesives and mortar products.
- · Fast-track products for floor-covering installations.
- · Accessory solutions for flooring, including clips and spacers.
- · Decorative and trendy grouts.

Visitors to the MAPEI booth got a chance to see products that are leading the way in the industry. A few of these include:

 A running shower featuring Shower System 4 LVT. "The luxury vinyl tile [LVT] shower was a great addition to our booth this year. With a working shower, we were able to showcase a combination of products that allows installation of LVT and other resilient coverings in wet environments," said Jeff Johnson, MAPEI's Business Manager for Floor Covering Installation Systems.

- MapeLevel™ EasyWDG System, which is designed to be applied entirely by hand. The ergonomic shape of the MapeLevel EasyWDG wedge allows it to be inserted smoothly and quickly into the MapeLevel EasyWDG Spacer M clips, and the wedge's thin milling increases precision during the leveling of tile edges.
- Keraflex™ mortars. "The Keraflex family of mortars meets the distributors' and contractors' desire to consolidate, simplify and reduce the complexity of the mortars managed. Keraflex large-and-heavy tile mortars are extra smooth with High-Transfer Technology™, providing solutions for the trends and issues facing today's tile installations," commented Brian Pistulka, MAPEI Corporation's Business Manager for Tile & Stone Installation Systems.
- *UltraCare*® care-and-maintenance solutions for stone, tile and grout installations.
- Mapeheat™ floor-heating solutions. Sonya Moste, product manager for crack-isolation, sound-reduction and floor-heating membranes, stated about MAPEI's solution for floor heating: "Mapeheat combines the knowledge of two powerhouses MAPEI and nVent into one comprehensive product line of radiant floor heating." Visitors to the booth learned about the line's full offering of custom mats, membranes, cables and programmable thermostats.



AGC Convention

The Associated General Contractors of America (AGC) convention was held in Grapevine, Texas, on March 28-31. There were more than 1,000 attendees representing contractors, legal financial consultants and sureties. The AGC is the leading association for the construction industry and represents more than 27,000 firms, including over 6,500 of America's leading general contractors and over 9,000 specialty contracting firms. More than 10,500 service providers and suppliers are also associated with AGC, all through a nationwide network of chapters. MAPEI was well represented and able to share our system solutions with the problem-solving decision makers.

MAPEI's Concrete Restoration Systems (CRS), Underground Technology Team (UTT) and Admixtures Team, as well as Fabrizio De Rossi, Director of Major Projects, were on hand to present MAPEI's products and solutions to support the construction industry, with a special focus on large infrastructure projects.











Construct Canada

MAPEI Canada took a pandemic-enforced, 18-month hiatus from all trade shows. With the ending of the mandate in Fall 2021, it was only a matter of time before trade show season would start up quickly.

In Toronto, Ontario, MAPEI Canada exhibited on December 1-3 at Construct Canada. This show was attended by construction and design professionals such as architects, specification writers, designers, project managers, contractors and others. Featured product lines were Concrete Restoration Systems, Tile & Stone Installation Systems, *Mapeheat* Floor-Heating Systems, Floor Covering Installation Systems, and Cementitious & Resin Flooring Systems. With one of Canada's largest expositions on buildings design and construction, we were determined to leave a mark with the right tools and products.







Coverings

Coverings, "the global tile and stone experience," took place on April 5-8, in Las Vegas, Nevada, and we were excited to show our additive, grout, mortar and waterproofing solutions.

Our MAPEI *Live!* demo sessions on the big stage featured advances in mortars and hybrid adhesives, simplified waterproofing product selection, and decorative and trendy grout solutions. These are a few products that were on the stage:

- Planiseal CR1 single-component, 100%-solids, cold-fluid-applied, structural waterproofing membrane. This is compatible with common construction materials such as concrete, concrete masonry units (CMUs), stone, metal, plastic (PVC and ABS), wood (pressure-treated and fire-treated), rigid insulation and insulating concrete forms (ICF).
- · Ultrabond ECO® GPT revolutionary, hybrid-technology adhesive for gauged porcelain tile. Its features include

- smooth consistency, high bond strength and deformability, and non-sag performance with panels.
- Keraflex Super premium, extra smooth, large-and-heavytile mortar with polymer. Keraflex Super can be used for interior/exterior residential and commercial installations on floors and walls and countertops in dry and wet areas.

MAPEI was also pleased to accept the TCNA's Tile Person of the Year honor for Dr. Giorgio Squinzi. Accepting the award were his children, MAPEI's co-CEOs Marco and Veronica Squinzi, who spoke of his passion for the pillars of MAPEI – internationalization, research & development, specialization and sustainability. Dr. Squinzi, who passed away in 2019, was known for his enthusiastic innovation that touched the global tile industry, as well as his support for culture and sports. For more about this honor, see the article "Celebrating 85 Years of MAPEI" in this issue.







Types of training events







Customer Locations



Lunch & Learn



Conferences



MTI adds more training dates

After the long in-person hiatus caused by COVID-19, MAPEI Technical Institute's classroom training events are proving to be more popular than ever. We have seen increased demand at every class, whether classes are held at one of our training facilities or onsite at the location of one of our distribution partners. This has proven to be true in the United States as well as in Canada.



To find out more about attending an MTI training event in the USA, scan here.



To find out more about attending an MTI training event in Canada, scan here.



Can't make it in person? No problem. To find out how to register for an online Webinar, scan here.



This article is reprinted from Realtà MAPEI International magazine, Issue #84.

The Alpine Skiing World Championships at Cortina d'Ampezzo in northern Italy brings to a close an extremely successful season for the Italian national team, which has been drawing on the services of MAPEI Sport Research Centre since 2001. Italy's "home" World Championships, unfortunately without any spectators due to the restrictions imposed by the pandemic, marks the end of a tricky past winter [2020] during which the best men and women skiers from the Italian national team proved they could even overcome bad luck.

"Leaving aside all the medals that have been won, we are proud to partner with the Italian Winter Sports Federation (FISI) under the presidency of Flavio Roda. We will continue to provide the Italian National Alpine skiing team with our expertise, helping them to achieve their goals as we did through the last Olympic Games in Beijing 2022. We are hoping to continue a partnership that has been going on for years now," said Claudio Pecci, Director of MAPEI Sport Research Centre.

Constant monitoring and cutting-edge equipment

From some of the world's most successful champions taking part in the World Cup to up-and-coming young skiers taking part in the Europa Cup, approximately 60 men and women from the Italian national squad can rely on the support of experts from MAPEI Sport who test them two or three times a year, focusing specifically on their physical fitness.

Over the years, the facility has developed special systems for

monitoring athletic skiers. The center's equipment includes the so-called "eccentric leg press," a prototype unique of its kind in the world that was designed and developed by physiologist Piero Mognoni and Professor Aldo Sassi.

"The press simulates with a high degree of approximation some of the specific physical demands that skiers must handle on the slopes. Skiers are subjected to reiterated eccentric-concentric contractions replicating what happens during turns," explained Ermanno Rampinini, Director of MAPEI Sport's Human Performance Lab (HPL).

Athletes undergo specific lab testing for their own specialties. Eccentric strength is an important physical determinant for alpine skiing performance: At every turn, skiers must resist the centrifugal force resulting from their high speed. They must also have good capacity and sensibility to modulate force on the snow. The ability to modulate force is crucial to keeping a skier's speed as high as possible during turns. Alongside these neuro-muscular measurements, tests are also carried out to determine lower limb power and the efficiency of a skier's anaerobic system (i.e., their stamina).

Determination and patience to get back to racing following an injury

MAPEI Sport has followed a number of skiers as they have gradually risen to the top of the World Cup circuit, such as the highly talented Marta Bassino, who has been a regular at MAPEI Sport Research Centre since 2004 (she underwent





1. MAPEI Sport has watched youngsters rise to the top of the world ski circuit, such as the highly talented Marta Bassino.

- 2. Federica Brignone is the most successful Italian skier ever to win the World Cup.

 7. Deminik Paris, back amongst the world's to
- Dominik Paris, back amongst the world's top downhill skiers



Over the years, MAPEI Sport has gradually developed special systems for training athletes of the Italian national skiing team.

her first test when she was 18 years old). The support of the staff at MAPEI Sport can be extremely useful for identifying and enhancing the potential of young athletes, as well as compensating for their weaknesses or limits. Developing both mentally and technically is also a crucial part in the training of a top-class athlete, such as Bassino.

Laboratory data can be invaluable during a busy competitive season involving lots of training, traveling, practice sessions and races. It can also be useful for dealing with any hurdles or disappointments encountered along the way, such as the ordeal that Pyeongchang 2018 Olympic downhill champion Sofia Goggia faced after fracturing the lateral tibial plateau of her right knee after a fall in Garmisch, Germany.

"We were sure she would come back as she has already done in the past, thanks to her physical abilities and determination, the true hallmark of a champion. Having completed the rehabilitation, she followed a post-injury recovery program with our help to regain full fitness," said Rampinini, who also serves as MAPEI Sport's consultant for team sports, such as football, basketball and winter sports.

"The testing we carry out over the years not only serves to optimize an athlete's training, it is also useful for determining how far they are from their usual fitness levels," Rampinini continued. "Knowing an athlete's background means you can gauge more accurately how far they are from being fully fit."

Champion skier Dominik Paris recently had to go through a situation that was similar to Goggia's before he successfully returned to the top of downhill racing: He tore the front cruciate ligament of his right knee following a crash in Kitzbühel, Austria, in January 2020.

"In his case, we focused on testing to assess how well his knee that had been operated on had recovered. A leg that suffers an injury like Dominik's can lose 30% to 50% of its strength, so you need plenty of patience to wait for it to fully recover and not rush back into competition too soon. That also means paying very careful attention to balancing training loads," Rampinini added.

Science can help in this respect, as can an athlete's determination. A recent example of this determination concerns downhill skier Guglielmo Bosca who, despite injuring the cruciate ligament of his right knee in the first World Cup race in Bormio in northern Italy, did everything he possibly could at the MAPEI Sport Lab to postpone surgery and hold onto his dream of being picked for the World Championships. Sometimes there should be more than three medals up for grabs... Some people are winners without making the podium.

By Giulia De Maio, MAPEI Sport, Olgiate Olona (Varese, Northern Italy)



A place to call home, thanks to the Gary Sinise Foundation

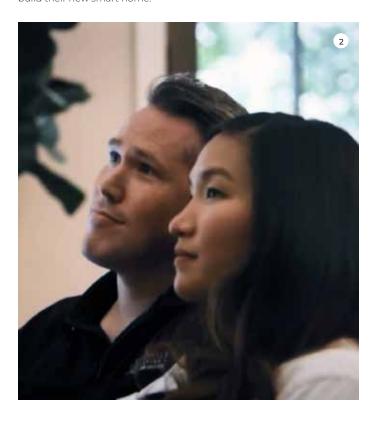
U.S. veterans deserve a place that they can call home. That's why MAPEI continues to support wounded heroes by supplying materials toward building specially adapted smart homes. Supplies donated for homes to be built in the first quarter of 2022 included homes for the following families:

- Retired U.S. Navy Senior Chief Petty Officer Kenton Stacy (Poway, CA)
- · Retired U.S. Army Captain Juan Guerrero (Boerne, TX)
- Retired U.S. Air Force Staff Sergeant Brian Schiefer (Santa Rosa Beach, FL)
- Retired U.S. Navy Petty Officer Second Class Doc Jacobs (Vista, CA)
- Retired U.S. Army Staff Sergeant Jason Tabansky (San Antonio, TX)
- Retired U.S. Marine Corps Staff Sergeant Stuart DiPaolo (Fallbrook, CA)
- Retired U.S. Army Chief Warrant Officer 3 Romulo "Romy" Camargo (Lutz, FL)

MAPEI has started to provide donations of *Mapeheat Mat* through the R.I.S.E. (Restoring Independence Supporting Empowerment) program, and most of these homes, which were built in the first quarter of the year, featured that product. *Mapeheat Mat* is a pre-wired, radiant floor-heating fabric designed for easy installation and is ideal for interior residential spaces.

1. COVID-19 could not dampen the joy of a welcome-home ceremony even one held virtually as they all have been throughout 2021. Although he could not be there in person, MAPEI Corporation's President and CEO, Luigi Di Geso, made sure to attend each of the events via videotaped message, delivering the thanks and best wishes of the entire corporation

2. Welcomed home virtually in Q4 2021, here U.S. Army Capt. (Ret.) Greg Galeazzi and his wife, Jazmine, watch videos from friends, family and the many sponsors who came together to donate time and materials to build their new smart home.



Team MAPEI makes strides against breast cancer

In October 2021, MAPEI's West Chicago plant made strides against breast cancer at Cantigny Park. With more than 80 participants on Team MAPEI, proceeds from the American Cancer Society walk, combined with MAPEI Corporation's match, totaled \$11,740.

"Many of us at the plant were affected by someone who had breast cancer during our lives. We knew this was a good opportunity to help with the fight and show the company's participation to the local community," commented Federico Mascherpa, engineer at MAPEI Corporation's West Chicago Plant and volunteer at the American Cancer Society.



plant joined together to not only exercise, but also to raise money for a great cause - the American Cancer

MAPEI to be official partner of cycling world championships



MAPEI Group Co-CFO Veronica Sauinzi and UCI President David Lappartient celebrate the continued partnership between MAPEI and UCI Cycling World Championships.

MAPEI is delighted to announce that we will be one of the Official Partners of the 2023 UCI Cycling World Championships, which is held from August 3-13.

MAPEI's long-standing partnership with the UCI began in 2008 at the UCI Road World Championships in Varese,

Italy, and will continue until 2024. The 2022 UCI Road World Championships in Wollongong, Australia, will mark the 14th anniversary of this partnership. As the Main Partner, MAPEI benefits from significant visibility, particularly along the routes, in cities, on support vehicles and on digital platforms.

MAPEI's close relationship with cycling began with Rodolfo Squinzi, founder of the Italian group and former elite cyclist. It continued with his son Giorgio Squinzi, who died in 2019, and today with the latter's children, Marco and Veronica Squinzi. During the '90s, the company sponsored one of the first-division UCI teams, which would go on to win more than 650 professional races including four UCI Road World Championships.

MAPEI CEO Veronica Squinzi said: "As we continue our long and successful partnership with the UCI, we wanted to confirm our support for this historic edition of the UCI Cycling World Championships, which for the first time will celebrate every aspect of cycling. This wonderful sport continues to epitomise values such as commitment, determination, perseverance and teamwork that also lie at the very foundations of our company."

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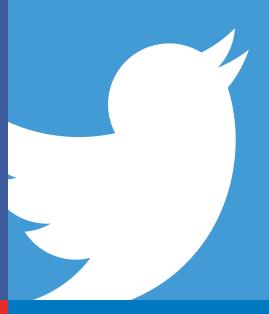
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Heavy rolling loads, changing temperatures and high traffic can all cause gaps in resilient flooring. But not anymore, thanks to MAPEI's *Ultrabond ECO* 399 heavy-duty, pressure-sensitive, multi-flooring adhesive.

Ultrabond ECO 399 features:

- · Superior moisture resistance, making it suitable for use on concrete slabs with relative humidity up to 99%.
- A formulation ideal for use with vinyl composition tile, luxury vinyl tile and luxury vinyl plank, vinyl enhanced tile, quartz tile, bio-based tile, fiberglass-reinforced vinyl sheet flooring, solid vinyl sheet flooring, reground rubber underlayment, cork underlayment, and vinyl- and polyolefin-backed carpet tile.

This aggressive adhesive puts the "resilient" in your resilient flooring. With *Ultrabond ECO 399*, your resilient floors will look just as good in six months as they do on the day they are installed. For more details, visit www.mapei.com.

