

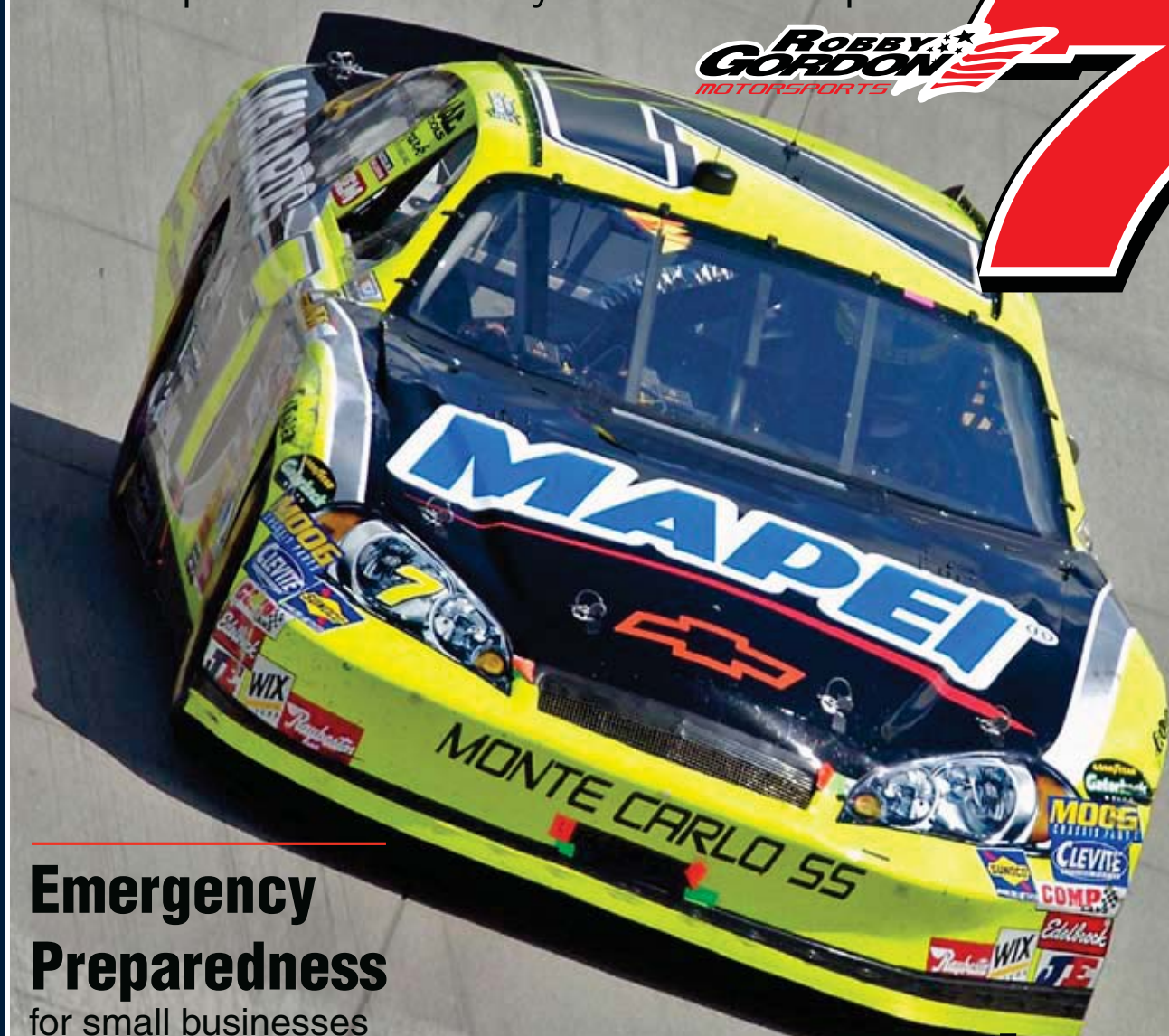
# Realtá MAPEI®

Americas

## Embracing the World of NASCAR!

MAPEI partners with Robby Gordon Motorsports

ROBBY  
GORDON  
MOTORSPORTS



**Emergency  
Preparedness**  
for small businesses

**What's new?**  
*11 impressive products*

**What's Inside**

• **Ultralite Mortar™** with Universal Color Formula™ • Trowel Do's and Don'ts • Choosing the right floor-covering adhesive

ISSUE  
**03**

# Realtà MAPEI

Americas

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## editor's letter

### All revved up for NASCAR

In this edition of *Realtà MAPEI* Americas, MAPEI is thrilled to share the exciting news that we've further expanded our ties with the sporting world. MAPEI has recently sealed a co-sponsorship deal with Robby Gordon Motorsports and the NASCAR



organization, putting our name on the hood of car No. 7 in nine of the NASCAR Nextel Cup Series races throughout the 2006 racing season. This partnership provides us with the opportunity to share love of a hugely popular sport with our customers and NASCAR fans, while significantly broadening MAPEI's brand recognition.

In other sporting news, we congratulate MAPEI-sponsored marathon runner Rita Jeptoo of Kenya, who won the Women's Division of the 2006 Boston Marathon with a time of 2:28:38. Jeptoo came in 24th overall among the 22,000 men and women who entered the famous marathon this year.



In an upcoming issue, we'll delve into MAPEI's commitment to sports and fitness through its many international sponsorships and its athletic training facility located in Italy.

*Realtà MAPEI* Americas continues to drive forward in a technically themed direction, giving you more of what you've asked for. Feedback from our online survey and magazine subscription card indicates that you appreciate knowing more about technical issues and applications, as well as MAPEI's solutions for project challenges. Because of this, we're expanding our Technical Departments section with a new column titled "Technical Do's and Don'ts."

This issue's project challenge is a little more personal as it features MAPEI's own experience of putting the pieces back together after Hurricane Wilma walloped our corporate building in late 2005. In an article of lessons learned, we offer a number of practical tips on how to prepare your company from potential loss of business should a natural disaster come your way.

Please continue to send us your feedback and comments by filling out the subscription reply card found after Page 36. And feel free to check out our electronic version of *Realtà MAPEI* Americas, now available in French and English: Just go to our Website at [www.mapei.com](http://www.mapei.com) and follow the links.

In the meantime, check out the schedule of NASCAR races located on Page 6. Get your adrenaline pumping by cheering for Robby Gordon as he chases his dream of winning the renowned Nextel Cup.

*A. Burton*

Sincerely,  
Anita Burton, Editor



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# Thank You

## to our Summit Club Members

MAPEI congratulates the following distributors for achieving 2005 Summit Club status. Membership is open to distributors who reach the highest levels of MAPEI product sales in a given year.

We thank our members for their business and loyalty to our company, and offer new club members a warm welcome.

### Platinum-level members (\$1,000,000+ product sales)

Prosol Distributions Inc.  
Durox Floor Acc. PS Inc.  
Boone Distributors Inc.  
American Marazzi Tile  
Carpet Cushions & Supplies  
Swift Train Co.  
Pacific Rim Flooring Ltd.  
NRF Distributors  
Brandon Co.

Mondo America Inc.  
Contempo Ceramic Tile Corp.  
Mohawk Industries  
C & C Wholesale  
Trinity Tile Group  
Big D Floorcovering  
Morris Tile Distributors  
Pro Tile Distributors  
Les Importations Ciot

Brolain Distributors Ltd./Floor Acc.  
Wheeler, Inc.  
Tile International  
Patriot Flooring Supplies  
SPI Floors  
Shamrock Flooring Access. Ltd.  
Dragona Carpet Supplies  
Mid America Tile Distributors  
Patcor Flooring Access Ltd.

Royal Tile Co.  
Southland Flooring  
Hoboken Floors  
Desoto Sales  
Golden Flooring Access. Ltd.  
Tile America  
Savoia Canada Inc.  
KLS Acquisition Corp.

### Gold-level members (\$500,000 – \$999,999 product sales)

Best Tile Dist.  
Matco International Ilc.  
L. Fishman & Sons Inc.  
Walcro Inc.  
Coleman Floor Co.  
Shaw Contract  
Northland Const. Supplies  
Tarkett Inc.  
Pro Floor Supplies Ltd.  
Stone Solutions

Premier Ceramics  
William Bird Co.  
Design Materials  
Italian Terrazzo & Tile Co.  
Monterrey Tile  
All Pro Materials Inc.  
Viking Distributors Inc.  
Tierra Sol Ltd.  
City Tile Ltd.  
Quality Flooring Supply

Arley Wholesale Inc.  
Mountain Trade Supply  
Blackton Supply  
Azulejos Y Ceramic  
Southern Wholesale Flooring  
B N C  
U.S. Adhesives  
Primco (PWL) Limited  
Kent Bldg. Supplies  
Tarkett Corp.

Boston Tile Co.  
Jaeckle Wholesale Inc.  
F.I.S.C. Inc.  
National Concrete Accessories  
W.J. Grosvenor  
Universal Concrete Acc. Ltd.  
Les Ceramiques Royal Ltee  
Midgley & West Ltd.

### Silver-level members (\$250,000 – \$499,999 product sales)

Advanced Floor Supplies Ltd.  
Norman D. Lifton Co.  
Systematic  
Paramount Carpet Sales  
International Stone Design  
Eagle Flooring - Ft. Wayne  
Ames Bros. Distributors Ltd.  
Southeastern Interior Systems  
True North Enterprises  
Geroquip Inc.  
Exclusive Floor Supply Inc.  
Tile Market of Delaware  
A.C.F. Distr. Inc.  
Pro-line Tile Dist.  
Pembroke Tile & Stone  
Hudson Flooring Sales Inc.  
Ceramic (Trinidad) Ltd.  
George's Cutting Edge

De Marco Tile Inc.  
Carpet Installers Supply  
Heuler Tile Company  
Bestflor Distributors Inc.  
Innovasia Inc.  
La Loseta FZ  
Terra Tile & Marble  
David C. Greenbaum  
Rheinschmidt Tile and Marble  
Acces-Sol A.M. Inc.  
Graham Dist. Co.  
E.J. Welch Co. Inc.  
McKenna's Flooring Supplies  
EM Brown Inc.  
SCP Distributors  
Imaginacion DBA  
CDC Distributors Inc.  
Brock White Canada Co.

Rigo Cabrera Tile Warehouse  
Alcon Technologies Inc.  
W.W. Supply  
A American Custom  
Henry Company  
Paradise Ceramics Inc.  
Best Made Products Inc.  
Eco Depot De Carreaux  
Steels Industrial Products Ltd.  
Tabor Associates  
D & B Tile Distributors  
Mundo Tile  
Cerimport  
Cronin Company  
Sodisco/Howden Group Inc.  
Fontile Corporation  
Carreaux Ceragres Canada Ltée  
Richform Construction Supply

Universal Distributors  
Cathey Wholesale Co Inc.  
Rivalda Ceramic Tiles Inc.  
Elder Distributing  
Tile for Less  
Standard Tile Supply  
Importadora Electromecanica S.A.  
Tile Magic  
Empresa Italo-Arubano  
Elmec S.A.  
Creative Building Finishes Ltd.  
R & E Brancker Ltd.  
The Final Touch  
Pick & Save Inc.  
Jose Luis Gonzalez  
Building Materials Ltd.

# MAPEI Welcomes a New President and CEO to the Americas

by Nick Di Tempora



On behalf of MAPEI Corporation, I would like to extend a warm welcome to **Mr. Rainer Blair**, who recently joined the MAPEI family as the new President and CEO of MAPEI Americas. To ensure a smooth transition of leadership, I will be staying on with MAPEI in an advisory capacity, temporarily supporting Rainer in taking over the reins.

As many longtime friends and customers know, MAPEI has been the heart of my professional and social life for a wonderful and rewarding 23 years. Having grown operations from one manufacturing plant to 14, the time has come for my family and me to smell the roses while wholeheartedly enjoying the fruits of our labor.

I am confident that Rainer is an ideal leader who will serve you well. Rainer joins MAPEI following an extensive search for the right company fit. With 16 years' experience at BASF Chemical Company, Rainer has embraced various management roles that include marketing, sales, product management and, most recently, vice president of the North American Coatings Division. Having been headquartered in Germany, South America and various states across the United States, Rainer comes to us with vast global and local business strategy and development perspectives.

With priorities centered in innovative product and service development and a strong sense of environmental stewardship, Rainer reflects MAPEI's core values and international philosophy beautifully. Rainer is committed to continually strengthening the MAPEI team, firmly believing that it takes a network of dedicated team players to produce the industry's best products and most efficient services.

Please join me in wishing Rainer a successful and gratifying journey as he takes over the helm of MAPEI Americas, embracing its customers, partners and staff in bringing MAPEI Americas' potential to new heights.

Most sincerely,

A handwritten signature in black ink, appearing to read 'Nick Di Tempora'. The signature is stylized with a large, circular flourish at the end.

Nick Di Tempora





cover story

# Racing With North America's Elite

by Anita Burton, Editor

MAPEI is excited to join the ranks of the NASCAR racing organization and Robby Gordon Motorsports. In addition to co-sponsoring car No. 7 in nine races of the NASCAR Nextel Cup Series' 2006 season, MAPEI will be an associate sponsor for all remaining scheduled races in 2006.

Look forward to seeing MAPEI's name on the hood of NASCAR Nextel's car No. 7 throughout the year.



"As a 37-year-old athlete who has built both a reputation as a skilled driver and a recognizable household name, Robby has the unique ability and desire to interact with the average race fan and leave virtually every new acquaintance with the feeling they have met a new friend."

— Robby Gordon Motorsports







## *Committed to sport*

Strong connections with the sporting world have helped MAPEI build lifelong business partnerships while greatly increasing visibility of the MAPEI brand. Historically, MAPEI has been a strong global supporter of sport, as evidenced by the company's longstanding sponsorship of both amateur and professional cycling teams, the Italian national soccer team and international marathon runners, along with American Superboat racing and sailing teams.

Because NASCAR races are hugely popular and well-attended sporting events with a strong national presence, a NASCAR sponsorship provides MAPEI with an ideal venue to showcase both its name and role in the construction industry. Taking advantage of 22 racetracks across the United States, the NASCAR Nextel Cup Series allows MAPEI to thank NASCAR's biggest fans and our loyal customers for their business, by having them join us at the track on race day.

## *Building on an international presence*

With more than 40,000 customers and 46 manufacturing plants in 22 countries, MAPEI is a world-leading single-source supplier of flooring installation systems for commercial and residential projects. Because of MAPEI's strong international presence, the company is drawn to international players with winning personalities who can best represent the MAPEI brand in the world of sport. Robby Gordon's versatile racing career and limits-pushing reputation have rewarded him with international accomplishments that MAPEI respects and admires. Having competed in every four-wheeled racing vehicle both nationally and internationally, Robby Gordon has gained a reputation for both athletic giftedness and sheer will to succeed, earning the right to race in the most high-profile series in NASCAR.

MAPEI is proud to support NASCAR racing, noted for its strong sense of tradition, honesty and respect. NASCAR's drivers are expected to exhibit family values and foster a feeling of community among fans and other drivers. MAPEI has confidence in knowing that NASCAR's Nextel Series drivers make excellent role models and sports heroes for MAPEI affiliations.

## *Like NASCAR, engineered to perform*

Loyal NASCAR fans understand the research and investment that goes into building a champion racing team. Because the majority of fans (and MAPEI customers) work in the construction industry, MAPEI strives to meet these high-performance standards in all of its construction-related products. The engineering and precision required to build a winning racing team parallels perfectly with the engineering and precision required to develop premium adhesives, mortars and grouts. As fast-track construction thrives as the industry norm, MAPEI's chemists work hard to formulate faster, easier and smarter systems that ensure outstanding results. Just like a NASCAR racing team, MAPEI aims to continually improve, excel and exceed customer expectations in order to continually outpace its competitors.

Wearing the hats of racecar driver, racing team owner and illustrious entrepreneur, Robby Gordon knows well that success in any industry demands hard work and determination. As Robby puts it, "the key to winning is going after a goal with all you've got." Please join MAPEI in supporting Robby Gordon Motorsports as Robby "floors it" throughout the 2006 NASCAR Nextel Cup Series.

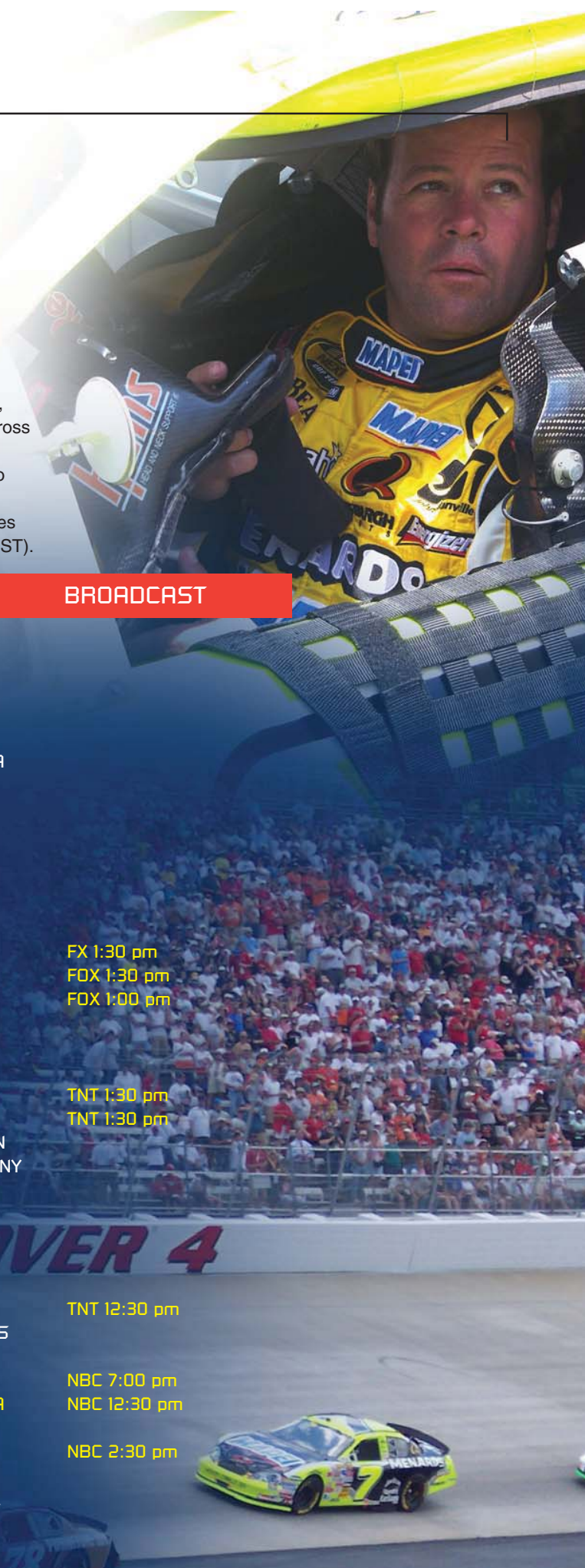
## cover story

# Race Schedule for the 2006 NASCAR Nextel Cup Series

The most high-profile series in NASCAR, the Nextel Cup Series, consists of 36 points races taking place at 22 different tracks across the United States. Telecasting to more than 150 countries in 23 languages, NASCAR uses progressive television partnerships to reach fans all over the globe.

Look for MAPEI on the hood of car No. 7 at the following races in yellow type. Broadcast times are in Eastern Standard Time (EST).

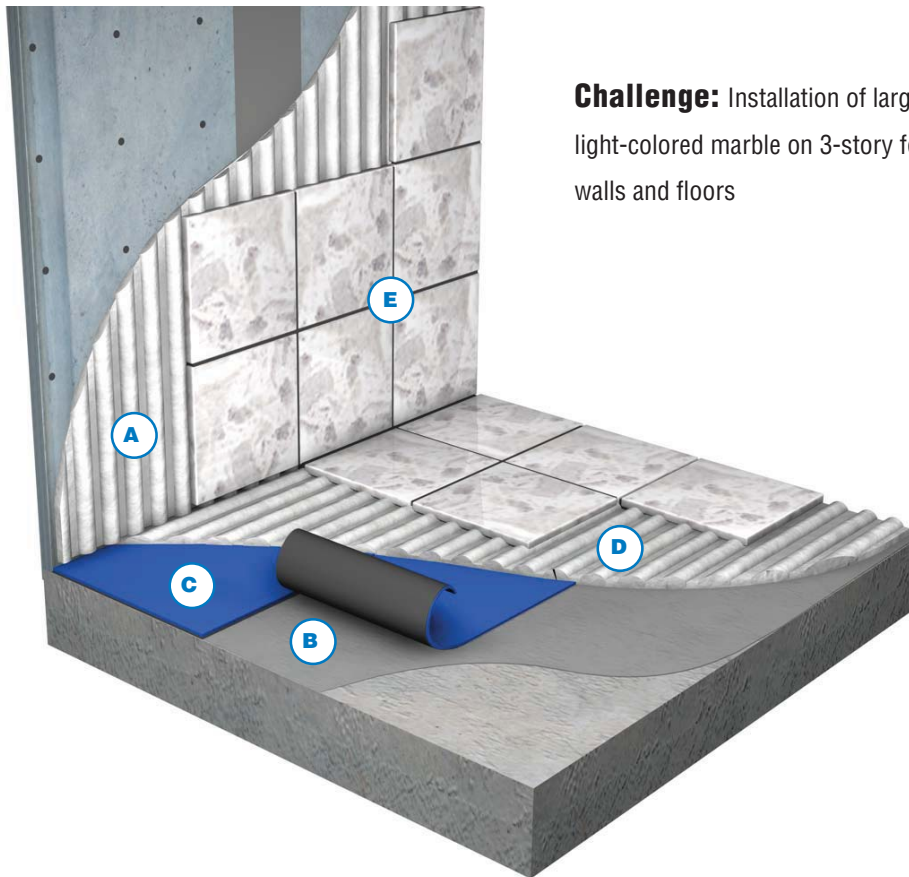
| DATE     | EVENT                          | CITY             | BROADCAST    |
|----------|--------------------------------|------------------|--------------|
| Feb. 19  | Daytona 500                    | Daytona, FL      |              |
| Feb. 26  | Auto Club 500                  | Fontana, CA      |              |
| Mar. 12  | UAW-Daimler Chrysler 400       | Las Vegas, NV    |              |
| Mar. 19  | Golden Corral 500              | Atlanta, GA      |              |
| Mar. 26  | Food City 500                  | Bristol, TN      |              |
| Apr. 2   | DirecTV 500                    | Martinsville, VA |              |
| Apr. 9   | Samsung/RadioShack 500         | Fort Worth, TX   |              |
| Apr. 22  | Subway Fresh 500               | Phoenix, AZ      |              |
| Apr. 30  | Aaron's 499                    | Talladega, AL    |              |
| May 6    | Crown Royal 400                | Richmond, VA     |              |
| May 13   | Dodge Charger 500              | Darlington, SC   |              |
| May 20   | Nextel Open/All-Star Challenge | Concord, NC      |              |
| May 28   | Coca-Cola 600                  | Concord, NC      |              |
| June 4   | Neighborhood Excellence 400    | Dover, DE        | FX 1:30 pm   |
| June 11  | Pocono 500                     | Pocono, PA       | FOX 1:30 pm  |
| June 18  | 3M Performance 400             | Brooklyn, MI     | FOX 1:00 pm  |
| June 25  | Dodge/Save Mart 350            | Sonoma, CA       |              |
| July 1   | Pepsi 400                      | Daytona, FL      |              |
| July 9   | USG Sheetrock 400              | Joliet, IL       |              |
| July 16  | New England 300                | Loudon, NH       | TNT 1:30 pm  |
| July 23  | Pennsylvania 500               | Pocono, PA       | TNT 1:30 pm  |
| Aug. 6   | Allstate 400                   | Indianapolis, IN |              |
| Aug. 13  | TBA                            | Watkins Glen, NY |              |
| Aug. 20  | GFS Marketplace 400            | Brooklyn, MI     |              |
| Aug. 26  | Sharpie 500                    | Bristol, TN      |              |
| Sept. 3  | Sony HD 500                    | Fontana, CA      |              |
| Sept. 9  | Chevy Rock & Roll 400          | Richmond, VA     |              |
| Sept. 17 | Sylvania 300                   | Loudon, NH       |              |
| Sept. 24 | Dover 400                      | Dover, DE        | TNT 12:30 pm |
| Oct. 1   | Banquet 400                    | Kansas City, KS  |              |
| Oct. 8   | UAW-Ford 500                   | Talladega, AL    |              |
| Oct. 14  | Bank of America 500            | Charlotte, NC    | NBC 7:00 pm  |
| Oct. 22  | Subway 500                     | Martinsville, VA | NBC 12:30 pm |
| Oct. 29  | Bass Pro Shops MBNA 500        | Hampton, GA      |              |
| Nov. 5   | Dickies 500                    | Fort Worth, TX   | NBC 2:30 pm  |
| Nov. 12  | Checker Auto Parts 500         | Phoenix, AZ      |              |
| Nov. 19  | Ford 400                       | Homestead, FL    |              |





# Single-Source System

MAPEI provides “total solutions” for challenges related to tile, stone and floor-covering projects.



**Challenge:** Installation of large-format, light-colored marble on 3-story foyer walls and floors

**A. Ultralite Mortar™**

**B. Mapelastac™ SM Primer**

**C. Mapelastac SM**  
(Sheet membrane)

**D. Ultralite Mortar**

**E. Keracolor™ U**

## Solution:

**Prep:** Clean and prepare existing walls and concrete floors using appropriate methods.

**A. For the walls:** Use **Ultralite Mortar** for installation of tile over cement-backer-unit walls. This lightweight premium-grade thin-set mortar has tremendous mastic-like properties, grabbing onto large-format tile without slip or sag. Formulated with Universal Color Formula™ technology, **Ultralite Mortar** can be used for any color of stone without shadowing through, making it ideal for installing light-colored natural stone and light-colored grouts.

**B. For the floors:** To prevent shrinkage cracks in the concrete floor from

affecting the beauty of the large-format tile installation, prime the floor with **Mapelastac SM Primer**, a liquid latex primer.

**C. For the floors:** Follow with **Mapelastac SM** professional-grade crack-isolation and sound-reduction sheet membrane. A highly flexible, fabric-reinforced, load-bearing “peel and stick” sheet membrane, **Mapelastac SM** reduces downtime by allowing setting materials to be applied immediately after the membrane is installed.

**D. For the floors:** Use **Ultralite Mortar** to accomplish a medium-bed floor application without slumping of

large-format tiles. Formulated with Universal Color Formula technology, **Ultralite Mortar** can be used for any color of stone without shadowing through, making it ideal for installing light-colored natural-stone tile and light-colored grouts. **Ultralite Mortar** is half the weight yet provides twice the coverage of a standard thin-set mortar – especially advantageous for installations involving multilevel floors. **E. Grout wall and floor tiles using Keracolor U** premium-grade, polymer-modified unsanded grout, which is designed for joint widths 1/16" to 1/8" (1,5 to 3 mm).

# Billions of Dollars of U.S. Concrete in Jeopardy

Every year, incomplete concrete repairs and insufficient corrosion protection cost U.S. building owners considerable money and time. A simple, yet often overlooked critical “**fifth step**” of concrete repair

has proven successful worldwide in ensuring the integrity and durability of concrete repairs – while significantly lowering overall lifecycle costs.

It is estimated there is more than 9 billion cubic yards (6,88 billion m<sup>3</sup>) of “in-place” concrete in the United States, most of which is more than 20 years old.

The use of concrete in construction has continued to grow rapidly, from approximately 220 million cubic yards (168 million m<sup>3</sup>) in 1990 to 400 million cubic yards (306 million m<sup>3</sup>) in 2004. This impressive quantity and usage rate of concrete in construction translate into a U.S. repair market of more than \$18 billion (USD) per year.

## Consult an engineer

These statistics indicate that the typical repair involving deteriorated concrete and corrosion of reinforcing rebar will become more frequent. Before defining a specific repair method, it is necessary to consult an engineer with the

appropriate expertise for an assessment of the key dynamics behind the deteriorating concrete. The engineer examines the extent of structural damage and determines the cause of damage, in order to design a material repair system that will ensure integrity and durability of the structure.

There remains, however, a lack of a solid understanding within the concrete industry as to the best method to address concrete deterioration. Some of the currently used repair methods – whether topically applied or introduced into repair materials – have yielded inconsistent results and compromised repair performance. This ultimately results in loss of time, money and credibility for both contractor and engineer, while the building owner ends up with disappointment, frustration and no return on dollars spent.

## Factors affecting deterioration of concrete

The dynamics behind concrete deterioration are important to understand as effective repair solutions are considered. Virtually all concrete has at least small micro-cracks. These tiny cracks, combined with the natural porosity of concrete, open an avenue for chloride (carried by moisture) to penetrate into the concrete, eventually reaching the rebar. As the rebar corrodes, it expands, “blowing” off the cover of concrete and accelerating the cycle of deterioration.

The other key factor in concrete deterioration is carbonation. When concrete is first poured, its high alkalinity serves as a passivating barrier, protecting the rebar from corrosion. However, as time goes on and the concrete is exposed to the environment, carbonation reduces the alkalinity and breaks down the passivating barrier. In time, carbonation will reach the depth of the rebar and corrosion cells will develop.

While chloride penetration and carbonation work closely together to deteriorate concrete, other aspects – such as the quality of the concrete and design of the structure – play a pivotal role. The bottom line: Even if the best available concrete repair mortar is used (i.e., high-density and dimensionally stable), carbonation and chloride penetration are working virtually 24/7 to undermine any repair effort.

To ensure long-term protection of concrete, *Mapelast* has been applied to supporting columns of bridges following structural repair.





## A 5-step method to repair and prevent corrosion

What then is the best method known today to address corroding concrete? Short of an "engineered" approach that provides for sacrificial anodic or active cathodic corrosion protection, the basic approach involves the following repair methods as defined by the American Concrete Institute (ACI). As stated earlier, any repair necessitates the involvement of an engineer who examines the structure and supervises material selection, repair methods and repair application.

**ACI prescribes the following procedures:**

1. Remove deteriorated concrete and profile the surface according to specifications of the repair material's manufacturer. This includes the removal of any carbonated or chloride-impregnated concrete. Note: There are methods available today that will remove chlorides from existing in-place concrete. These methods should be evaluated and considered by building owners and engineers. Such methods may be appropriate depending on the extent of the damage and of the desired repair.
2. Clean rebar with an appropriate method to remove all corrosion, and repair appropriately to ensure the integrity of the completed repair.
3. Coat the exposed rebar with a high-performance anticorrosion and bonding agent like MAPEI's **Planibond® 3C**. To improve bonding of the repair mortar to existing concrete, coat all areas of the repair with **Planibond 3C**.
4. Select an appropriate repair mortar with the required performance and application characteristics such as **Planitop 12**, **Planitop 15**, **Planitop 18**, **Planitop X** and/or **Mapecem 101** and **Mapecem 102**. This wide variety of MAPEI mortars is designed specifically for horizontal, vertical and overhead repairs.

## The Fifth Step

While this completes the defined ACI repair method, MAPEI recommends going one critical step further to solidify the repair's longevity by an exponential factor – ultimately decreasing lifecycle costs to the owner. **For this fifth step, coat the entire structure – both the original concrete as well as the repaired area – with MAPEI's Mapelastic™ cementitious, flexible water-proofing and protective coating.** *Mapelastic* works by providing a crack-bridging barrier that impedes carbonation and chloride penetration of the concrete.

Before repair mortar is applied, exposed rebar is coated with **Planibond 3C** anticorrosion and bonding agent.



## MAPEI's Mapelastic proves successful

**Mapelastic's** effectiveness in halting chloride penetration was tested by an independent laboratory. The test evaluated two specimens – uncoated concrete, and concrete coated with **Mapelastic**. In the test environment, both specimens were immersed in a 10% solution of sodium chloride (NaCl) for 60 days. According to National Italian UNI 7928 standard test method, analysis of the specimens showed that the uncoated

sample exhibited chloride penetration of 35 mm, while the **Mapelastic**-coated sample had a minimal chloride penetration depth, measuring only 1 mm!

The benefit of cementitious coating for repairs has been further validated by Chris Atkins, senior materials engineer within the Materials and Corrosion Engineering Section of Mott MacDonald Consulting Engineers, in Altrincham, UK. In a recently published interview in the *Journal of Protective Coatings and Linings*, Mr. Atkins concluded that the application of a polymer-modified cementitious coating at thicknesses over 2 mm (80 mils) is the best method to protect concrete structures in wastewater treatment systems.

**Mapelastic** has proven its effectiveness through years of testing by a wide variety of associations and engineering groups. In addition, it has been successfully used for more than a decade on such varied European applications as bridges, spillways, dams, balconies, swimming pools and numerous other structures.

## Mapelastic is the key step

To ensure that your corrosion repair stands the test of time while providing the best lifecycle cost, make sure to complete that critical fifth step to prevent future corrosion: Coat the final repair with MAPEI's **Mapelastic** (spray- or trowel-applied).

For information on MAPEI products and systems, visit [www.mapei.com](http://www.mapei.com).



### About the author:

Todd Miller is the Product Line Manager for MAPEI's Concrete Restoration Systems division. He has been involved in product development for the Decorative Concrete industry as well as Color Formulation systems for a wide variety of building materials. With extensive experience in Product Line Management, Marketing, Systems Development and Customer Service, Todd is solidly committed to innovative products and positive customer solutions.

# Mapelast<sup>TM</sup>

**Industrial-grade** waterproofing and concrete protection for all climates

This two-component, flexible cementitious membrane has a long, worldwide track record of preventing concrete deterioration and costly repairs. **Mapelast** accomplishes this by providing exceptional waterproofing and protection from chemical attack by de-icing salts, sulphates, chlorides and carbon dioxide.

Spray- or trowel-applied, **Mapelast** is designed for industrial and commercial applications including hydraulic projects such as channels and faces of dams and concrete bridges as well as balconies, terraces and swimming pools. In addition, **Mapelast** has excellent bonding properties to all properly prepared concrete, masonry, ceramic and marble surfaces while remaining flexible under all environmental conditions.

## Uses

- Waterproofing bathrooms, showers, balconies, terraces, fountains, swimming pools, etc., before the installation of ceramic tile and natural stone
- Waterproofing retaining walls and precast concrete elements embedded in the ground
- Protection against the penetration of carbon dioxide into concrete pillars, concrete joists, and road and railway viaducts repaired with products from MAPEI's *Planitop*®, *Planigrout*® or *Mapecem*® lines, as well as structures with an insufficient layer of concrete covering reinforcement rods
- Protection of concrete surfaces that can come into contact with seawater, de-icing salts (such as sodium or calcium chloride) and sulphates
- Protection of render and concrete with shrinkage-produced cracks against atmospheric elements

## Technical Data

(Based on 73°F [23°C] and 50% relative humidity)

|  | Part A       | Part B       |
|--|--------------|--------------|
| Consistency .....  | Powder       | Liquid       |
| Color .....  | Gray         | White        |
| Density (lbs. per cu. ft. [kg per m <sup>3</sup> ]) .... | 87.4 (1 400) | 68.7 (1 100) |
| Shelf life .....   | 1 year       | 2 years      |

## Application Data

|   |   |
|---|---|
| Color of mix .....  | Gray  |
| Mixing ratio .....  | Part A: Part B = 3:1  |
| Consistency .....   | Plastic   |
| Density of mix (lbs. per cu. ft. [kg per m <sup>3</sup> ]) .....                        | 106 (1 700)   |
| Density after application by spraying (lbs. per cu. ft. [kg per m <sup>3</sup> ]) ..... | 137 (2 200)   |
| Application temperature range .....   | 46°F to 95°F (8°C to 35°C)  |
| Pot life .....  | 1 hour  |
| Storage .....   | In a dry place with a temperature of at least 41°F (5°C)                      |
| Health and safety .....   | Consult the Material Data Safety Sheet (MSDS) for safe-handling instructions. |

## Final Performance

| Adhesion to concrete                  | psi | MPa  |
|---------------------------------------|-----|------|
| After 28 days .....                   | 158 | 1,09 |
| After 7 days + 21 days in water ..... | 87  | 0,6  |
| Elongation – DIN 53504 (modified)     |     |      |
| After 28 days .....                   | 30% |      |

## Waterproofing capacity

|   |                |
|---|----------------|
| EN 12390/8 (modified)   |                |
| (50 head feet positive side for 7 days) .....   | Waterproof     |
| Crack bridging of nonreinforced <b>Mapelast</b>   |                |
| After 28 days .....   | 1/32" (1 mm)   |
| After 7 days, + 21 days in water .....  | 1/42" (0,6 mm) |
| After 7 days, + 24 months in water .....  | 1/50" (0,5 mm) |
| Crack bridging at breakage of <b>Mapelast</b> membrane reinforced with MAPEI's <i>Fiberglass Mesh</i> : |                |
| After 28 days .....   | 1/16" (1,5 mm) |

## Packaging

|                               |  |
|-------------------------------|--|
| Kit: 66.7 lbs (30,3 kg) ..... | Part A (powder): Bag, 50 lbs. (22,7 kg)      |
|                               | Part B (liquid): Drum, 2 U.S. gals. (7,57 L) |



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# Restore the strength and beauty of your concrete with less effort and less time!



## ***Planitop® X***

**Repairs become invisible with *Planitop X*!**

One-component vertical, horizontal and overhead mortar that blends with the original concrete color within minutes! Easy Glide Technology™ makes repairs from featheredge to 4" (10 cm) in depth quick and easy.



## ***Mapecem® Quickpatch***

**Quick and effortless horizontal patches**

High-flow horizontal concrete patch restores weathered damaged concrete to "better than new" condition! Fast-setting in both interior and exterior patches from featheredge to 3" (7,5 cm).



## ***Concrete Renew™***

**Make concrete look like new!**

From featheredge to 3/16" (4,5 mm), vertical and horizontal surfaces can be refinished to look like new. Even broom and decorative trowel finishes can be matched!

## Call your MAPEI distributor today!

1-800-42-MAPEI (1-800-426-2734) • [www.mapei.com](http://www.mapei.com)



## special feature

The power of **Ultralite Mortar**: Even at 17 lbs. 6 oz. (7,88 kg), this 18" x 18" (46 x 46 cm) tile is a snap to install with no slip or sag.







# Ultralite Mortar

The world's first nonsag,  
lightweight mortar

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by Anita Burton, Editor

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**M**APEI's Research & Development Team has once again achieved brilliance with its latest technological advancement in mortars. State-of-the-art ***Ultralite Mortar™***, a Universal Color Formula™ product, solves so many of the challenges associated with tile and natural-stone installations that MAPEI's technical experts brand it as the ultimate multipurpose mortar. Designed for both interior and exterior use, *Ultralite Mortar* is ideal for most ceramic tile, porcelain and stone installations involving walls, floors, countertops, showers, bathrooms and backsplashes.

*Coverage continues on next page*

## ***Ultralite Mortar* in a nutshell**

- substitute for 4 industry products
- new Universal Color Formula
- nonsag
- spreads like butter
- same coverage at half the weight
- for walls and floors
- replaces typical white mortars
- built-in BioBlock™ antimicrobial protection

## Ultralite Mortar – the “ultimate 5-in-1” multipurpose mortar

**Ultralite Mortar™** is a lightweight, premium-grade, polymer-modified, multipurpose thin-set mortar. *Ultralite Mortar's* impressive features allow it to replace four different industry products: nonsag mortars, medium-bed mortars, thin-set mortars and mastics. With the addition of MAPEI's Universal Color Formula™, *Ultralite Mortar* has been described as the “ultimate 5-in-1,” providing outstanding benefits to all industry professionals.

- Incorporating Universal Color Formula into **Ultralite Mortar** benefits everyone. No longer is there a need for distributors to carry two different colors of mortars, thus reducing their stock to one SKU. Because *Ultralite Mortar* can be substituted for traditional gray and white mortars, installers can now purchase and use one single mortar for most walls and floors. *Ultralite Mortar* works as effectively as white mortars, and is approved for use with translucent natural stone and light-colored grouts. Architects can now specify one product for a multitude of applications.

- **Ultralite Mortar's** incredible “grab” allows it to work as a remarkable nonsag mortar, allowing for vertical installations of large-format, heavy tile and stone – with no slip or sag. Formulated with Easy Glide Technology™, *Ultralite Mortar* mixes to an ultra smooth, buttery consistency that results in easier, faster installations with significantly reduced trowel fatigue. *Ultralite Mortar's* easy-glide performance allows it to apply like mastic and grab like mastic when it comes to installing large-format, heavy tile. *Ultralite Mortar* completely cures out, minimizing the chance of mold development and optimizing installation success. *Ultralite Mortar* meets ANSI requirements (< 2 mm) and ISO international standards (≤ 0,5 mm) for sag on vertical surfaces.

- Functioning like a medium-bed mortar, **Ultralite Mortar** builds up to provide a firm bed without slump or sag. *Ultralite Mortar* assists in eliminating tile lippage in horizontal large-format tile installations, providing more uniform installations for installers. Its superior wet-in characteristics provide exceptional bond to both the substrate and tile.

- Packaged in 25-lb. (11,3-kg) bags, back-friendly **Ultralite Mortar** is half the weight yet provides the same coverage as 50-lb. (22,7-kg) bags of traditional thin-set mortars. This allows installers to purchase less product and transport less weight both to and around the job site, which is especially beneficial for multilevel applications. Architects now have a multipurpose, light-weight product that helps reduce dead load on buildings.

*Ultralite Mortar* has all the strength and flexibility of traditional thin-set mortars, while reducing the weight per square foot (meter) on building structures by half. *Ultralite Mortar* helps architects reach their goals – while keeping construction costs down.

- As the price of petroleum continues to rise, the cost of transporting construction materials rises with it. The further the distance traveled and the more material weight carried, the higher the selling cost to customers. **Ultralite Mortar**, weighing 50% less per square foot (meter) of coverage than traditional thin-sets, can significantly reduce costs to both distributors and installers.



## Scientific research is a priority for MAPEI

Worldwide, 12% of MAPEI's 4,000 employees work in research and development, working to produce superior products and ensure quality service for all of the company's customers.

To stay on the cutting edge of innovation and one step ahead of the

competition, MAPEI reinvests 5% of its annual sales revenue into research and development. MAPEI's laboratories around the world work toward annually producing an outstanding new product like **Ultralite Mortar** in each of the company's main product lines.

## Ultralite Mortar's Universal Color Formula

**Ultralite Mortar's** revolutionary Universal Color Formula™ provides a one-solution mortar for light- and dark-colored tile, translucent natural stone as well as light-colored grouts. Formulated with a unique blend of aggregates and binders, this mortar provides

consistent universal color without shadows in a manner equaling that of typical white mortars. With the development of this amazing new product, MAPEI continues to reign as the industry's powerhouse for innovative tile and stone installation systems.




## Ultralite Mortar recycles and protects

Concern for the environmental impact of products is fundamental to MAPEI's philosophy and corporate commitment. MAPEI invests in innovative technologies that use recycled industrial by-products whenever practical, while maintaining production of high-quality products. In the case of **Ultralite Mortar**, up to 35% of its dry weight comes from recycled raw materials.

Committed to improving air quality for new construction and remodeled buildings, MAPEI has built BioBlock antimicrobial technology right into **Ultralite Mortar**. When used with grouts, caulks and waterproofing containing BioBlock technology, **Ultralite Mortar** forms part of a complete antimicrobial system for tile and stone installations.

BioBlock technology has been added to select MAPEI products to help inhibit the growth of various types of odor- and stain-causing mold, mildew and bacteria. BioBlock technology provides built-in antimicrobial protection without expensive additives, extra steps or added time. Consult your federal, state and local environmental and health departments for recommendations on preventing mold, mildew and

bacteria growth.

For the most current information on BioBlock technology's antimicrobial protection, visit [www.mapei.com](http://www.mapei.com). 



**You'll find BioBlock's antimicrobial protection technology in many of our premium products:**

### Industry-leading mortar:

*Ultralite Mortar™*

### Color-matched caulks:

*Keracaulk™ S, Keracaulk U*

### Industry-leading grouts:

*Ultracolor®, Keracolor™ S, Keracolor U*

### Waterproofing and crack isolation:

*Mapelastix™ HPG*

### Universal flooring adhesives:

*Ultrabond ECO® 350,*

*Ultrabond ECO 300*

### Multipurpose flooring adhesives:

*Ultrabond ECO 800, Ultrabond ECO 200*

### Carpet adhesives:

*Ultrabond ECO 220, Ultrabond ECO 185,*

*Ultrabond® Mach™ 6*

### Vinyl sheet goods adhesives:

*Ultrabond ECO 290, Ultrabond ECO 160*

### Vinyl composition tile adhesives:

*Ultrabond ECO 711, Ultrabond ECO 710*

### Wood-flooring adhesive:

*Ultrabond ECO 972*

### Wall-base adhesive:

*Ultrabond ECO 575*

### Linoleum adhesive:

*Ultrabond ECO 540*

### Outdoor carpet adhesive:

*Ultrabond ECO 420*





## Product Spotlight

# Ultralite Mortar™

The ultimate "5-in-1" multipurpose mortar

As a lightweight, premium-grade, multipurpose thin-set mortar, **Ultralite Mortar** can also be used for medium-bed and nonsag applications. **Ultralite Mortar** is formulated with Easy Glide Technology™ for ease of application and BioBlock™ technology\* for antimicrobial protection. Packaged in 25-lb. (11,3-kg) bags, **Ultralite Mortar** is half the weight yet provides the same coverage as a standard thin-set mortar. A Universal Color Formula™ product, **Ultralite Mortar** is approved for use with natural stone and light-colored grouts.

### Uses

- Interior residential and commercial installations of tile on floors, walls and countertops in dry and wet areas
- Exterior residential and commercial installations of tile on floors, walls and countertops in dry and wet areas
- Installations of ceramic and porcelain tile and mosaics, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone
- Replacement for mastic when installing tile in showers, bathrooms, backsplashes and areas where mastics are commonly used
- Installations of light-colored natural stone or translucent marble
- Installations of cement boards in accordance with the manufacturer's instructions

### Recommended substrates

**Ultralite Mortar** can be applied over fully cured concrete, masonry walls of cement block or brick, cement mortar beds and leveling coats, as well as cement backer units. Suitable substrates also include gypsum wallboard (interior dry walls only) and APA and COFI Group 1 exterior-grade plywood (interior, residential and light commercial floors and countertops in dry areas). **Ultralite Mortar** can be applied over properly prepared, well-bonded unglazed tile and cement terrazzo, VCT, VAT and

cutback residue (interior installations only), as well as properly prepared existing ceramic and porcelain tile, quarry tile and pavers. Finally, **Ultralite Mortar** can

be used over MAPEI's waterproofing and crack-isolation membranes (when used over recommended substrates for those membranes).

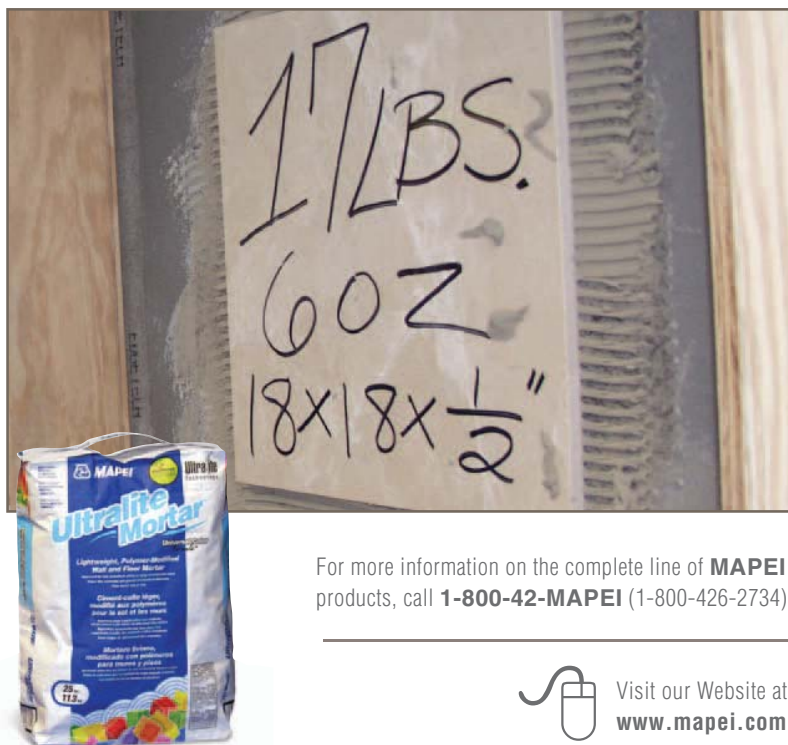
### Technical Data

(Based on 73°F [23°C] and 50% relative humidity)

|                                     |   |
|-------------------------------------|---|
| Dry-solid content .....             | 100%  |
| Rating .....                        | Extra heavy-duty                                      |
| Shelf life .....                    | 1 year in a dry place in original, unopened packaging |
| Colors .....                        | Universal Color Formula                               |
| Application temperature range ..... | 50°F (10°C) to 100°F (38°C)                           |

#### *Ultralite Mortar* (mixed)

|                         |  |
|-------------------------|--|
| Pot life .....          | 3 to 4 hours                                     |
| Open time .....         | 25 to 35 minutes                                 |
| Consistency .....       | Paste  |
| pH .....                | About 13   |
| Health and safety ..... | Consult the MSDS for safe-handling instructions. |
| Packaging .....         | Bag: 25 lbs. (11,3 kg)                           |



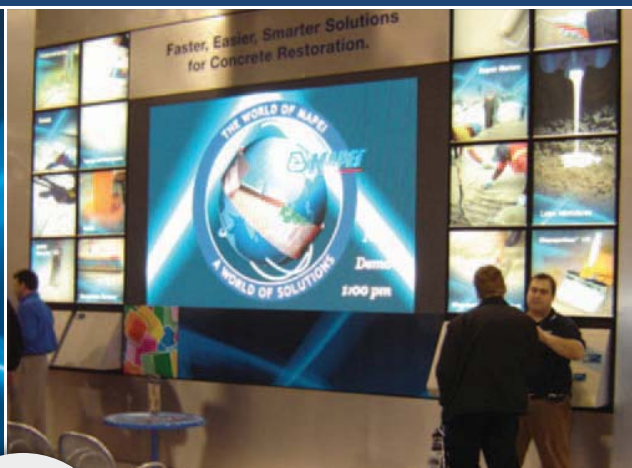
For more information on the complete line of **MAPEI** products, call **1-800-42-MAPEI** (1-800-426-2734).



Visit our Website at  
[www.mapei.com](http://www.mapei.com)

\* For the most current information on BioBlock technology, visit [www.mapei.com](http://www.mapei.com).

# What's **new** ?



## 11 impressive products.

Once again, MAPEI upheld its reputation for innovation by developing 11 new products that were launched at the 2006 World of Concrete and Surfaces trade shows. MAPEI takes pride in its ability to offer the flooring industry faster, easier, smarter solutions for tile and stone installations, floor-covering installations as well as concrete restoration systems.

### 1 **Concrete Renew** makes worn concrete look new

MAPEI's **Concrete Renew**™ provides a uniform, fresh finish to worn sidewalks, driveways, steps, pool decks and patios. This fast-setting, one-component, vertical and horizontal concrete resurfacer can be applied from featheredge to 3/16" (4,5 mm) depths. Light gray in color to match originally placed concrete, **Concrete Renew** remains compatible with most sealers, dyes and stains. Formulated with advanced polymer technology, **Concrete Renew** offers superior adhesion to existing concrete surfaces and is highly resistant to freeze/thaw cycles. Final finishes can be practical or imaginative, as **Concrete Renew** allows for slip-resistant broom and decorative trowel possibilities.



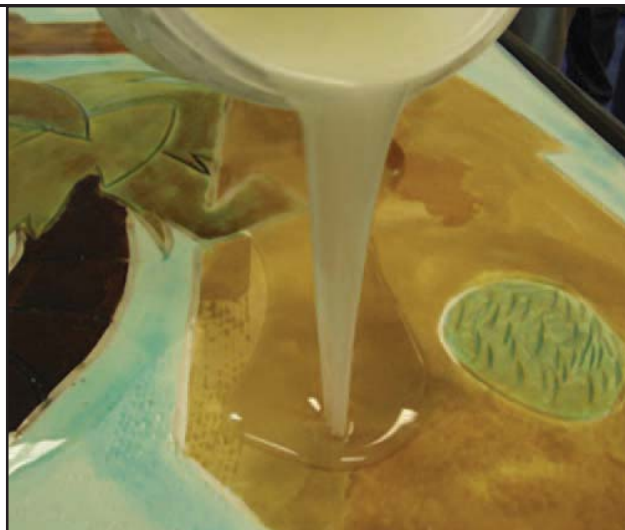
### 2 **Mapecem Quickpatch** makes concrete "better than new"

MAPEI's **Mapecem**® **Quickpatch** is the ideal solution for restoring weathered, damaged concrete floors, balconies, ramps, driveways and sidewalks to a uniform, superior-wearing condition. This ultra versatile, fast-setting patching material features extraordinary ease of placement to allow for outstanding workability and quick job-site turnaround. Natural light gray and compatible with most sealers, dyes and stains, **Mapecem Quickpatch** can be applied from featheredge to 3" (7,5 cm) neat.



## 2 **Mapefinish Fusion** sealer offers incredible slip resistance

MAPEI's new **Mapefinish™ Fusion** is an outstanding multipurpose sealer designed for interior/exterior concrete surfaces and decorative concrete finishes, as well as interior epoxy floor coatings. Providing a direct bond to existing concrete surfaces, **Mapefinish Fusion** offers exceptional slip and abrasion resistance, making it the sealer of choice for high-traffic areas. This one-component, water-based aliphatic polyurethane sealer is odor-free, low in VOCs and permeable to water vapor. Solid performance, combined with user-friendly application, makes **Mapefinish Fusion** a best bet for preserving the integrity of colored concrete surfaces.



## 4 **Prevent costly concrete repairs with Mapelast**

MAPEI's **Mapelast**™ enjoys 10 years of worldwide success for exceptional industrial-grade waterproofing and concrete protection. Industry leaders worldwide use **Mapelast** to prevent costly repair and rehabilitation of concrete structures caused by aggressive atmospheric elements. Seawater, salts and sulphates are of little threat to concrete protected by this two-component, flexible cementitious membrane. Spray- or trowel-applied **Mapelast** is designed to waterproof and protect bridges, dams, balconies, terraces and pools. Providing excellent bonding properties to all concrete, masonry, ceramic and marble surfaces, **Mapelast** is a sure-fire, cost-saving solution for a host of industrial and commercial concrete needs.



## 5 **Waterproofing and concrete protection made simple with Mapelast Smart**

With the development of **Mapelast™ Smart**, MAPEI can offer the industry powerful waterproofing and concrete protection with ease of application. This two-component, highly flexible cementitious membrane is easily applied by roller or brush to curved structures and tight corners. Ideal for residential and commercial applications, **Mapelast Smart** is the perfect solution for waterproofing and protecting concrete foundations, retaining walls, fountains, pools and balconies. **Mapelast Smart** is formulated with excellent bonding properties, and provides exceptional waterproofing and concrete protection against aggressive atmospheric elements like seawater, salts and sulphates. Costly concrete repairs over the long term can be prevented by protecting installations now with **Mapelast Smart**.





## 6 **Mapeprime 1K** takes guesswork out of primer selection

MAPEI's new advanced-technology, silane-modified epoxy primer is great news for the construction industry. **Mapeprime™ 1K** optimizes adhesion over a variety of smooth, nonabsorbent and difficult-to-bond-to substrates such as ceramic tile, VCT, wood floors and concrete surfaces, as well as cement- and epoxy-based terrazzo. One-component **Mapeprime 1K** is easy to apply and fast-drying for quick job-site turnaround. Low in VOCs, **Mapeprime 1K** is the ideal, multipurpose primer for commercial and residential interior applications.



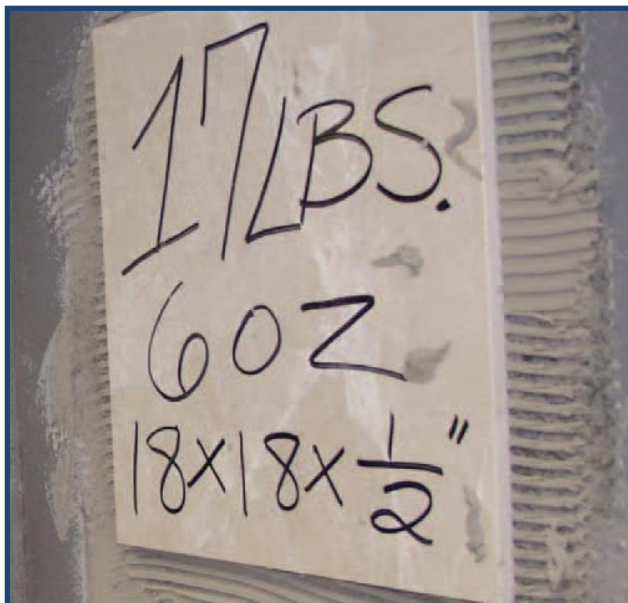
## 7 Give a unique finishing touch with **MAPEI Spraytop RS**

**MAPEI Spraytop™ RS** decorative knockdown topping is specially designed to provide unique textured finishes to vertical and horizontal concrete surfaces. Formulated for excellent slip resistance, this one-component, fast-setting decorative resurfacer is ideal for driveways, sidewalks, pool decks and patios. Compatible with most sealers, dyes and concrete stains, **MAPEI Spraytop RS** permits use of sealers within 2 to 4 hours after application – promoting quick job-site turnaround. Unique textures can be created using a trowel, hopper gun or plaster pump from featheredge to 3/16" (4,5 mm) depths. Appropriate for both interior and exterior applications, **MAPEI Spraytop RS** is stable in freeze/thaw environments.



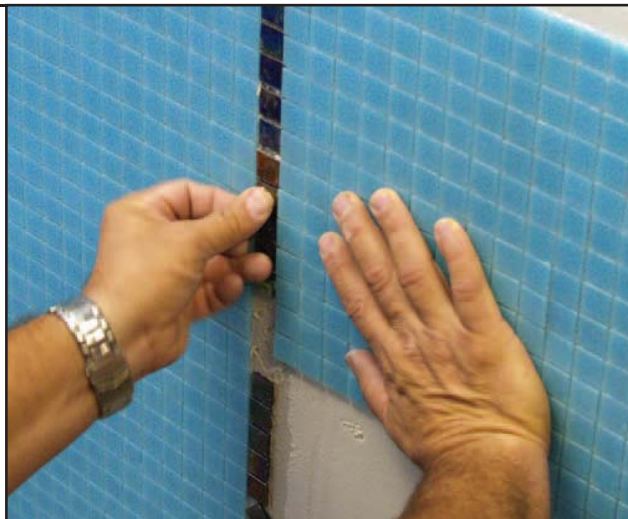
## 8 Outstanding nonsag **Ultralite Mortar** features universal color

**Ultralite Mortar™** functions as a remarkable nonsag mortar, allowing for vertical installations of large-format, heavy tile and stone with no slip or sag. Formulated with groundbreaking Universal Color Formula™, this light-weight, thin-set mortar is ideal for installing light-colored and translucent tile, stone and grout in a manner equaling that of typical white mortars. Designed for both interior and exterior use, **Ultralite Mortar** is a perfect fit for most installations involving walls, floors, countertops, showers, bathrooms and backsplashes. Packaged in 25-lb. (11,3-kg) bags, back-friendly **Ultralite Mortar** is half the weight yet provides the same coverage as traditional thin set-mortars in 50-lb. (22,7-kg) bags. MAPEI even offers a 15-year limited system warranty for **Ultralite Mortar** when used with MAPEI grout products.



## **Adesilex P10: Impressive nonsag mortar for glass tile**

MAPEI is proud to announce the release of **Adesilex™ P10** – a new, premium nonsag mortar for glass tile, glass mosaic and natural-stone installations. *Adesilex P10* is bright white to enhance the brilliance of glass, mixing to a creamy paste consistency for easy workability. This mortar's remarkable nonsag performance benefits wall and floor applications, allowing mosaic tile to be installed from ceiling to floor. Developed for commercial and residential applications, *Adesilex P10* allows both interior and exterior uses and is an excellent choice for pool installations when mixed with MAPEI's **Keraply™**.



## **Ultrabond ECO 972 for wood provides antimicrobial protection**

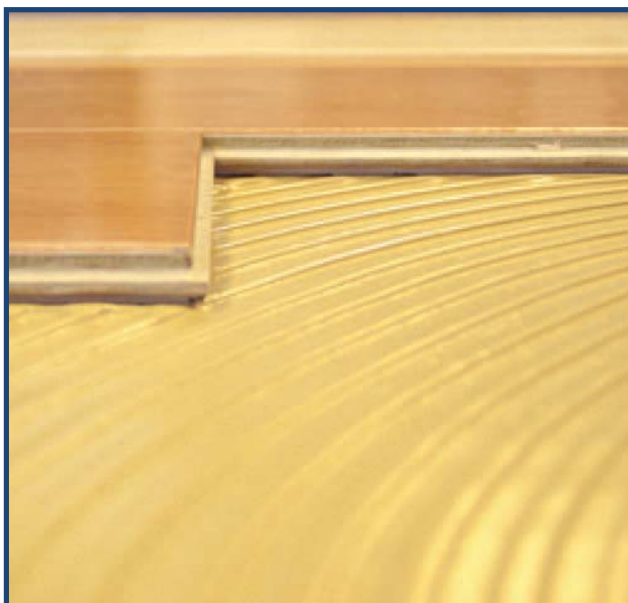
**Ultrabond ECO® 972** is the latest in MAPEI's ECO series of environmentally friendly floor-covering adhesives that are low in TVOCs. Its solvent-free, cutting-edge formula was designed for the installation of engineered wood and prefinished parquet flooring. *Ultrabond ECO 972* incorporates MAPEI's BioBlock™ antimicrobial technology\* to help inhibit the growth of various types of odor- and stain-causing mold, mildew and bacteria. This high-solids, high-tack wood-flooring adhesive allows for easy placement of flooring and has excellent rebonding abilities, making it the adhesive of choice for residential and light commercial applications.

\*For the most current information on BioBlock technology, visit [www.mapei.com](http://www.mapei.com).



## **Ultrabond 980 wood adhesive = performance + value**

**Ultrabond® 980** is the newest addition to MAPEI's lineup of solvent-free, moisture-curing, urethane wood adhesives. *Ultrabond 980* simplifies the installation of engineered and solid wood flooring by applying easily. This adhesive also holds its trowel ridges well, allowing for maximum contact between the adhesive and wood. *Ultrabond 980* offers great initial grab to hold boards in place during installation, while ensuring easy cleanup. It remains elastomeric to move with the wood throughout the lifetime of the installation. Ideal for both residential and commercial applications, value-priced *Ultrabond 980* is VOC-compliant and contains no ozone-depleting chemicals.

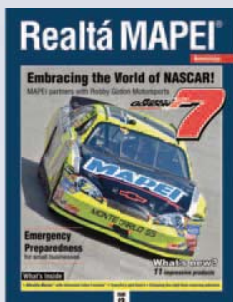






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*MAPEI's Website has it all!*



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View the highlights and features of our most current issue in English or French.



### **Grout Calculator**

Use this tool to calculate the approximate amount of grout needed to complete your job. Coverages provided are for estimating purposes only.

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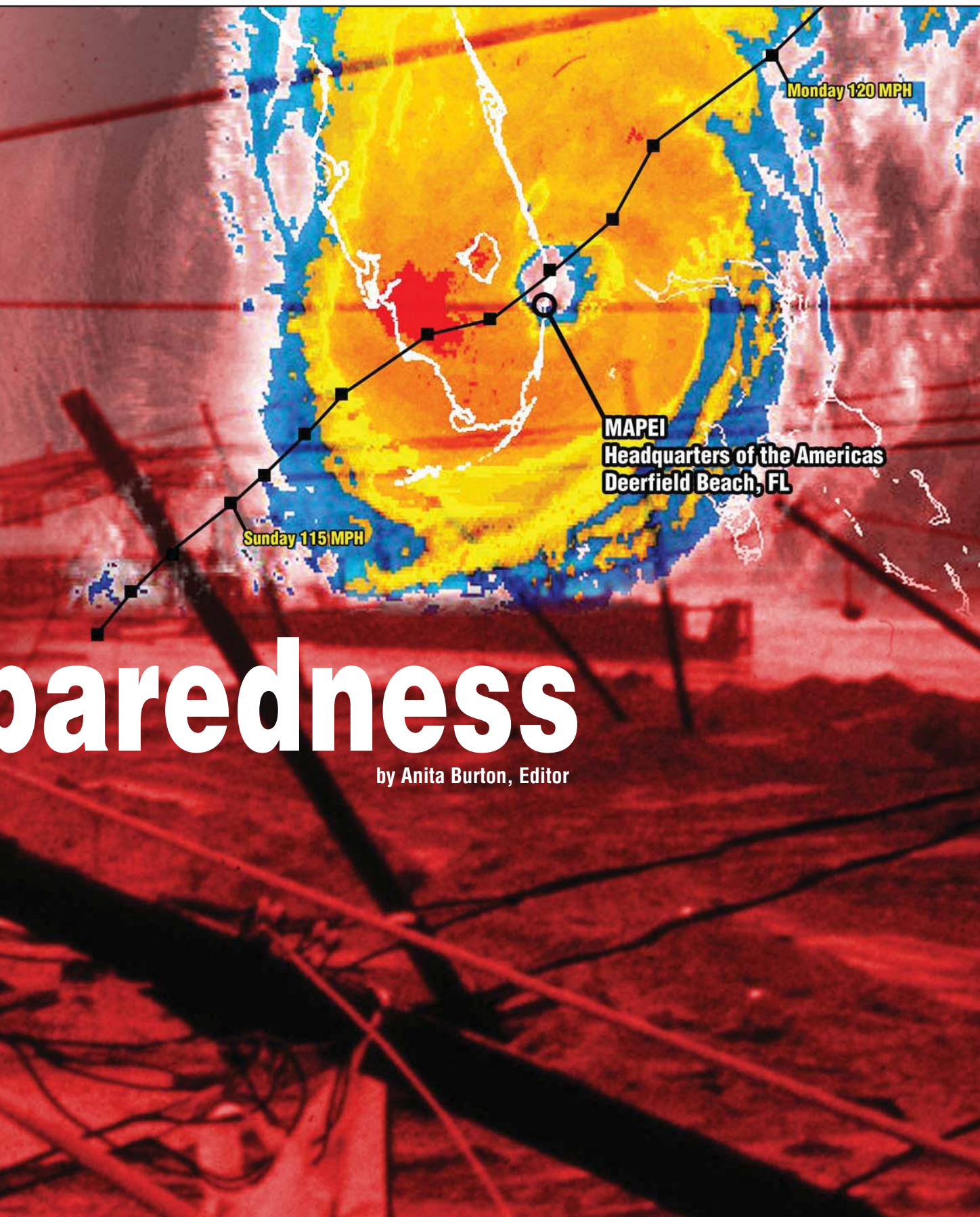
# MAPEI: A Role Model for Emergency Prep

In late fall of 2005, MAPEI's headquarters for its U.S. operations experienced firsthand the devastation that a natural disaster can bring. Rebuilding efforts to mend the Deerfield Beach office have finally come to a close after Hurricane Wilma's winds of more than 100 mph (161 km/h) tore through South Florida. Here we share

our story of survival, outlining the steps we took to overcome a natural disaster, while continuing to put our customers' needs first. We follow with invaluable suggestions as to how your company can prevent potential loss of business by putting an emergency preparedness plan in place, to help endure whatever natural disasters may come your way.

Photo courtesy of NOAA





# paredness

by Anita Burton, Editor



**L**ittle did we know that at her peak, Wilma would go on to earn the rating for most intense tropical cyclone ever recorded in the Atlantic basin. Even after witnessing the devastation from hurricanes Rita and Katrina a few months earlier, most Floridians doubted that more disaster would come. The common belief was that Wilma would slow to a crawl after crossing the land mass of South Florida. Showing obvious signs of hurricane fatigue by underestimating the intensity of this hurricane, many Floridians failed to prepare for the worst.

### The path of Wilma

After wreaking havoc on Mexico's Yucatan Peninsula as a devastating Category 5 hurricane with winds of 185 mph (298 km/h), Wilma entered the Gulf of Mexico headed for Florida. Wilma awakened Florida's southwest coast as a Category 3, with sustained winds of at least 125 mph (201 km/h). She slammed the lower Florida Keys, destroying tens of thousands of vehicles and flooding many Key West homes under 3 to 6 feet (0,91 to 1,83 m) of seawater.

In its diagonal swath, Wilma cut across South Florida, battering several metropolitan areas with intense wind and rain, including Palm Beach, Fort Lauderdale and Miami. Wilma pounded Florida with torrential rain and destructive winds for six hours before exiting into the Atlantic Ocean. In her wake she left widespread flooding to homes, as well as extensive damage to high-rise condominiums, office buildings and airports ranging from blown-in windows to near building collapse. Roof damage to homes and businesses was widespread, in addition to complete destruction of pool screens and fences.


### South Florida unplugged

Hurricane Wilma caused sweeping destruction to Florida's critical infrastructure, including power, water

and sewer systems. Florida Power & Light Company, the state's largest electricity utility, reported that more than 3.2-million customers (equivalent to 6-million people) had no power – many for three weeks or more. Communication problems mounted as landlines and cellular towers were damaged or overloaded in capacity. For up to two months, cable television, Internet and cellular services were completely unavailable to some.

Power outages compounded transportation difficulties faced by Floridians following Wilma. Traffic lights that weren't blown down dangled lifelessly, resulting in traffic woes galore. Cars and generators created a high demand for gasoline, yet the commodity was hard to come by even if the supply was there: Few gas stations had the generators necessary for gasoline to be pumped.

Wilma made several landfalls, with the most destructive effects felt in Mexico's Yucatan Peninsula, Cuba and Florida. Estimates of total damage range between \$16 and \$20 billion, ranking Wilma among the 10 costliest hurricanes ever recorded in



Hurricane winds and rain damaged 1/3 of the building's roof along with several air-conditioner units (left), allowing water, wind and heat to penetrate the building's core.

the Atlantic and as the sixth costliest storm in U.S. history.

### The aftermath

Having known for days that Wilma was on its way, MAPEI took precautions to evacuate staff at its two-story corporate office. When Wilma hit, her winds and rain managed to peel off about one-third of the building's roof, allowing water and wind to penetrate the building core.

### Wilma reigns as a record-setter

Hurricane Wilma set numerous records for both strength and seasonal activity: Wilma affected 11 countries with winds and/or rainfall, more than any other hurricane in recent history. Wilma was the 21st named storm, 13th hurricane, 6th major hurricane and 3rd Category 5 hurricane of the record-breaking 2005 Atlantic season. This was the first time on record that three Category 5 hurricanes (Katrina, Rita and Wilma) had formed in the Atlantic basin in a year.

At the same time, Wilma's winds tore the side panels from 20 rooftop air-conditioning units, causing massive heat infiltration and significant damage to MAPEI's computer server (the heat buildup actually melted two hard drives!).

Because of the roof damage, water saturated the entire upper floor, drowning 20,000 sq. ft. (2,323 m<sup>2</sup>) of insulation and acoustical ceiling tiles. After becoming wet, acoustical tiles became the weight and consistency of oatmeal, causing the ceiling to buckle, fall, and then coat and ruin computers, office furniture and personal valuables. Water damage shorted out ceiling cable wires throughout the building, knocking out phone and computer accessibility, requiring IT to completely rewire the internal system. Water that saturated and ruined carpeting on the upper floor eventually leaked through to similarly damage the lower floor's acoustical ceiling tiles and carpet.

To top off the damage, the hurricane winds blew in two upper-floor windows, devastating both offices. In the parking lot below, all canopies and supports were blown away, and most trees were knocked down, creating an obstacle course for the bravest of drivers.

### How MAPEI repaired and remodeled itself

After every natural disaster, it helps to have a solid plan of action. Before renovation at MAPEI Corporation's headquarters could begin, several preliminary steps helped turn crisis into calm:

- 1 A task-force "recovery team" was established representing Operations, Administration, Technical Services, R&D, IT, Product Management, Marketing, Accounting and Customer Services. The team devised a corporate plan of action to address the lack of electrical power at the Deerfield Beach corporate office and the

Ft. Lauderdale manufacturing plant. The recovery team met twice daily to discuss primary needs and prioritize shared assignments.

- 2 MAPEI's insurance company brought in Disaster Services Incorporated to address such immediate remediation needs as removing wet and damaged carpet, ceiling tiles and insulation.
- 3 Walls were tested for moisture to avoid the potential of mold. Tests revealed that moisture was present from ground level up to 18 inches (46 cm) on one side of the building. Wherever moisture was found, the drywall was cut out 4 feet (1,23 m) high. Once the drywall and carpets were removed, a bleach solution was sprayed to help prevent mold.
- 4 An electrical contractor was hired to help stabilize and recover electrical power throughout corporate building.

- 5 Two hot-air generators were set up to pump generous loads of hot air through polyethylene tubes into the building's walls, to dry out the remainder of the building and prevent mold development.
- 6 Once the building was dry, a mold-testing company was hired to test for mold in the areas where moisture was previously discovered. Thanks to the quick reaction, final results revealed no presence of mold.

### The silver lining: A fresh look

When your own building needs a facelift, it helps if you're a player in the construction industry. Specialized contractors were called in to deal with critical roofing repairs, electrical wiring, gutting and reconstruction of several offices, yet much of MAPEI's efforts centered on reconstructing the upper- and lower-level flooring surfaces.

### With one plant down, MAPEI kept production a priority

While the hurricane left only minor structural damage at MAPEI's plant in Ft. Lauderdale, it was the total loss of electrical power in South Florida that created enormous challenges for this key manufacturing facility. Operations worked closely with MAPEI's manufacturing plants in Virginia, Illinois and Texas, which supported Ft. Lauderdale's production needs for two weeks until public power could be fully restored. Having 14 strategically located plants throughout the Americas paid off for MAPEI during this challenging time.

In the meantime, a diesel generator was trucked in from Mississippi, to power the Ft. Lauderdale plant, allowing it to become operational after only five days following the hurricane! Broward Oil Company supplied the plant with 1,500 gallons (5,678 L) per day of needed fuel, and an additional 200 gallons (757 L) per day to power the corporate building's existing emergency



diesel generator for a week.

One of the most interesting challenges for MAPEI's Ft. Lauderdale plant staff had to do with its corporate neighbor. In order to gain safe vehicle access to the Ft. Lauderdale plant after the hurricane, MAPEI's plant and engineering staff worked delicately to cut off several hundred feet of its neighbor's metal roof, which was literally peeled back and covering adjacent power lines, telephone lines and the narrow roadway leading to the plant. Due to the massive volume of power outages throughout South Florida, it took several days for the power company to arrive and finish the job.



## Product Challenge

Following Wilma's wrath, MAPEI seized the opportunity to replace its existing damaged carpet with contemporary, large-format porcelain tile. MAPEI's corporate office has grown from 55 to more than 135 employees in just six years, creating a need for a durable flooring product with a long established lifecycle that is both fashionable and practical.

The challenge was to replace 35,000 sq. ft. (3,252 m<sup>2</sup>) of soggy, damaged carpet on two levels of the building with large-format, porcelain tile. Here is how MAPEI's Technical Services staff worked with flooring contractors to meet the challenge:

**A) Challenge:** To accommodate upper-floor, heavy foot traffic in a building subfloor originally designed for carpet installation, as well as provide both levels with crack-suppression capabilities.

**Solution:** Install the *Mapelastic™ SM Primer* liquid latex priming system, before applying *Mapelastic SM* crack-isolation and sound-reduction "peel-and-stick" sheet membrane.

**B) Challenge:** To install 15,000 sq. ft. (1,394 m<sup>2</sup>) of porcelain tile over an uneven concrete slab on the lower level of the building.

**Solution:** Accommodate unevenness of slab by installing porcelain tile on the building's lower level with *Ultralite Mortar™* lightweight, polymer-modified wall and floor mortar (ideal for both thin-set and medium-bed applications).

**C) Challenge:** To install 20,000 sq. ft. (1,858 m<sup>2</sup>) of porcelain tile on the upper level of the building requiring a fast-track, flexible, rapid-curing mortar system.

**Solution:** Install tile using MAPEI's *Granirapid®* premium rapid-setting, flexible polymer-modified mortar system developed with High-Hydrated Cement Technology (HCT™) to build high, early mechanical strength. *Granirapid* is formulated from a shrinkage-compensated technology that allows medium-bed, high-build capacity for large-format tile.

**D) Challenge:** To install a grout that meets durability requirements of the



*Granirapid* flexible mortar system was used to install 20,000 sq. ft. (1,858 m<sup>2</sup>) of porcelain tile on the building's upper level.

upper floor while providing chemical and stain resistance to the research and development offices on the lower floor.

**Solution:** Grout 35,000 sq. ft. (3,252 m<sup>2</sup>) of porcelain tile using *Kerapoxy®* chemical and stain-resistant 100%-solids epoxy mortar and grout. Ideal for fast-track installations, *Kerapoxy's* easy water cleanup and fast-setting properties allow foot traffic within 24 hours.

**E) Challenge:** To remove damaged carpet in upper-floor gym and replace with large-format rubber tile.



*Kerapoxy* chemical and stain-resistant grout was used to grout 35,000 sq. ft. (3,252 m<sup>2</sup>) of porcelain tile throughout the building.

**Solution:** Use *Ultrabond® G21* solvent-free polyurethane adhesive, designed for extreme indoor and outdoor installations. *Ultrabond G21* aggressively adheres all types of floor coverings and many difficult-to-bond-to substrates. MAPEI's fitness enthusiasts can now enjoy exercising in a more durable and contemporary-looking environment. 🧘



*Ultrabond G21* polyurethane-based adhesive was used to install large-format rubber tile in MAPEI's employee gym.

## Hurricane Wilma: Vital Stats

|  |                     |
|--|---------------------|
| Number of homes and businesses without power .....     | <b>3.2 million</b>  |
| Number of people affected by power loss .....          | <b>6 million</b>    |
| Number of shelters set up across state .....           | <b>124</b>          |
| Number of people staying in shelters across state..... | <b>36,000</b>       |
| Number of airports closed .....                        | <b>19</b>           |
| Number of flights disrupted/cancelled .....            | <b>2,000</b>        |
| Number of National Guardsmen mobilized .....           | <b>3,000</b>        |
| Number of Wilma-related fatalities in Florida .....    | <b>35</b>           |
| Estimated total cost of damage in Florida .....        | <b>\$10 billion</b> |

MAPEI's continued operation after Wilma ..... **Priceless**



**special** feature

# Are you ready?

## Emergency preparedness for small businesses

Over the past year alone, several hurricanes and floods devastated areas in the southern and southeastern United States, while countless wildfires broke out on the West Coast . Parts of the Midwest were ravaged by tornadoes and hail, while many northern U.S. communities suffered through snowstorms and blizzards.

*Coverage continues on next page*

**E**ach year, natural disasters force thousands of businesses to close.

According to the Institute for Business and Home Safety, at least 25% that close following natural disasters never reopen – and many reopened businesses struggle to stay in business.

How can you protect your company from the potential loss of business? Because most natural disasters are predictable, you can follow these recommendations:

### Employee communication

Seamless communication with your employees after a disaster is critical to your business' survival and continuing viability. Employees will want to know when and where they should report to, and the status of recovery efforts. Consider implementing the following options:

- Store an up-to-date telephone tree of employee names and phone numbers in an accessible and secure location for emergency contact at all times.
- Designate one remote voice-mail number for recording messages for employees.
- Arrange for programmable call-forwarding for your main business line, or have the phones/faxes programmed to work at a preplanned recovery location.
- Prearrange the capability to have a conference bridge for conference calling with employees or customers following an event.
- Prepare for a complete break in phone service by instructing designated employees to meet at a prearranged location or recovery site, if accessible.
- Set up an out-of-state telephone number to record messages for employees, or arrange for an out-of-state person/company that



employees can contact for recovery status. This can be an invaluable tool for keeping key customers and vendors up-to-date as well.

- Invest in simple two-way radios and pagers that send signals to each other in case all phone service is interrupted.
- Maintain at least one analog phone in the event that electricity is lost. Analog phones do not require electrical power to operate.

### Employee needs

**Because your business cannot resume normal operations until employees return to work, consider the following:**

- Invest in several battery-operated radios and flashlights for emergency use.
- Arrange for alternate forms of transportation, such as carpooling.
- Arrange for childcare at your primary or recovery site.
- Offer short-term financial aid to assist with disaster-related problems at home.
- Offer overtime pay to employees available to help maintain

operations.

- Have prenegotiated agreements with major suppliers to meet employees' basic needs for food, water and climate control.
- Have generators and sufficient fuel available to power whatever employees need to resume business operations.
- Because ATMs may be down, keep an emergency stash of cash in a fireproof safe or safety deposit box.

### Vendors

**Your ability to resume operations relies on the ability of your suppliers to deliver what you need on time. To encourage continuity of the supply chain, consider the following:**

- Ensure that your principal suppliers are not all in the same geographical location.
- Have backup vendors and shippers in place in case your primary ones are disabled, and place periodic orders so they consider you an active customer when you need them.
- Require that your critical suppliers have an agreement in place with



another manufacturer to fulfill commitments should its business functions be interrupted. MAPEI relies on its pool of 14 plants located throughout the Americas to ensure that its customers' needs are met following natural disasters.

- Ensure that your bills are paid in advance to encourage your vendor to ship replacements immediately.
- Know your suppliers' emergency contact numbers in the event of a disaster.
- Prearrange agreements with computer vendors to quickly replace damaged hardware and software at your primary or recovery location, should the need arise.

### Customers' needs

**Your economic recovery depends on minimizing any business interruption following a disaster. Depending on the degree of devastation, you may be able to communicate with customers via direct telephone calls, a prearranged toll-free phone number, e-mail, or announcements by radio, TV or newspaper.**

- Prior to an event, inform your customers of your prearranged disaster plan.
- Stock up on materials before a disaster hits to minimize short-term depletion.
- After an event, keep customers informed about the status of their ordered products and the delivery schedule.
- Inform your customers if you are operating from an alternate site, whether another facility, branch office or temporary office space outside the affected power grid.
- Consider storing essential supplies, inventory and equipment critical to business operations in a remote or recovery location that can be easily accessed in case of a disaster.



- Make sure that work-related vehicles are filled with fuel and ready to go after the disaster hits.
- Have prearranged agreements in place with rental companies to replace damaged vehicles or specialized equipment required for your business to function.
- Have prearranged agreements in place with fuel companies to provide sufficient quantities in the event of a disaster.

### Vital records

**Vital records are necessary to perform critical business functions. Examples include: employee data, payroll, financial records, production records, customer lists, inventory, blueprints, the building lease, insurance records, etc.**

- Store copies of all vital information on site and secondary copies in a safe off-site location (some experts recommend at least 50 miles away). Routinely back up files.
- Consider the services of a data center and disaster recovery facility, where data is backed up on a regular basis and available to you should a disaster strike.

### Insurance issues

**While it may seem obvious, double-check your current insurance policy to make sure that your coverage is adequate to help you get back to business following a disaster.**

- Know whether you need to purchase additional insurance for natural disasters associated with your location.
- Consider purchasing business income interruption insurance for potential revenue losses due to temporary closure.
- Maintain current photos or video of your building contents and your warehouse inventory for insurance claim purposes. 📷

Typical commercial generator



# *Technical* \_\_\_\_\_ **Playing matchmaker with trowels and adhesives**

## *Do's and Don'ts*

**I**n the floor-covering industry, trowels function as metering devices for applying the right amount of adhesive in flooring installations. Rapid advances in floor-covering products, adhesives and installation techniques make the proper combination of trowel and adhesive crucial for installation success over

many substrates. MAPEI believes that the key to ensuring a cost-effective, long-term, well-bonded installation – one that minimizes the risk of callbacks and costly repairs – lies in choosing the appropriate combination of the adhesive and trowel for the desired floor covering.



To help ensure the success of your flooring installation, choose the appropriate trowel and adhesive.

## How to optimize the success and serviceability of your next floor-covering installation

**DO ✓ purchase a high-quality adhesive.** Some adhesives are specifically formulated for certain types of floor coverings. Spending a little more for a high-quality adhesive and pairing it with the manufacturer's recommended trowel can save substantial time and effort throughout the installation. High-quality adhesives not only speed up installations due to their shorter open times, but also provide superior adhesion over the long term. MAPEI adhesives are composed of the highest-quality raw materials and are manufactured under strict production control. They are developed to meet the most stringent requirements of engineers, contractors, architects and building owners.

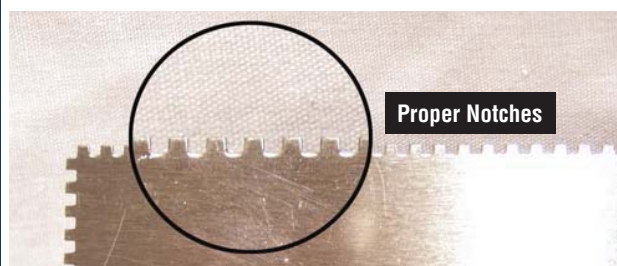
**DO ✓ maintain the cleanliness of your trowel.** Before starting a job, trowels should be clean and dry to ensure sufficient adhesive coverage; dirty, clogged-up notches can lead to poor bond performance and costly installation repairs. Always clean and wipe trowels dry after applying adhesive. Using abrasive techniques to remove dried adhesive will damage the trowel, shorten its life span and increase operating costs by having to replace it more often.

**DO ✓ follow the manufacturer's trowel recommendations.** Trowels are notched with different profiles and sizes. The correct notch size and notch style (whether V-notched, U-notched or square-notched) are what the floor-covering or adhesive manufacturer recommends. Take these recommendations seriously. Because the width and depth of the notch act as a gauge for applying a consistent amount of adhesive, notches that are too close together can result in insufficient coverage, resulting in a shorter open time and poor bond performance. Notches that are too far apart can result in ridges showing through the flooring product.

**Don't ✗ use too much adhesive.** When it comes to adhesives, more is not better! Too much adhesive will take longer to dry and can result in bubbles, ridges and indentations caused by point loads applied before and after the adhesive fully cures. This will ultimately weaken the flooring system, greatly increasing risk of installation failure and resulting in the need for costly repairs.

**Don't ✗ use too little adhesive.** Applying an insufficient amount of adhesive will not only shorten open time, but increase the risk of poor contact between the adhesive and flooring material – resulting in poor bond. Applying too little adhesive, especially under soft flooring products, can cause a total loss of bond.

**Don't ✗ use worn-out trowels.** Worn-down notches can result in insufficient adhesive application and poor bond performance. Maintain the proper profile by replacing such trowels or, if the notches are interchangeable, changing the “teeth” frequently. Buying a new replacement trowel can be less expensive than renotching an old one, due to the cost of labor involved.



**Using a trowel with worn notches increases the likelihood of applying insufficient adhesive, resulting in poor bond performance.**

To help prevent costly mistakes, MAPEI works hard to educate its customers on proper choice of trowels and adhesives. Using the wrong trowel can necessitate removing the floor covering and adhesive, preparing the subfloor for replacement of material and purchasing new materials – which can all spell disaster for the contractor and installer. Avoid these headaches by choosing top-quality adhesives and the appropriate trowels for the jobs.

You'll find a variety of top-quality trowels and adhesives in MAPEI's product brochures for its tools line as well as its Floor Covering Installations Systems line. Simply contact your local MAPEI sales representative for these brochures. [🔗](#)



### About the author:

Art Palmer is a Technical Services Consultant with MAPEI. Art brings to his position nearly 30 years of floor-covering expertise in the installation of VCT, residential and commercial sheet goods, including linoleum and homogenous products.



# 2006 MTI Training Schedule

The MAPEI Technical Institute offers courses for distributors, architects, contractors and installers in Laval (Montreal) in Canada and Deerfield Beach, FL in the USA.

## Training dates for Deerfield Beach

### Concrete Restoration Systems (CRS)

Classroom instruction and hands-on training that cover acid staining; vertical, horizontal and overhead patch repairs; and full-depth repair mortars.

- TBA

### Surface Preparation and Waterproofing (SPW)

Classroom instruction and hands-on training for such waterproofing projects as shower enclosures and balconies. Products and procedures to prepare concrete for overlayment.

- November 1 – 2

### Tile & Stone Installation Systems (TSIS)

Classroom instruction and hands-on training that cover the basics from surface preparation to grouting for tile and stone installation on walls and floors.

- July 19 – 20
- October 18 – 19
- November 8 – 9
- December 6 – 7

### Floor Covering Installation Systems (FCIS)

Classroom instruction and hands-on training that cover surface preparation and installation of vinyl and wood floors.

- October 4 – 5



## Training dates for Laval

### Concrete Restoration Systems (CRS)

Training 101, Basics: Surface preparation, one-step repair mortar and systems.

Training 102, Hands-On: Surface preparation, column repair, balcony repair and sidewalk refurbishing.

Training 101, Basics

- TBA

Training 102, Hands-On

- November 9 – 10 (English-speaking)
- November 6 – 7 (French-speaking)

### Floor Covering Installation Systems (FCIS)

Training 101, Basics: Surface-preparation products, multipurpose adhesives and specialized adhesives.

Training 102, Hands-On: Use of *Planiseal*™ MRB moisture-reduction barrier coating; surface-preparation products; and installation of engineered wood using *Ultrabond ECO*® 972, hardwood with *Ultrabond ECO* 980 and homogenous sheet goods using *Ultrabond*® G21.

Training 101, Basics

- TBA

Training 102, Hands-On

- November 27 – 28 (English-speaking)
- September 14 – 15 (French-speaking)

### Tile & Stone Installation Systems (TSIS)

Training 101, Basics: Surface-preparation products, thin-set mortars, adhesives and grouts.

Training 102, Hands-On: Building a shower installation from A to Z.

Training 101, Basics

- October 16 – 17 (English-speaking)

Training 102, Hands-On

- December 4 – 5 (English-speaking)
- September 11 – 12 (French-speaking)

**Sign up for MTI training by contacting your local MAPEI sales representative.**

Attendees pay for their travel expenses to and from the seminar location. Course schedule is subject to change. For the most updated schedule, and information on hotel lodging and meals, please contact your local registration representative:

For details on upcoming seminars in **Deerfield Beach**, contact **Maria Paladino** at (954) 246-8568.

For details on upcoming seminars in **Laval**, please contact **Raffaelina Aceto** at (450) 662-1212.



# Answers

## From the Experts

### **Q:** How can I pick the right adhesive in today's floor-covering industry?

**A:** To help keep pace with design trends, floor-covering manufacturers continue to offer a growing array of floor-covering options. No longer are consumers limited to carpet, sheet goods and tile – they can now enjoy the resurgence of homogenous vinyl, along with unique looks created from cork, bamboo, exotic wood and luxury vinyl tile. Contractors and installers looking to maximize profit while minimizing the risk of callbacks need to stay “in the know” when it comes to new floor-covering products, to ensure they choose adhesives that perform effectively.

#### The world of carpet

When choosing an adhesive for a carpet installation, one must consider the type of backing, necessary grab, traffic load, maintenance schedule, and quality and lifecycle of the carpet. Historically, the two most popular carpet backings have been ActionBac and jute. However, industry demand for fast-track carpet installations as well as new technologies and materials have led to a new world of carpet backings, including: smooth, rough and woven unitary, hot-melt, Kanga, Karastan and solid PVC.

Moving from two-step to one-step padded carpet installation methods, such as with Enhancer-backed carpet, meant that adhesives also had to evolve to provide more aggressive bonding. The majority of today's one-step carpet installations rely on the use of styrene butadiene rubber (SBR)-based adhesives due to their fast grab and excellent retacking characteristics. Many of MAPEI's adhesives are SBR-based.

For builders and business owners desiring a short-term carpet installation,



MAPEI's *Ultrabond Mach* series, featuring TurboTack Technology and extreme legging, offers excellent options for achieving fast grab.

an economy-grade, SBR-based adhesive such as MAPEI's *Ultrabond ECO® 85* or *Ultrabond ECO 90* would be suitable. On the other hand, a higher-end, commercial installation expected to last several years, which calls for double glue-down application, would require a higher-grade adhesive such as MAPEI's *Ultrabond ECO 350* high-tack universal adhesive.

For carpets without design patterns where seams can be “trace-cut,” an adhesive offering ultra quick grab should be used. This will allow the carpet to be rolled right away, ideal for today's fast-turnaround installation schedule. MAPEI's *Ultrabond® Mach™* series, featuring TurboTack Technology® and extreme legging, offers excellent options for achieving fast grab. More expensive, patterned carpets require a higher-quality adhesive with strong grab and appropriate slip time for matching up the patterns, such as MAPEI's *Ultrabond ECO 200* multipurpose adhesive.

#### Sheet-goods adhesives

It is imperative that the sheet-goods backing (e.g., felt-backed vinyl, PVC-backed vinyl and solid PVC) dictate the choice of adhesive for the installation, thus avoiding the dreaded “plasticizer migration” syndrome and subsequent callback. When an incompatible adhesive is used to install solid vinyl sheet-goods products, the chances are high for experiencing bubbling, severe discoloration and installation failure. Avoid product incompatibility by checking the adhesive manufacturer's recommendation for proper choice of adhesive.

Some of MAPEI's SBR-based, solvent-free, multipurpose adhesives include *Ultrabond ECO 85*, *Ultrabond ECO 90* and *Ultrabond ECO 150*, which are ideal for felt-backed sheet goods and many types of carpet installations. For solid PVC and PVC-backed vinyl, MAPEI recommends acrylic-based *Ultrabond ECO 300* and *Ultrabond ECO 350* solvent-free flooring adhesives.

Be sure to consider the specific application criteria that the sheet-goods installation will be subjected to. For example, if the floor-covering product will be subject to heavy "point loads," as in healthcare facilities, a harder-setting polyurethane adhesive such as MAPEI's *Ultrabond® G21* solvent-free premium adhesive should be used. While a higher-quality, more durable adhesive may cost a little more, the chances of installation failure now and later drop significantly.



**Healthcare facilities subject to heavy point loads require hard-setting polyurethane adhesives such as MAPEI's *Ultrabond G21*.**

## Vinyl composition tile

While adhesive selection for a typical vinyl composition tile (VCT) installation should be foolproof, experienced installers could tell you otherwise. Quite often, a VCT installation appears flawless on the day of installation but has tiles mysteriously out of position on the following day. Chances are, another construction trade trampled across the floor, moving ladders or carts and causing "fresh" VCT to slide. Having to execute immediate damage control creates much grief for both the floor-covering installer and contractor.

Fortunately, MAPEI has a solution for preventing such a common annoyance with the development of *Ultrabond ECO® 711* premium clear, thin-spread adhesive. Spending a little more money on an adhesive with a shorter open time, very aggressive grab and ultra high shear strength is well worth the investment, particularly in fast-track, heavy commercial flooring applications. For VCT installations that are not fast-track, a more economical product such as MAPEI's

*Ultrabond ECO 710* clear, thin-spread adhesive with high residual tack would be more than sufficient.

## Wood adhesives

Wood floor coverings continue to thrive and are growing in popularity. Because wood is a natural product, much consideration must be given to the type of adhesive used in its installation. The type of adhesive appropriate for engineered wood product installations is very different from that for solid wood planks.

As is the case for all floor-covering products, wood products need to acclimate according to manufacturer's recommendations. Because solid wood products require a strong bond, urethane-based adhesives, such as MAPEI's *Ultrabond 980* and *Ultrabond 990*, are excellent choices for holding solid wood in place. Once cured, both of these high-quality, solvent-free adhesives provide the needed flexibility and superior bond strength that solid wood installations demand.

For approved pre-finished, engineered wood, cork and parquet floor coverings, a water-based adhesive such as MAPEI's *Ultrabond ECO 972* is a choice pick due to its ultra high tack and excellent re-bonding characteristics. For antimicrobial protection, MAPEI has added BioBlock™ technology\* to *Ultrabond ECO 972* to help inhibit the growth of various types of odor- and stain-causing mold, mildew and bacteria. Before beginning any wood product installation, always consult the wood manufacturer to determine if their product is recommended for glue down, because some engineered woods must be installed as floating or nail-down systems.

**\* BioBlock technology provides built-in antimicrobial protection without expensive additives, extra steps or added time.**

**Consult your federal, state and local environmental and health departments for recommendations on preventing mold, mildew and bacteria. For the most current information on BioBlock technology's antimicrobial protection, visit [www.mapei.com](http://www.mapei.com).**



## The most important aspect to remember

Keep in mind that in the world of construction, warranties are given with only one condition: The manufacturer's installation recommendations must be followed. Before beginning any installation, take the extra step of consulting with the floor-covering and adhesive manufacturers regarding the proper adhesives and trowels. Doing so will help protect you from future liabilities and teach you more about the products' characteristics and capabilities, which pays off with an easier, faster and more successful installation.

MAPEI is committed to maximizing its customers' comfort level with its products by offering expert technical support and product advice for any stage of flooring installations. For more information on MAPEI's floor-covering adhesives, contact your local sales representative. 



**MAPEI's urethane-based *Ultrabond 980* and *Ultrabond 990* are both excellent choices for holding solid wood in place.**



### About the author:

*Shawn Mitcham is a Technical Claims Representative for MAPEI Corporation in*

*Deerfield Beach, Florida. He has over 13 years of experience in commercial floor installations and technical consulting. Shawn's multifaceted expertise results from his years serving commercial businesses in tile, wood, carpet and resilient flooring while specializing in advanced commercial-grade carpets and vinyl goods.*

## Product Spotlight

# Ultrabond ECO® 972

## Ultra high-tack wood-flooring adhesive

This solvent-free, VOC-compliant wood-flooring adhesive is specially designed for installing prefinished engineered wood planks up to 1/2" (12 mm) thick, acrylic impregnated plank, prefinished wood parquet and approved cork flooring. Ultra high-tack **Ultrabond ECO 972** remains flexible to move with wood while demonstrating tough bond strength and excellent rebonding properties.

Suitable for both commercial and residential installations, *Ultrabond ECO 972* is easy to use and easy to clean up, requiring only water during the wet phase. BioBlock technology\* has been added to *Ultrabond ECO 972* to help inhibit the growth of various types of odor- and stain-causing mold, mildew and bacteria. MAPEI offers a 4-year limited system warranty for this economical product.

### Recommended Substrates

- Fully cured concrete
- Any wood underlayment that is recommended or guaranteed by either the wood underlayment manufacturer or the wood manufacturer, such as APA exterior-grade plywood or underlayment-grade particleboard and OSB
- For existing floor covering (residential applications) including properly prepared and bonded existing noncushioned felt-backed sheet vinyl flooring as well as properly prepared and bonded vinyl composition tile (VCT)



### Technical Data

|   |   |
|---|---|
| Open time at 73°F (23°C) and 50% relative humidity .....            | 10 to 25 minutes  |
| Drying time at 73°F (23°C) .....                                    | 24 hours (set time)   |
| Freeze/thaw stability at 0°F (-18°C) .....                          | Stable 5 cycles   |
| Flash point .....   | Nonflammable  |
| Maximum moisture vapor emission rate of concrete (ASTM F1869) ..... | 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m²) per 24 hours |

Cleanability .....

With water while fresh; with mineral spirits when dried

Color .....

Oak

Health and safety ..... Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

Packaging ..... Pails: 1 U.S. gal. (3,79 L); 3.96 U.S. gals. (15 L)

### Typical Trowels and Approximate Coverages

Engineered or acrylic impregnated plank – 3" (7,5 cm) wide and up to 5/16" (8 mm) thick:  
1/8" x 1/4" x 1/4" ..... 55 to 65 sq. ft./U.S. gal. (3 x 6 x 6 mm) ..... (1,35 to 1,59 m²/L)

Engineered or acrylic impregnated plank – 3" (7,5 cm) wide and from 3/8" to 9/16" (10 to 14 mm) thick:  
3/16" x 3/16" x 3/16" ..... 32 to 42 sq. ft./U.S. gal. (4,5 x 4,5 x 4,5 mm) ..... (0,78 to 1,03 m²/L)

Engineered plank 3/4" (19 mm) thick or wider than 4" (10 cm)  
1/4" x 1/4" x 1/4" ..... 25 to 35 sq. ft./U.S. gal. (6 x 6 x 6 mm) ..... (0,61 to 0,86 m²/L)

Prefinished wood parquet (dry and foam back)  
1/8" x 1/8" x 1/8" ..... 90 to 108 sq. ft./U.S. gal. (3 x 3 x 3 mm) ..... (2,20 to 2,59 m²/L)

For more information on the complete line of **MAPEI** products, call **1-800-42-MAPEI** (1-800-426-2734).

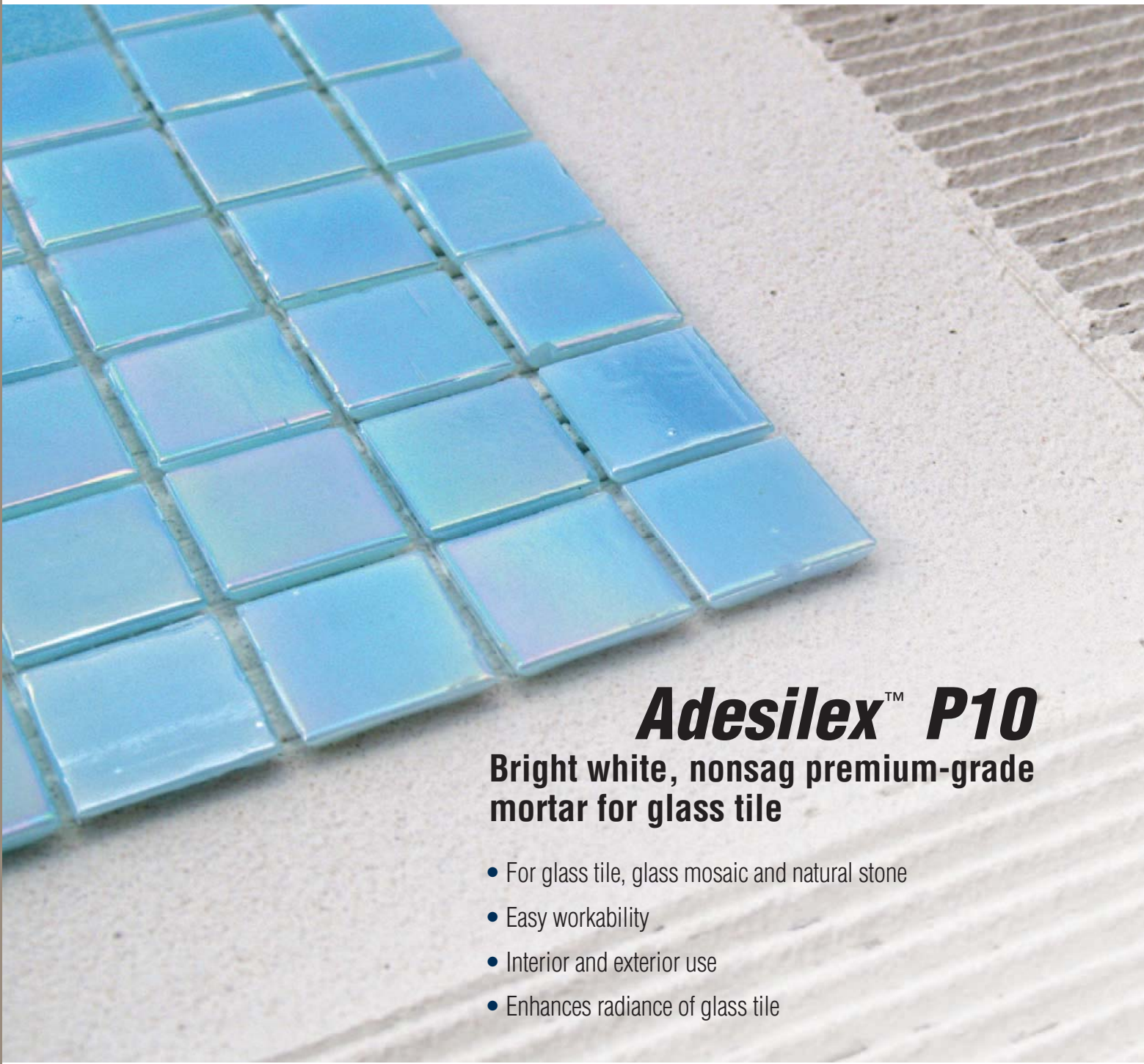


Visit our Website at  
**www.mapei.com.**

\* For the most current information on BioBlock technology, visit [www.mapei.com](http://www.mapei.com).



# Simply brilliant.



## **Adesilex™ P10**

**Bright white, nonsag premium-grade mortar for glass tile**

- For glass tile, glass mosaic and natural stone
- Easy workability
- Interior and exterior use
- Enhances radiance of glass tile

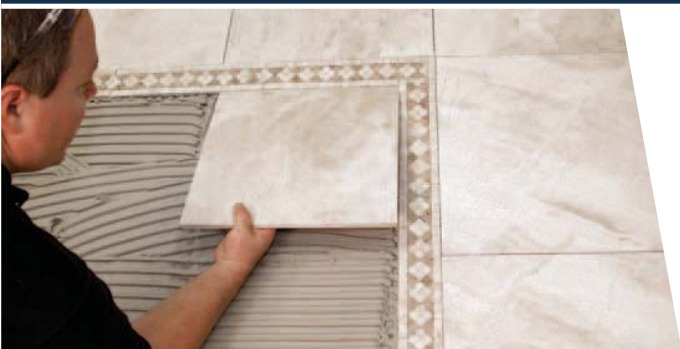


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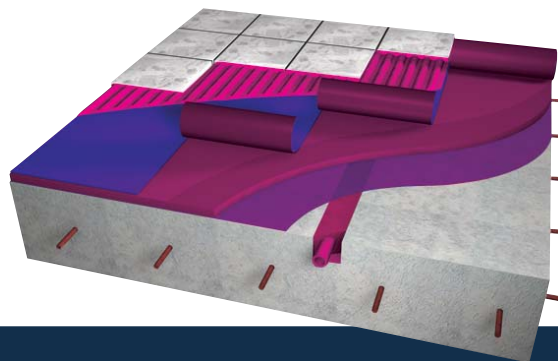




## Advanced Systems for Flooring Installation and Concrete Restoration



**Tile & Stone Installation Systems**



**Floor Covering Installation Systems**



**Concrete Restoration Systems**



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### CUSTOMER SERVICE

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### TECHNICAL SERVICES

1-800-992-6273 (U.S. and Puerto Rico)  
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