

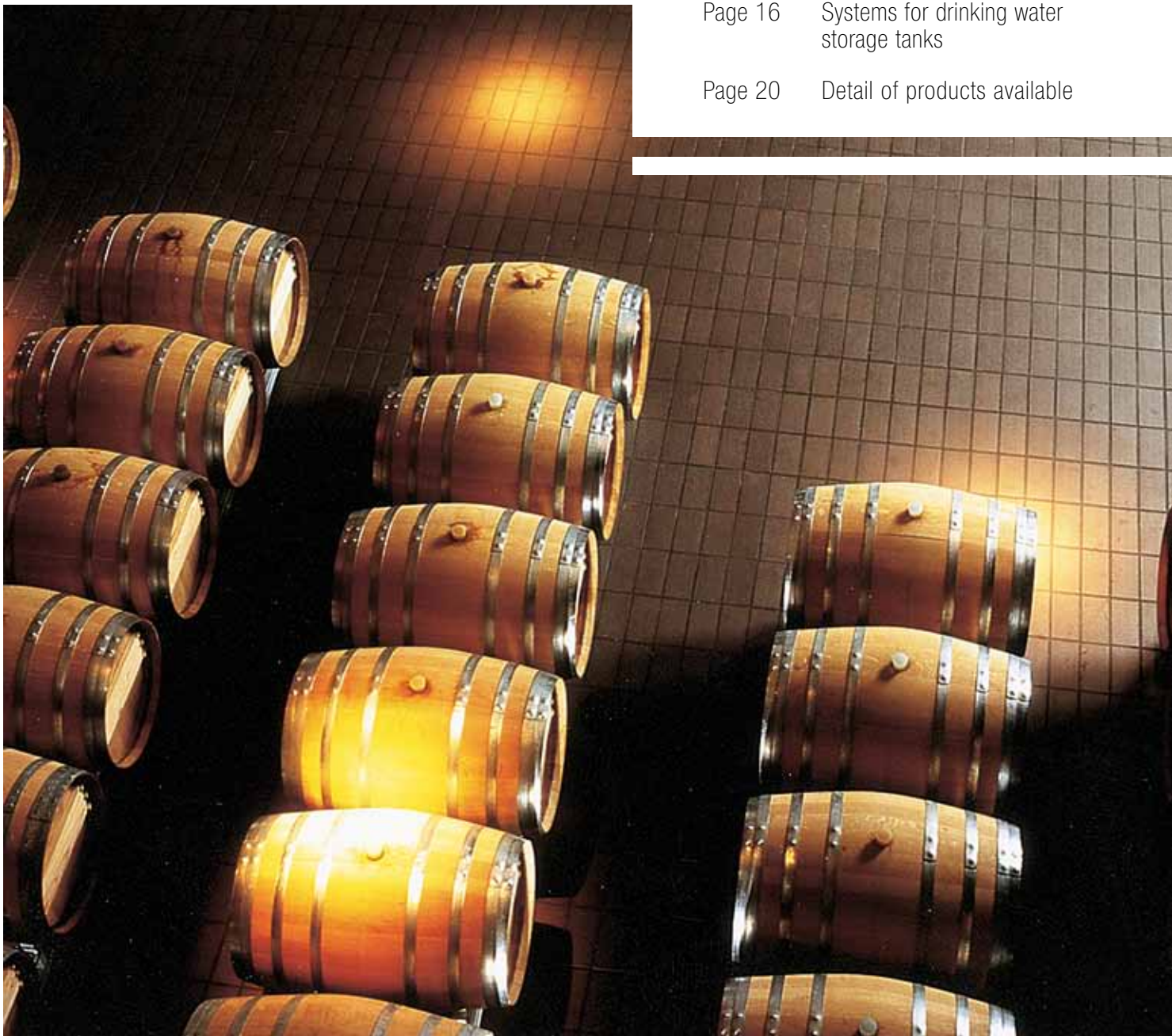
MAPEI SYSTEMS FOR THE FOOD AND DRINKS INDUSTRIES



Cover:
Foodstuffs factory
Plzen - Czech Republic

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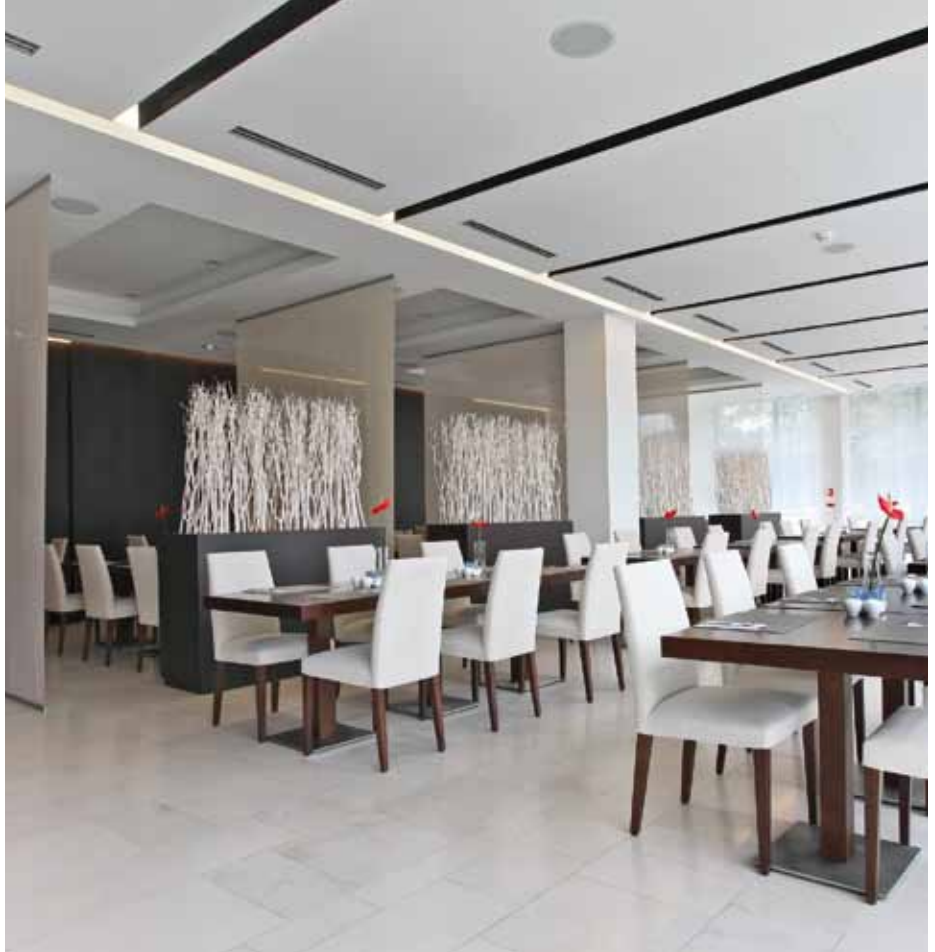
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Rotari sparkling wine production plant - Mezzocorona - Italy



NH Hotel
Olomuc
Czech Republic



FIELDS OF **APPLICATION**

There are many different types of areas used in the food and drinks industries, from food processing and packaging to processing, sales and distribution, to areas where food and drinks are actually consumed (canteens, restaurants, bars, etc.). In all these areas it is of primary importance that surfaces are strong, resistant and durable, while at the same time they must also be easy to clean and take care of and, above all, hygienic. Installation materials must always be chosen according to the type of floor or wall covering material to be installed, and the floor or wall covering itself must be suitable and able to withstand the type of use it has been chosen for.

Mapei has always been at the forefront when it comes to developing products and systems that meet the requirements of specific market needs and has the right solutions for this sector too.

In order to implement EC Directives that regulate and monitor environmental safety and compliance with HACCP management systems (Regulation EC No. 852/2004 issued by the European Parliament), increasingly severe norms and standards regarding hygiene are being introduced, along with more stringent performance requirements for wall and floor coverings applied in industrial and commercial environments within the food and drinks industries.

Hygiene requirements laid down by norms and standards regarding safety in the food and drinks industries require specific materials to be used for covering and coating surfaces in areas used for processing, packaging and distributing food and drinks.

Mapei's 15 product lines offer complete systems that meet the requirements of these norms and standards.

SYSTEM FOR AREAS EXPOSED TO HIGHLY AGGRESSIVE ORGANIC ACIDS

AREAS EXPOSED TO
HIGHLY AGGRESSIVE
ORGANIC ACIDS SUCH
AS HIGH TEMPERATURE
CURING CELLS FOR
COOKED MEATS AND
OIL MILLS

PRODUCT SYSTEM

Floors:

- 1 Reinforced cement floor slab
- 2 Isolated screed **Mapecem Pronto**
- 3 Adhesive **Kerapoxy Adhesive**
- 4 Porcelain tile floor
- 5 Grout **Kerapoxy IEG**
- 6 Sealant **Mapeflex PU20**

Walls:

- 7 Cementitious render **Planitop Fast 330**
- 8 Adhesive **Kerapoxy Adhesive**
- 9 Porcelain tile coating
- 10 Grout **Kerapoxy IEG**
- 11 Finish **Mapecoat I 24**



CHARACTERISTICS OF THE SYSTEM

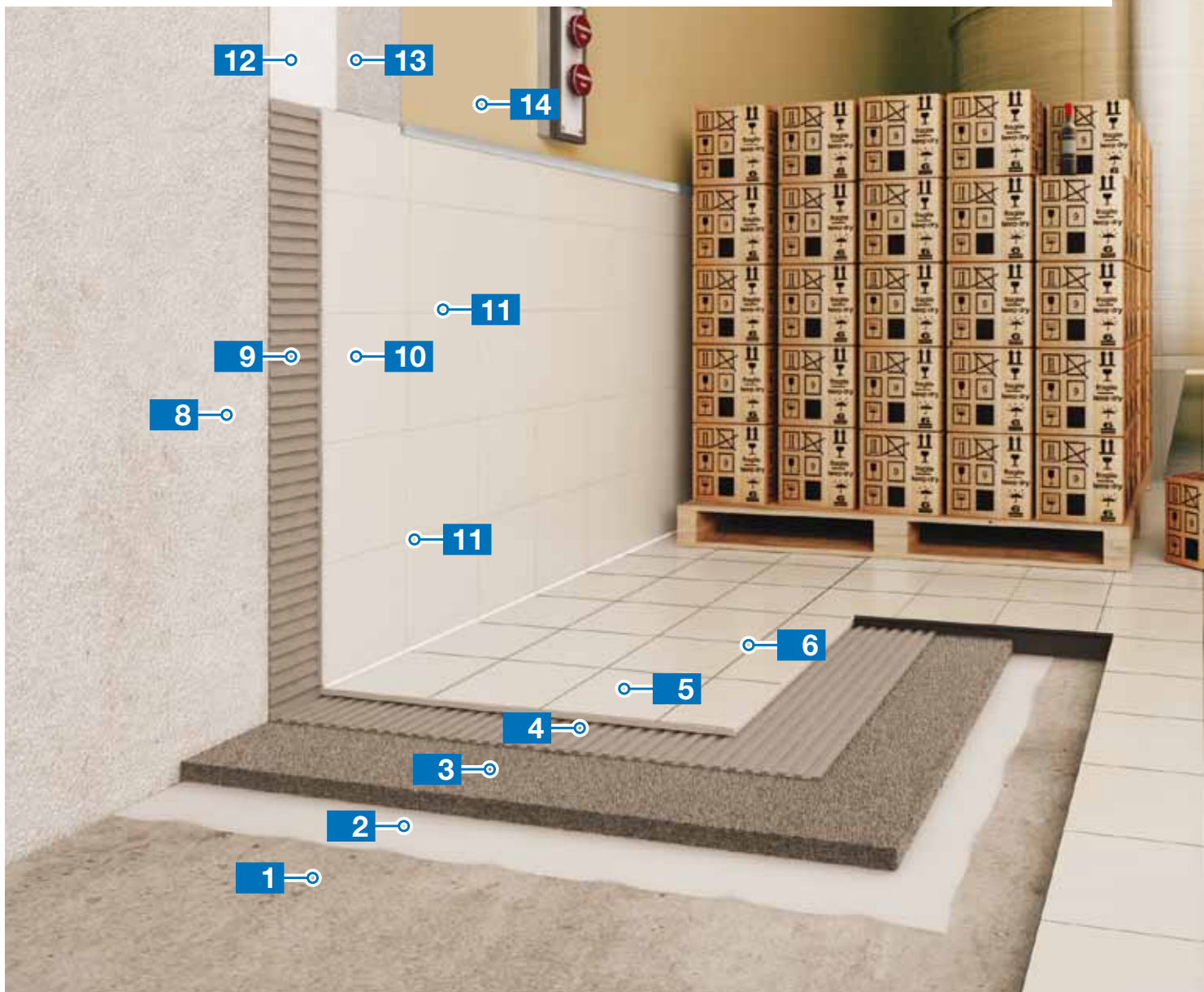
- **Mechanical strength:** high. The use of **Mapecem Pronto** allows screeds with a strength level of more than 60 MPa to be formed. Used in combination with epoxy-based adhesives and grouts and **Mapeflex PU20** sealant, it makes very strong floors suitable for heavy industrial traffic.
- **Chemical resistance:** very high. The chemical resistance of **Kerapoxy IEG** is higher than normal epoxy grouts, particularly against organic acids, and is suitable for grouting wall and floor coverings in meat curing plants that are in contact with animal fats for long periods and that are cleaned regularly with high pressure hot water. It is also used in cooking areas in meat curing plants where grout is exposed to hot, aggressive organic acids and in olive oil processing plants where there is particularly aggressive oleic acid.
- **Resistance to abrasion:** high.
- **Ease of cleaning:** high. Resistant to frequent cleaning, including with hot water.
- **Resistance to temperatures:** from -20°C to +100°C.
- **Impermeability:** excellent to liquids and oil.



AREAS USED FOR STORING SUCH AS WINE CELLARS, BREWERIES AND DAIRIES

CHARACTERISTICS OF THE SYSTEM

- **Mechanical strength:** high. The system is suitable for floors subjected to concentrated loads and heavy traffic, the constant passage of fork-lifts and moving vehicles.
- **Chemical resistance:** high. Gaps grouted with **Kerapoxy CQ** are resistant to acid and bacteria. The same product may also be used for bonding where higher resistance to acids is required.
- **Wear resistance:** high.
- **Ease of cleaning:** high. Resistant to frequent washing cycles and liquids on the surface.
- **Hygiene: Kerapoxy CQ** is certified according to ISO 22196:2007 standards as a grouting mortar protected against the formation and proliferation of micro-organisms; contains a bacteriostatic agent, with BioBlock® technology.
- **Impermeability:** excellent.





SYSTEM FOR AREAS FOR STORING FOOD AND DRINKS

PRODUCT SYSTEM

Floors:

- 1 Existing industrial concrete floor
- 2 Bonding promoter **Eporip**
- 3 Screed **Topcem Pronto**
- 4 Adhesive **Elastorapid**
- 5 Klinker tiled industrial floor
- 6 Grout **Kerapoxy CQ**
- 7 Sealant **Mapeflex PU20**

Walls:

- 8 Render
- 9 Adhesive **Ultralite S1**
- 10 Porcelain tile coating
- 11 Grout **Kerapoxy CQ**
- 12 Skim coat **Planitop 540**
- 13 Primer **Mapecoat I 600 W**
- 14 Finish **Mapecoat I 24**



SYSTEM FOR AREAS USED FOR PREPARING AND COOKING FOOD

AREAS USED FOR PREPARING
AND COOKING FOOD SUCH AS
SCHOOL/WORKS CANTEENS
AND RESTAURANT KITCHENS

PRODUCT SYSTEM

Floors:

- 1 Existing concrete structure
- 2 Bonding promoter **Eporip**
- 3 Screed **Topcem Pronto**
- 4 Epoxy waterproofing **Mapegum EPX**
- 5 Adhesive **Kerapoxy Adhesive**
- 6 Tiles
- 7 Grout **Kerapoxy CQ**



CHARACTERISTICS OF THE SYSTEM

- **Mechanical strength:** high. The system is suitable for floors subjected to intense traffic.
- **Chemical resistance:** very high. **Kerapoxy CQ** used in combination with **Kerapoxy Adhesive** and **Mapegum EPX** forms completely impermeable floors with high resistance to chemicals.





- **Resistance to abrasion:** high.
- **Ease of cleaning:** high. Resistant to frequent washing cycles and liquids on the surface.
- **Hygiene:** Kerapoxy CQ is certified according to ISO 22196:2007 standards as a grouting mortar protected against the formation and proliferation of micro-organisms; contains a bacteriostatic agent, with BioBlock® technology.

Forms surfaces that comply with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.

- **Impermeability:** excellent. Thanks to Mapegum EPX floors may be formed that are completely impermeable and protect substrates from infiltrations.

CHARACTERISTICS OF THE SYSTEM

- **Rapidity:** this system allows resilient and textile floor coverings to be repaired or bonded rapidly so areas may be renovated while remaining in operation.
- **Dimensional stability:** excellent. This adhesive is suitable for most types of resilient flooring. Stops end joints from opening.
- **Mechanical strength:** high. Suitable for areas where high resistance to static and dynamic loads is required, including intense loads.
- **Hygiene:** apart from being inherently hygienic, resilient floor coverings are easy to clean and completely non-absorbent.





SYSTEM FOR AREAS USED FOR PREPARING AND COOKING FOOD

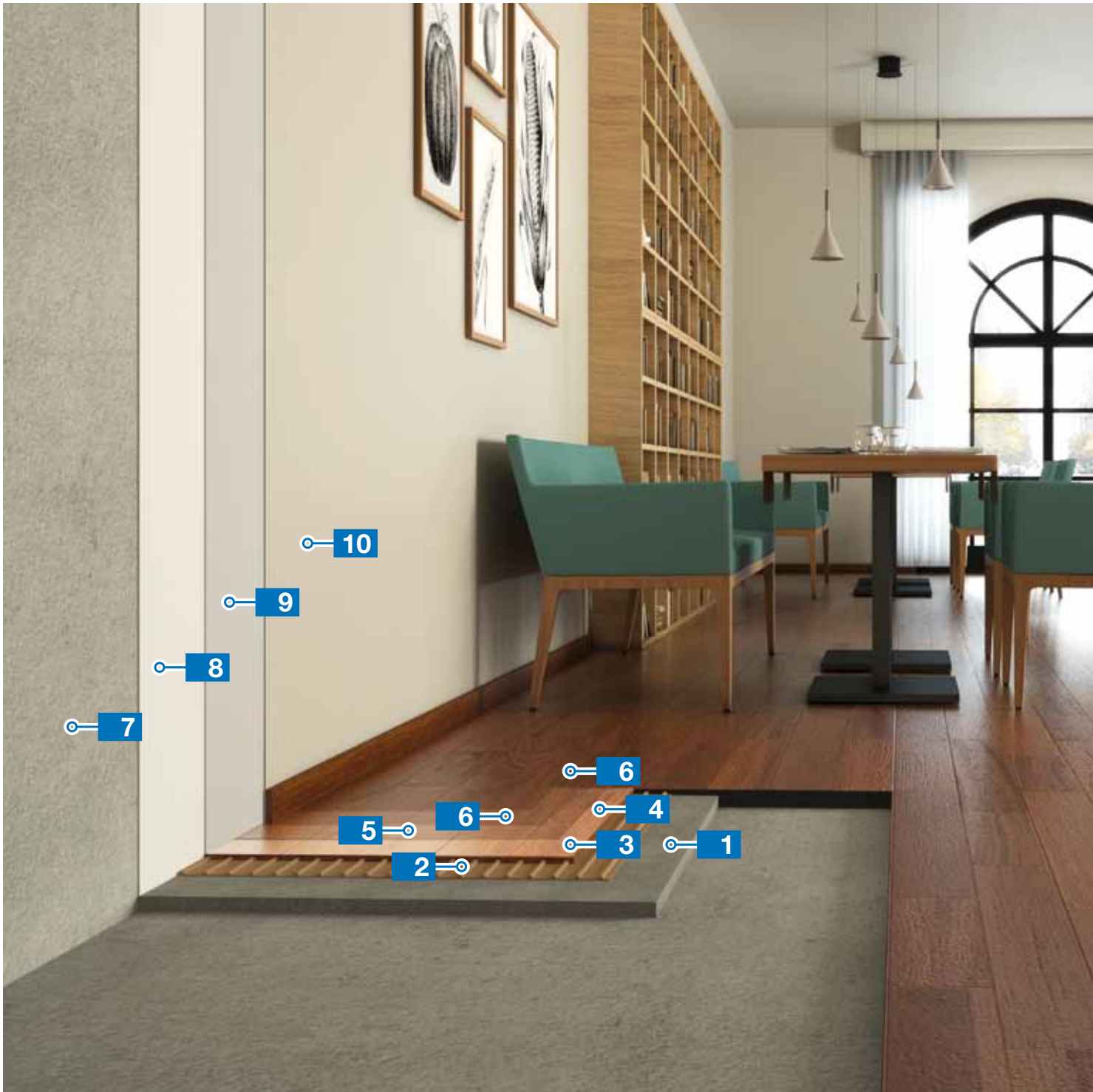
RAPID SYSTEM FOR BONDING RESILIENT FLOOR COVERING ON EXISTING CERAMIC FLOORING

PRODUCT SYSTEM

Floors:

- 1 Old flooring
- 2 Smoothing compound **Planiprep Fast Track**
- 3 Primer **Eco Prim T**
- 4 Self-levelling compound **Ultraplan Fast Track**
- 5 Adhesive **Ultrabond Eco Fast Track**
- 6 Resilient floor covering





CHARACTERISTICS OF THE SYSTEM

- **Mechanical strength:** high. The system is suitable for making floors subjected to intense foot traffic such as in areas for commercial use.
- **Resistance to abrasion:** high. The use of the suggested **Ultracoat** painting system forms surfaces with high resistance to wear and abrasion.
- **Ease of cleaning:** excellent. With the **Ultracoat** system it is easy to remove marks left by rubber shoes. Used on walls, **Dursilite** is easy to clean and is characterised by its low dirt pick-up.
- **Safety:** one coat of **Ultracoat Premium Base** and two coats of **Ultracoat High Traffic** applied on solid wood is certified class Bfl s1 or Cfl s1 fire resistant according to EN 13501 standards.



SYSTEM FOR DINING AREAS

PUBLIC AREAS FOR THE CONSUMPTION OF FOOD AND DRINKS

PRODUCT SYSTEM

Floors:

- 1 Screed **Mapecem Pronto**
- 2 Adhesive **Ultrabond Eco S968 1K**
- 3 Solid wood
- 4 Grout **Ultracoat Binder**
- 5 Two-component water-based undercoat **Ultracoat Premium Base**
- 6 Two-component water-based polyurethane paint **Ultracoat High Traffic** (2 coats)

Walls:

- 7 Render **Nivoplan**
- 8 Skim coat **Planitop 560**
- 9 Primer **Dursilite Base Coat**
- 10 Finish **Dursilite**



SYSTEM FOR DINING AREAS

REMOVABLE RAPID SYSTEM FOR BONDING RESILIENT AND TEXTILE FLOORING

PRODUCT SYSTEM

Floors:

- 1 Ceramic tiles
- 2 Double-sided adhesive band **Mapecontact Release**
- 3 LVT flooring



CHARACTERISTICS OF THE SYSTEM

- **Rapidity:** the **Mapecontact Release** system allows resilient and textile floor coverings to be bonded rapidly on existing floors.
- **Removable:** thanks to the use of double-sided adhesive band, this system allows new floor coverings to be removed quickly and easily without leaving traces. This system is particularly suitable for rented premises where you wish to safeguard existing flooring.



- **Dimensional stability:** the different adhesion of the two sides of **Mapecontact Release** allows old floor coverings to be removed easily and new resilient and textile floor coverings adhere well and remain dimensionally stable.
- **Mechanical strength:** this system is suitable for anchoring floor coverings where there are intense dynamic loads.
- **Hygiene:** apart from the inherent hygiene properties of resilient floor coverings, the adhesive on both sides of **Mapecontact Release** is made from synthetic resin which has no surfactants or protective colloids, making them extremely resistant to damp and mould.

RAPID SYSTEM FOR INSTALLING AND RENOVATING OLD FLOORING IN COMMERCIAL AREAS

REBUILDING FLOORING IN A SUPERMARKET

PRODUCT SYSTEM

Floors:

- 1 Old cracked ceramic flooring
- 2 Separating layer
- 3 Screed **Mapecem Pronto**
- 4 Adhesive **Granirapid**
- 5 Porcelain tile floor
- 6 Grout **Ultracolor Plus**
- 7 Sealant **Mapeflex PU20**

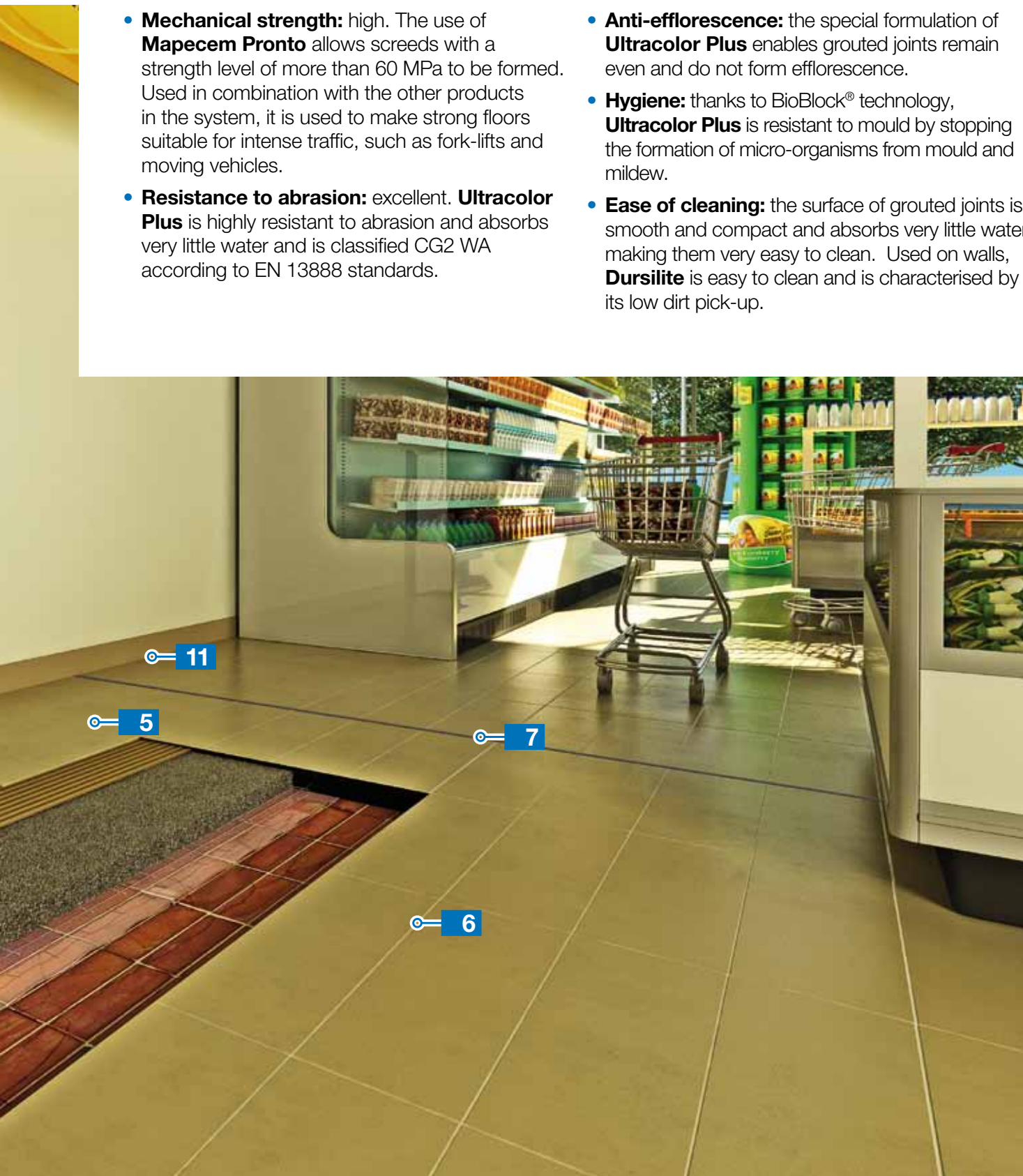
Walls:

- 8 Skim coat **Planitop 540**
- 9 Primer **Malech**
- 10 Finish **Dursilite**
- 11 Sealant **Mapeflex PU40**



CHARACTERISTICS OF THE SYSTEM

- **Rapidity:** this system allows ceramic tiling to be installed rapidly and within a short time it may be used by light foot traffic and be ready for use.
- **Mechanical strength:** high. The use of **Mapecem Pronto** allows screeds with a strength level of more than 60 MPa to be formed. Used in combination with the other products in the system, it is used to make strong floors suitable for intense traffic, such as fork-lifts and moving vehicles.
- **Resistance to abrasion:** excellent. **Ultracolor Plus** is highly resistant to abrasion and absorbs very little water and is classified CG2 WA according to EN 13888 standards.
- **Water-repellence:** **Ultracolor Plus** grout is water-repellent thanks to DropEffect® technology which reduces the surface's absorbency.
- **Anti-efflorescence:** the special formulation of **Ultracolor Plus** enables grouted joints remain even and do not form efflorescence.
- **Hygiene:** thanks to BioBlock® technology, **Ultracolor Plus** is resistant to mould by stopping the formation of micro-organisms from mould and mildew.
- **Ease of cleaning:** the surface of grouted joints is smooth and compact and absorbs very little water making them very easy to clean. Used on walls, **Dursilite** is easy to clean and is characterised by its low dirt pick-up.



SYSTEMS FOR DRINKING WATER STORAGE TANKS

Italian Ministerial Decree 174/04 defines the conditions that materials and components must meet in order for them to be used in distribution networks that treat water for human consumption. The decree specifies that the components of a material or product must not be released into the water above certain limits and specifies that a “global migration” value must also be defined.

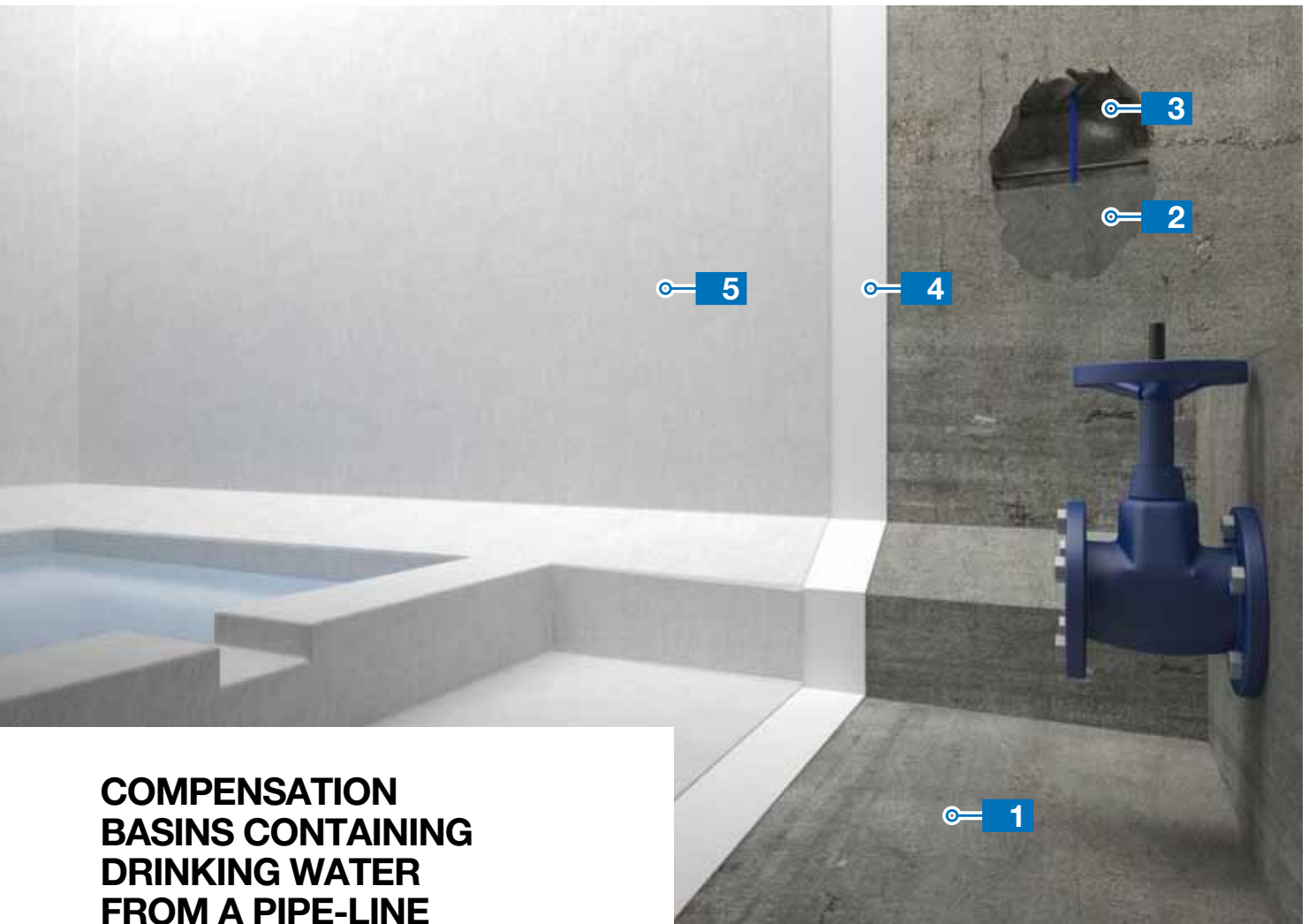
Water is an increasingly precious resource for our planet as well as a fundamental requirement for the health and economic wellbeing of every community. Leaks from water distribution networks (storage tanks, pipe-lines, etc.), normally due to cracks or fractures in the system or general wear and tear, lead to the loss of millions of litres of drinking water every year and, as a result, a waste of this precious resource and economic damage.

Mapei offers complete systems to solve these types of problem, from repair work on substrates to the application of protective, impermeable membranes.

Suspended water tank - Rovigo - Italy



AP Padova aqueduct
Milan - Italy



COMPENSATION BASINS CONTAINING DRINKING WATER FROM A PIPE-LINE

CHARACTERISTICS OF THE SYSTEM

- **Rapidity:** **Mapecoat DW 25** sets to light foot traffic in 24 hours.
- **Mechanical strength:** **Mapecoat DW 25** adheres well to concrete.
- **Chemical resistance:** resistant to slightly aggressive chemical agents.
- **Resistance to abrasion:** high.
- **Suitability for drinking water:** according to tests carried out in compliance with Italian Ministerial Decree No. 174 issued 06-04-2004, Chapter 2 art.5, **Mapecoat DW 25** may be used in static captation, treatment, integrating and distribution systems for water for human consumption. **Mapecoat DW 25** is also certified and complies with the requirements of EU 10/2011 Regulations for materials in contact with foodstuffs.
- **Impermeability:** excellent.
- **Safety:** **Mapecoat DW 25** is certified class Bfl-s1 fire resistant according to EN 13501-1 standards.

PRODUCT SYSTEM

- 1 Concrete structure
- 2 Structural mortar for repairing reinforced concrete **Planitop Rasa & Ripara R4**
- 3 Cementitious anti-corrosion mortar **Mapeter 1K**
- 4 Primer **Triblock P** (2 coats)
- 5 Epoxy paint suitable for contact with drinking water **Mapecoat DW 25** (2 coats)



WATERPROOFING DRINKING WATER TANKS



CHARACTERISTICS OF THE SYSTEM

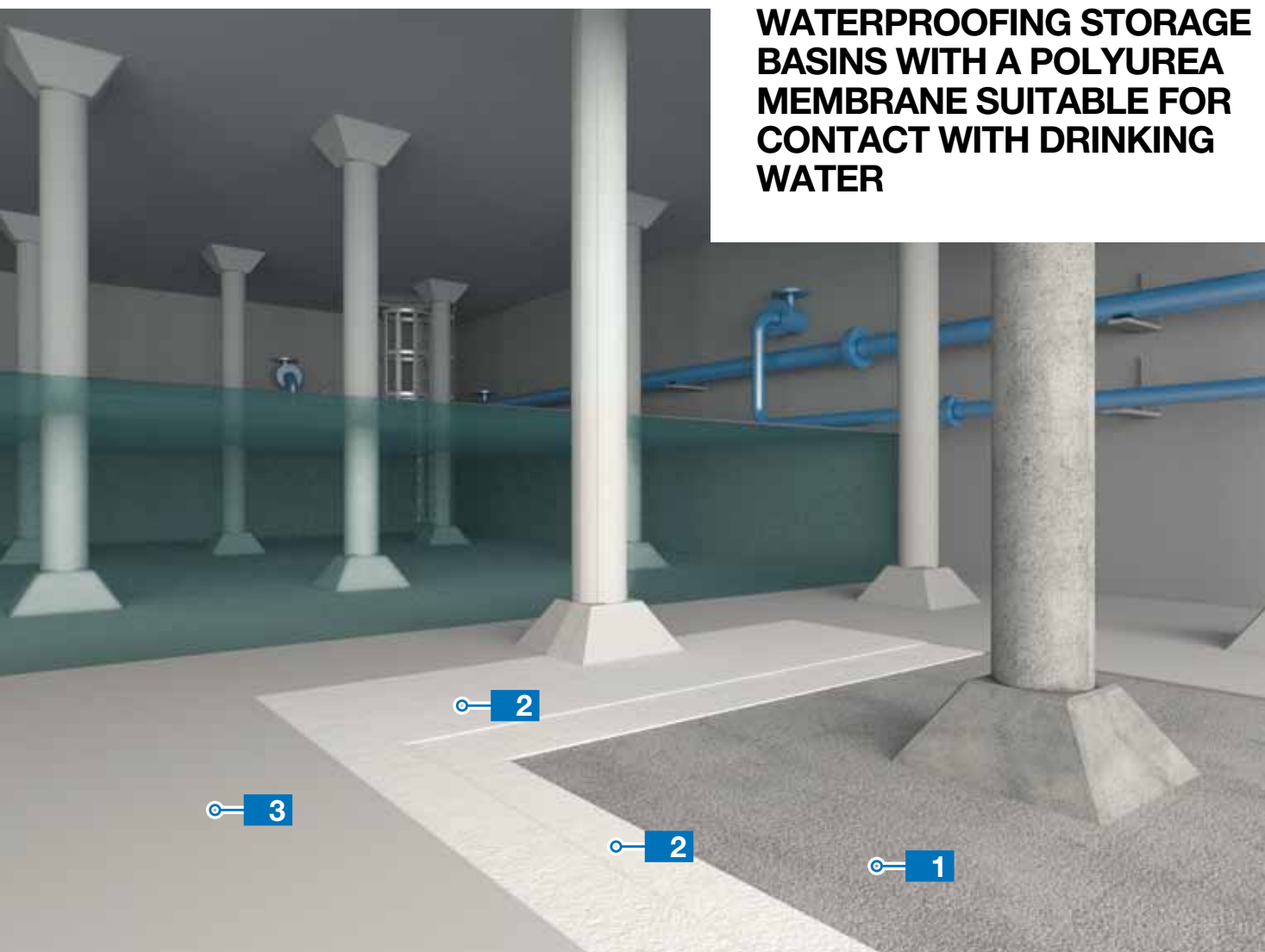
- **Mechanical strength: Idrosilex Pronto** adheres well to rigid concrete structures with no movements.
- **Suitability for drinking water: Idrosilex Pronto** is certified as a product suitable for contact with drinking water according to Italian Ministerial Decree 174 issued 6/4/2004.
- **Impermeability:** excellent. Surfaces treated with **Idrosilex Pronto** are characterised by their total impermeability, including to water in slight counter pressure.

PRODUCT SYSTEM

- 1 Concrete structure
- 2 Evening of the substrate with two-component cementitious mortar **Mapefinish**
- 3 Waterproofing layer of osmotic cementitious mortar suitable for contact with drinking water **Idrosilex Pronto** (2 coats)



WATERPROOFING STORAGE BASINS WITH A POLYUREA MEMBRANE SUITABLE FOR CONTACT WITH DRINKING WATER



CHARACTERISTICS OF THE SYSTEM

- **Rapidity:** rapid waterproofing by spray-applying a pure polyurea-based membrane.
- **Mechanical strength: Purtop 1000** guarantees excellent tensile and tear strength, particularly high elongation at failure of more than 350% and high crack-bridging capacity, including at low temperatures. No reinforcement required. The excellent mechanical properties make this membrane highly elastic.
- **Chemical resistance:** high.
- **Resistance to abrasion:** high.
- **Suitability for drinking water: Purtop 1000** is certified as a product suitable for contact with drinking water according to Italian Ministerial Decree 174 issued 6/4/2004. It is characterised by its low global migration value (less than 11 mg/kg) and is resistant to root penetration according to CEN/TS 14416.
- **Impermeability:** high and immediate.

PRODUCT SYSTEM

- 1 Concrete structure
- 2 Primer **Triblock P**
- 3 Pure polyurea-based waterproofing membrane **Purtop 1000**



DETAIL OF PRODUCTS AVAILABLE



KERAPOXY IEG

- Two-component, anti-acid epoxy resin-based mortar for grouting tile joints at least 3 mm wide.
- Very low emission level of volatile organic compounds.
- Very strong with high resistance to chemicals.
- Resistant to oleic acid and aromatic hydrocarbons, including at high temperatures.
- Used to make floors, worktops, etc. in compliance with the HACCP management system and the requirements of regulation EC 852/2004 regarding hygiene for food and drinks.
- Smooth, compact, non-absorbent, easy-to-clean surface.
- Available in colours 113 and 130 from the standard range.
- For ceramic floors in the foodstuffs industries such as processed meat plants, oil mills, etc.



KERAPOXY CQ

- Two-component, anti-acid epoxy resin-based mortar.
- Very low emission level of volatile organic compounds.
- Mould-resistant with BioBlock® technology: stops the proliferation of bacteria and the formation of mould on the surface of grouted joints, making the surface of tiles hygienic and safe.
- Certified by the University of Modena (Italy) according to ISO 22196:2007 standards as a grouting mortar protected against the formation and proliferation of micro-organisms.
- Makes floors, walls, worktops, etc. in compliance with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.
- Easy to apply.
- Very strong with high resistance to chemicals.
- Excellent workability and easy to clean.
- Excellent resistance to heavy traffic.
- Available in 21 different colours.
- For industrial ceramic floor and wall tiling where high strength and a high level of hygiene are required.
- May also be used for bonding.



ULTRACOLOR PLUS

- High performance mortar for joints from 2 to 20 mm wide.
- Anti-efflorescence and resistant to mould (BioBlock®).
- Water-repellent (DropEffect®).
- Polymer-modified.
- Available in 30 different colours.
- For internal and external use.
- For all types of ceramic, stone, glass mosaic and marble floors and wall coverings.
- For swimming pools.



Iper supermarket - Varese - Italy



Roxane bottling plant - Merignies - France



Westin Diplomat Resort & SPA
Hollywood - USA



PURTOP 1000

- Two-component pure polyurea membrane.
- Solvent-free.
- Excellent mechanical properties.
- Instant waterproofing and set to light foot traffic.
- Applied in situ by spray using a high-pressure, bi-mixer type pump to form waterproof coatings.
- Suitable for contact with drinking water according to Italian Ministerial Decree 174 issued 6/4/2004.
- Global migration value less than 11 mg/kg.
- Used for the following: storage tanks, channels, water towers and hydraulic structures in general.



IDROSILEX PRONTO

- Osmotic cementitious mortar suitable for contact with drinking water.
- Waterproofs masonry and concrete structures, foundation walls, basements, rooms below ground level, lift shafts, swimming pools, channels and water tanks (including for drinking water).
- Application by brush, trowel and mortar pump.
- Complies with the requirements of Italian Ministerial Decree No.174 issued 06-04-2004 for components in contact with drinking water.



MAPECOAT DW 25

- Two-component epoxy paint for coating concrete surfaces.
- When completely hardened resists the action of saturated solutions and slightly aggressive acids.
- For contact with food and drinks in compliance with Regulation EU 10/2011.
- For contact with drinking water, may be used in static captation, treatment, integration and distribution networks for water for human consumption in compliance with the requirements of Italian Ministerial Decree No. 174 Chapter 2, Art. 5 issued 06-04-2004.
- Certified according to EN 13501-1, fire-resistance class Bfl-s1.
- Suitable for protecting floors in the food and drinks industries in processing and production areas, concrete water tanks and pipes for slightly aggressive chemical substances and storage tanks used to contain drinking water.



Aqueduct Olma
Olomuc - Czech Republic



Brewery - Cerna Hora - Hungary



Coop supermarket
stockhouse - Rome - Italy



Linea Azzurra S.r.l. fish production
plant - Genoa - Italy



- **Technical documentation**

From the technical area menu you can view the technical documentation divided per product lines and type of document.

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