GROUTS AND SEALANTS

for installing ceramic tiles and stone material
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for installing ceramic tiles and stone material

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Elegant marble floors, porcelain with a design finish, refined mosaics: every type of covering is more complete with the right grouting. A technical detail that plays a key role in the functionality and durability of surfaces which, at the same time, offers us the chance to be creative and to create an ambience with its own unique character and personality.

Through its extensive range of coloured grouts, Mapei has found the way to meet the requirements of such a well-established market, the ceramic and natural stone market, one which is in constant evolution with the development and introduction of new materials, new types of tiling and increasingly higher expectations in terms of functionality and aesthetics.

From refined, elegant spaces in hotels and public spaces to damp surroundings such as bathrooms and swimming pools, from façades covered with large format stone and porcelain tiles to commercial and industrial settings used by intense levels of traffic and exposed to aggressive chemicals: Mapei has the capacity to propose the most appropriate solution for any situation and to guarantee performance properties, durability and aesthetics while safeguarding the healthiness of the surroundings, in line with the concept of a more sustainable building industry.
Five colour collections with more than 50 different shades specially created to match contemporary design trends. The most subtle of variations that evoke purity and tranquillity, the more classic, natural colours of the earth, or bright, sparkling colours to express character in bolder settings.

The coloured grouts collections by Mapei will always help you make the best choice and meet the design requirements and preferences of the final client.

**SERENE**
- Transparent 999
- White 100
- White 799
- Ice White 710
- Translucent 700
- Moon White 103
- Manhattan 2000 110
- Silver Grey 111
- Crocus Blue 170
- Caribbean 137
- Cream 290
- Vanilla 131
- Tormaline 182

**TRADITIONAL**
- Medium Grey 112
- Bardiglio Grey 282
- Pearl Grey 720
- Dark Grey 728
- Cement Grey 113
- River Grey 115
- Musk Grey 116
- Tornado 174
- London Grey 119
- Anthracite 114

**NATURAL**
- Sahara Yellow 729
- Sand 133
- Silk 134
- Golden Dust 135
- Liquorice 152
- Brown 142
- Cappuccino 147
- Mud 136
- Terracotta 143

**ROMANCE**
- Jasmine 130
- Beige 2000 132
- Almond 138
- Pink Powder 139
- Caramel 141
- Violet 162

**GLAMOUR**
- Turquoise 171
- Space Blue 172
- Yellow 150
- Terra di Siena 145
- Chocolate 144
- Volcano Sand 149
- Black 120
- Lime Green 183
- Ocean Blue 173
- Sea Blue 283
- Mustard Yellow 151
- Rich Brown 146
- Cherry Red 165

Due to the printing processes involved, the colours should be taken as merely indicative of the shades of the actual products.
Classification of mortars for grouting ceramic and stone material according to EN 13888 standards

As with adhesive, a grouting product must be chosen so that it meets well defined requirements which vary according to where it is being installed, its final type of use and the type of covering material. Euronorm EN 13888 divides grouting mortars into cementitious grouts (CG) and epoxy grouts (RG). Cementitious grouts are divided into two main classes CG1 (normal) and CG2 (improved), which are followed by special classes A (high abrasion resistance) and W (low water absorption).

Cementitious grouting mortars

Normal (CG1)
They may be considered sufficient for installing ceramic or porcelain tiles not subject to excessive variations in temperature and humidity in residential and commercial environments.

Improved (CG2)
Specially developed to adapt to various site conditions, they have numerous advantages compared with class C1 grouts:
• Resistance to temperature variations
  (installation on heated substrates or external substrates).
• Good compatibility with deformable adhesives
  (such as when installing large format tiles).
In addition to traditional applications, they are therefore recommended for areas subject to high humidity and thermal shock or intense traffic, conditions typically found in high-intensity commercial and industrial environments.

Class A – High abrasion resistance
It is required when the area is subject to intense foot or trolley traffic such as in supermarkets.

Class W – Low water absorption
W class products are recommended for installations subject to continuous immersion in water, such as tiling in fountains and swimming pools.

Epoxy grouting mortars

Two-component epoxy resin-based products.

Advantages
• High mechanical resistance.
• High resistance to aggressive chemicals.

Epoxy grouting mortars are normally used when particularly hygienic surfaces are required, or if there are particular strength or chemical resistance requirements. They are particularly suitable in industrial environments. In the residential sector they are used in bathrooms, kitchens and all those areas where total cleanability of the joints is important.

Beyond the regulation

All Mapei epoxy grouts meet all the requirements for the RG classification.
The use of Mapei epoxy grouts allows floors, walls, worktops, etc. to comply with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.
Classification of mortars for grouting architectural stone paving according to UNI 11714-1

As for installation, also the choice of grouting has to meet precise requirements, which vary according to surrounding conditions, stress related to the use and the type of stone material. UNI 11714-1 standard requires design consistency between the characteristics of installation and the filling of joints: compact bedding shall feature compact fillings, while loose bedding joints shall make use of elastic-pervious products or systems. This is why regulations specify the types of grouting that are compatible with compact and loose bedding for the various environments and the relevant load class when in use.

**Grouts for compact bedding paving: pre-blended mortars**

Current standard provides for the use of pre-blended mortars for grouting paving with compact bedding in case of intense vehicle traffic (P9) and recommends them in any other case.

**Advantages**
- High mechanical strength.
- High resistance to freezing/thawing.
- High resistance to de-icing salts.
- High resistance to sea spray and aerosol.
- Reopening to vehicular traffic in short times.

**Joints for loose-filled paving: polyurethane resins**

Current standard provides for the use of polyurethane resins for grouting loose-filled paving, elastic and pervious, on small blocks, cobblestones and paving bricks, for any kind of traffic.

**Advantages**
- Highly pervious.
- High flexibility.
- High mechanical strength.
- High resistance to freezing/thawing.
- High resistance to de-icing salts.
- High sound-absorbing capacity.
- No need for expansion joints or distribution joints.
- Reopening to vehicular traffic in short times.
Calculating the correct width for grouts

According to current standards, tiling should be installed with grouts at least 2 mm wide and their width must be increased according to the type of use and the design loads and stresses when in service. For architectural stone paving, according to UNI 11714-1 standard, when installed in external surroundings, grouts must be at least 5 mm wide and their width must be increased according to the dimensional tolerances and morphology of the stone tiles or slabs, the type of use and the design loads and stresses when in service.

Butting adjacent slabs or tiles or leaving no gap is not permitted.

Forming joints

According to current standards, apart from respecting the position of structural joints, control joints and expansion joints must also be included. When installing tiles or slabs on internal surfaces, perimeter deformation joints and control joints must be created every 24-25 m² for ceramics and every 20-25 m² for stone. When installing tiles or slabs on external surfaces, the surface must be divided into areas of maximum 9-12 m² for ceramics and 16 m² for stone. As a general guide, joints must be between 5 mm and 12 mm wide.

For architectural stone paving, according to UNI 11714-1 standard, when installing on a compact installation bed, apart from respecting the position of structural joints, control joints and expansion joints must also be included. In order to prevent the formation of uncontrolled cracks, joints must be installed in correspondence of slope variations, vertical corners and any other interruption on the horizontal surface. Deformation joints must be created around the perimeter, in correspondence with any changes in slope and in any particular points and control joints must be created at least every 25 m². As a general guide, joints must be between at least 10 mm wide. The width of the joint must be calculated according to the amount of movement expected and the deformability of the sealant product specified.
Grouts: the first step to ensure durability of flooring

Installations designed with grouts of the correct dimensions are very important in order to obtain flooring which is even, strong, resistant and durable.

Ceramic or stone flooring, particularly large format tiles or slabs installed on external surfaces

• Tile joints reduce the modulus of elasticity and, therefore, the stiffness of the tiling. The tiling installed by butting the tiles together is comparable to a stiff, seamless surface as if it were a single tile. When tiles are installed with “open” joints, each of the tiles has a certain degree of movement. This characteristic helps the tiling withstand the possible movement of the substrate (due to movements in the floor or dimensional instability in the substrate) and, therefore, provides protection against the risk of cracking, tiles lifting or becoming detached from the floor.

• Any steps between tiles have less of an impact. The maximum acceptable step between tiles is 1 mm for joints up to 6 mm wide for ceramics and 3 mm for stone material, and 2 mm for joints wider than 6 mm. As the width of the joint increases, the maximum acceptable step also increases.

• Installing tiles with large joints allows the amount of filler, or grout, in the joints to be calibrated correctly. This leads to advantages, such as the durability of the grout and its aesthetic, mechanical and functional characteristics.

Architectural stone paving

• Grouts are required to tie the stone elements to each other and to the installation bed, so they form a monolithic architectural paving (for compact bedding installations) or an elastic, pervious paving (for loose bedding installations).

• The width and depth of grouts determine the effectiveness of grouting products, which must fill them completely in order for them to reach the aesthetic, mechanical and functional properties required when in service.

• The width of grouts must be such that they allow both the aesthetic and functional requirements to be achieved.

• In the case of movements in tiling, or if access is required to plant equipment under the tiling, a large grout allows the grout to be removed and to preserve the condition of the flooring element. In fact, grouts may be filled quite easily with fresh grouting material without compromising the overall appearance of the flooring.

For these and many other reasons, installing tiles with a wide joint is a requirement of current standards.
Mapei has improved their range of grouting products by including cutting-edge technology which increases their performance properties, durability and uniformity of colour, thereby guaranteeing that grouts maintain their aesthetic qualities over the years.

**DropEffect®**

*Easy to clean non-absorbent grouts*

The quality of grouts is essential for the cleanability and maintenance of surfaces. Mapei grouts with DropEffect® technology absorb less dirt and are easy to clean and their colour remains stable over the years. In fact, thanks to this special technology, they are less absorbent to liquids and are water-repellent. Liquids deposited on the surface are not absorbed but remain on the surface in the form of droplets, so joints are much easier to clean before stains are formed.

**BioBlock®**

*Put a stop to mould for more hygienic and healthier surfaces*

The proliferation of bacteria on the surface of grouts, especially in damp environments such as bathrooms and saunas, may lead to the formation of moulds and fungi. In addition to causing an unsightly finish, these can be harmful for the health of final users. This is why the Mapei Research and Development has developed BioBlock® technology: molecules of special organic material distributed throughout the microstructures of the grout that impede the formation and proliferation of the microorganisms that cause mould. And in so doing, tiled surfaces are healthier and more hygienic and maintain their appearance and finish over the years.

**Stable and uniform colour**

*Guaranteed over time*

In order to meet the aesthetic requirements of end users, the colour of grouts is undoubtedly one of the main features. Mapei grouts are available in a wide variety of colours, more than 50 if we consider the various cementitious and epoxy products. The durability and uniformity in colour of Mapei grouts are guaranteed by their special formulation and the use of pigments which remain stable if subjected to UV rays or other atmospheric phenomena.

All our products undergo accelerated ageing tests using a weatherometer, an instrument used to assess the reaction of products exposed to sunlight, rain and temperature variations. All Mapei grouts are also subjected to rigorous quality control tests in compliance with the ISO 9001 system. A spectrophotometer is used to check the colour of cementitious and epoxy grouts before they are put on sale to make sure they comply with Mapei quality standards and that every production batch is the same.

**Anti-efflorescence**

*Stop to unaesthetic white stains*

Efflorescence, the typical white streaks that can form on the joints’ surface, is one of the most common and unsightly defects on ceramic tiling. The presence of calcium hydroxide through the joints is typical of formulas that contain Portland cement. The binder in Ultracolor Plus does not contain Portland cement, which makes the product immune from the formation of efflorescence, ensuring maximum colour stability.

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*Spa Rudas, Budapest, Hungary*
Environmental sustainability

Every year Mapei dedicates part of its resources into research and development. It actively promotes sustainability by adhering to international programmes and organisations, including the LEED protocol – Leadership in Energy and Environmental Design – developed by the US Green Building Council to provide guidance on the design of eco-sustainable buildings.

Mapei products help earn important LEED credits thanks to their EPDs (Environmental Product Declaration) and their Emicode certification for materials with a very low emission level of volatile organic compounds.

Thanks to EPD’s, in Italy, Mapei products comply with the requirements of CAM (Criteri Ambientali Minimi - Minimum Environmental Criteria for design services and the construction and renovation of public buildings) aimed at identifying sustainable design solutions by evaluating the entire life-cycle of the products used.

Mapletree Business City 2, Singapore
Construction of a new, ultramodern and sustainable business district.

Mapei played a leading role in this innovative project with many products for the preparation of substrates and the installation of both interior and exterior tiling. Granite tiles in several areas such as walkways, car parks and courtyards, were installed using Keraflex Maxi S1 and grouted with Keracolor GG. Mapei products used in some exterior works: Topcem Pronto, Kerapoxy, Keraflex Maxi S1, Keracolor GG, Mapleflex PU50 SL, Primer PU 60.
Grouts for ceramics and stone material chart

<table>
<thead>
<tr>
<th>Cementitious grouts</th>
<th>Epoxy grouts</th>
<th>Polymer grouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULTRACOLOR PLUS</td>
<td>KERA COLOR FF</td>
<td>KERA COLOR GG</td>
</tr>
</tbody>
</table>

1. Identify the area of use
2. Choose the product

<table>
<thead>
<tr>
<th>Joint width in mm</th>
<th>from 2 to 20</th>
<th>from 2 to 6</th>
<th>from 2 to 15</th>
<th>from 2 to 4</th>
<th>from 2 to 7</th>
<th>from 2 to 20</th>
<th>from 3 to 20</th>
<th>from 2 to 10</th>
<th>from 2 to 8</th>
<th>from 10</th>
</tr>
</thead>
</table>

**External Use**
- Balconies and terraces
- Façades
- Swimming pools

**Internal Use**
- Heated floor
- Residential environments
- Public buildings
- Commercial environments
- Foodstuffs industries
- Areas subject to intense traffic
- Kitchens
- Damp environments

Grouts for architectural stone paving chart

<table>
<thead>
<tr>
<th>Compact bedding Pre-blended mortars</th>
<th>Loose bedding Polyurethane resins</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the area of use</td>
<td>2. Scegli il prodotto</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint width in mm</th>
<th>≥ 5</th>
<th>≥ 5</th>
<th>≥ 5</th>
<th>≥ 5</th>
<th>≥ 5</th>
</tr>
</thead>
</table>

**Stone element type**
- Small blocks
- Cobblestones
- Paving bricks
- Tiles/slabs with a regular cut shape
- Tiles/slabs with an irregular section
- Blocks

**Surrounding conditions**
- Freezing/thawing
- De-icing salts
- Sea spray
- Large day/night temperature variations

**Classes of use**
- P4 - External paving for pedestrian, residential use only
- P5 - Public/commercial external paving for pedestrian and cycle use
- P6 - Public/residential paving for pedestrian and light vehicle use
- P7 - Paving of pedestrian areas, square markets occasionally used for emergency deliveries
- P8 - Paving of pedestrian areas often used by heavy vehicles
- P9 - Paving of streets and lanes

**Suitable product**

Identify the area of use
Choose the product

**MAPEI SUGGESTION**

Suitable product

Scegli il prodotto
Sealants chart

External Use
- Balconies and terraces
- Façades
- Swimming pools
- External courtyards
- Cracks
- Joints between different materials
- Fitting/glass joints
- Fitting/wall joints

Internal Use
- Structural joints
- Cracks
- Joints for industrial floors
- Joints for civil floors
- Joints with kitchen tops
- Joints for stone floorings
- Tile joints
- Sanitary joints for bathrooms
- Fitting/glass joints
- Fitting/wall joints
- Bonding of skirtings and doorsteps

Architectural paving – Classes of use
- P4 - External paving for pedestrian, residential use only
- P5 - Public/commercial external paving for pedestrian and cycle use
- P6 - Public/residential paving for pedestrian and light vehicle use
- P7 - Paving of pedestrian areas, square markets occasionally used for emergency deliveries
- P8 - Paving of pedestrian areas often used by heavy vehicles
- P9 - Paving of streets and lanes

Sealant deformability
- Joint movement ≤ 10% of width
- Joint movement > 10% ≤ 20% of width
- Joint movement ≤ 25% of width

Type of sealant
- High-flowing
- Thixotropic

Colour chart

Mapei Coloured Grouts

External Use
- Balconies and terraces
- Façades
- Swimming pools
- External courtyards
- Cracks
- Joints between different materials
- Fitting/glass joints
- Fitting/wall joints

Internal Use
- Structural joints
- Cracks
- Joints for industrial floors
- Joints for civil floors
- Joints with kitchen tops
- Joints for stone floorings
- Tile joints
- Sanitary joints for bathrooms
- Fitting/glass joints
- Fitting/wall joints
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Architectural paving – Classes of use
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Sealant deformability
- Joint movement ≤ 10% of width
- Joint movement > 10% ≤ 20% of width
- Joint movement ≤ 25% of width

Type of sealant
- High-flowing
- Thixotropic

Due to the printing processes involved, the colours should be taken as merely indicative of the shades of the actual products.
With Mapei coloured grouts collection it is possible to find the ideal solution for every project. A wide variety of colours is available. Choose the best solution for your needs from among cementitious, epoxy and paste grouts.

**Mortars for cementitious grouts**

A complete range of grouts for all types of ceramic, stone and glass mosaic coverings. They are ideal for residential and commercial use.

- Ultracolor Plus
- Keracolor FF
- Keracolor GG
- Keracolor SF

**Mortars for epoxy grouts**

They are particularly suitable when particular requirements for hygiene and resistance to aggressive chemicals are required. They are ideal in industrial environments, where very high resistance to chemicals and high strength is required.

- Kerapoxy
- Kerapoxy Design
- Kerapoxy CQ
- Kerapoxy P
- Kerapoxy IEG

**Mortars for polymer grouts**

Ready and easy to use.

- Flexcolor
- Fix & Grout Brick
A complete range of grouts for all types of ceramic, stone and glass mosaic floors and walls. For internal and external use. The ideal choice for residential use (bathrooms, kitchens, swimming pools, external façades, balconies and terraces) and for commercial environments (supermarkets, restaurants, airports and public buildings). They are also suitable for grouting floors in industrial environments.
Ultracolor Plus

Mapei safe, mould-resistant and water-repellent coloured grout

High-performance, anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent DropEffect® and mould-resistant BioBlock® technology for grouting joints from 2 to 20 mm wide.

WHERE TO USE
• All types of ceramics.
• Marble and stone material.
• Marble and glass mosaic.
• Interior and exterior use.
• Floors and walls.
• Swimming pools, façades and balconies.
• Floors and walls in areas subject to intense traffic (airports, shopping centres, restaurants, etc.).

AREAS OF USE

DESCRIPTION

MOULD-RESISTANT
BioBlock® technology prevents the formation of the microorganisms that form mould at the root.

WATER-REPELLENT
Low dirt pick-up. The DropEffect® technology reduces water and liquid absorption making grouts easier to clean.

ANTI-EFFLORESCENCE
It does not form any efflorescence and guarantees that colours remain uniform without stains and remain stable over the years.

QUICK-SETTING AND DRYING
Set to light foot traffic after 3 hours, quickly ready for use.

HIGH RESISTANCE
Excellent resistance to abrasion, compression, flexural stress and to freeze-thaw cycles.

34 COLOURS
Colours are resistant to UV rays and atmospheric agents.

GOOD RESISTANCE TO ACIDS

COLOURS: 34
EMICODE: EC1 Plus - very low emission
STORAGE: 12 months (for 23 kg bags)
24 months (for 2 and 5 kg bags)
CONSUMPTION: According to the size of the joints
PACKAGING: 23 kg bags
4x5 kg or 8x2 kg Alupack boxes depending on the colour

POT LIFE OF MIX: 20-25 minutes
WAITING TIME FOR FINISHING: 15-30 minutes
SET TO LIGHT FOOT TRAFFIC: 3 hours
READY FOR USE: After 24 hours (48 hours for swimming pools)

CERTIFICATIONS & TECHNOLOGIES

Dallara Academy, Varano De’ Melegari, Italy
Exhibition area and education and training centre of Dallara Automobili.
A building with a daring design, composed of a system of geometric figures, it was awarded as the Best Future Building at the 2017 ABB Leaf Awards in London. For tiling the three outdoor cones, special three-dimensional ceramic tiles (10x10 cm) were used. These tiles were installed with Ultrabond Eco PU 2K or Kerabond+Isolastic and grouted with Ultracolor Plus. Elastic joints were installed to control thermal expansions, using Mapesil LM silicone sealant.
Former Zedda-Piras distillery area, Cagliari, Italy
Transformation of the Zedda Piras industrial area into a multifunctional space.

The exterior tiling of façades, consisting of 1000x3000 mm ceramic slabs cut in different shapes, was installed using the light weight, highly-deformable cementitious adhesive Ultralite S2. The joints between slabs were grouted with the anti-efflorescence, water-repellent and mould-resistant cementitious mortar Ultracolor Plus. The neutral, mould-resistant silicone sealant Mapesil LM, ideal for façades, was used for sealing expansion joints.
New Istanbul airport, Turkey

From Terminal 1 to the Central Tower: Mapei products in the world’s largest airport.

In the Terminal 1 building, the water-repellent, cementitious mortar Keracolor FF, ideal for grouts up to 6 mm, was used for grouting large format tiles (120x60 cm). Elastorapid, high-performance, two-component, highly deformable, cementitious adhesive, was used for bonding tiles in some areas.
Masjid Negara (National Mosque),
Kuala Lumpur, Malaysia

Renovation works: waterproofing and installation of covering on roofs, domes and pyramids.

After having primed the surfaces with Primer SN, they were waterproofed with Purtop 1000 and grouted with Keracolor FF

- Fugolastic. The mosaic tiles on the dome and pyramids were bonded with Kerapoxy and grouted with Keracolor FF
- Fugolastic.
Keracolor GG

Coloured cementitious mortar ideal for terracotta and natural brick

Pre-blended, high-performance polymer-modified cementitious mortar for grouting joints from 4 to 15 mm. Mixed with the Fugolastic admixture, it reaches a level of strength which makes it suitable for severe in-service conditions (grouting of façades, swimming pools, bathrooms and floors subject to intense traffic).

DESCRIPTION

WHERE TO USE

• All types of ceramics.
• Suitable for terracotta.
• Exposed brick.
• Stone material.
• Interior and exterior use.
• Floors and walls.
• External façades, balconies, terraces and swimming pools.
• Grouting floors with a rustic finish.
• Ceramic industrial flooring where resistance to chemicals is not required (garages, warehouses, etc.).

COLOURS

14

EMICODE

EC1 Plus - very low emission

STORAGE

12 months (for 22-25 kg bags)
24 months (for 5 kg bags)

CONSUMPTION

According to the size of the joints

PACKAGING

25 kg bags,
4x5 kg Alupack boxes
depending on the colour

POT LIFE

OF MIX

Approx. 2 hours

WAITING TIME

FOR FINISHING

10-20 minutes

SET TO LIGHT

FOOT TRAFFIC

Approx. 24 hours

READY

FOR USE

7 - 10 days

DURABLE AND STRONG

Good resistance to abrasion, compression, flexural stress and freeze-thaw cycles.

UNIFORM GROUTS, WITHOUT CRACKS

Keracolor GG mortar is characterised by a low shrinkage rate which means it does not form cracks.

GOOD RESISTANCE

TO ACIDS

GOOD PRICE-PERFORMANCE RATIO

AREAS

OF USE

CERTIFICATIONS

& TECHNOLOGIES

Mont Blanc SkyWay. Courmayeur, Italy

Mont Blanc New Cableways - complete reconstruction of the three ski lifts.

In the three stations of the cableway (Pontal d’Entrèves, Pavilion du Mont Frèty and Punta Helbronner, the arrival station with a panoramic terrace, at an altitude of 3,466 m) the coverings and the floor porcelain tiles of different format were bonded with Ultralite S1.

Floors and wall coverings were grouted with Keracolor GG.
**Keracolor SF**

**DESCRIPTION**

**Fine-grained mortar for smooth and glossy surfaces**

Fine-grained, high-performance, white cementitious mortar for grouting **joints up to 4 mm**. Mixed with the Fugolastic admixture, it reaches a level of strength which makes it suitable for severe in-service conditions (grouting façades, swimming pools, bathrooms and floors subject to intense traffic). It may also be used for grouting joints in marble floors to be polished on site.

<table>
<thead>
<tr>
<th>POT LIFE OF MIX</th>
<th>WAITING TIME FOR FINISHING</th>
<th>SET TO LIGHT FOOT TRAFFIC</th>
<th>READY FOR USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. 2 hours</td>
<td>10-20 minutes</td>
<td>Approx. 24 hours</td>
<td>7 days</td>
</tr>
</tbody>
</table>

**COLOURS**

White

**EMICODE**

EC1 Plus - very low emission

**STORAGE**

12 months (for 22 kg bags)
24 months (for 5 kg bags)

**CONSUMPTION**

According to the size of the joints

**PACKAGING**

22 kg bags,
4x5 kg Alupack boxes

**WHERE TO USE**

- All types of ceramics.
- Stone material and pre-polished marble.
- Glass and pre-finished marble mosaic.
- Interior and exterior use.
- Floors and walls.
- Ideal for particularly smooth and glossy surfaces (polished porcelain, pre-polished marble, etc.).
- Ideal for grouting thin joints.

**CERTIFICATIONS & TECHNOLOGIES**

**DURABLE AND STRONG**

Good resistance to abrasion, compression, flexural stress and freeze-thaw cycles.

**EASY TO CLEAN**

Smooth and compact final surface, with very smooth texture and low water absorption, easy to clean.

**UNIFORM GROUTS, WITHOUT CRACKS**

Keracolor SF mortar is characterised by a low shrinkage rate which means it does not form cracks.

**GOOD RESISTANCE TO ACIDS**

**GOOD PRICE-PERFORMANCE RATIO**

### AREAS OF USE

- Floors and walls.
- Grouting joints up to 4 mm.
- Ideal for particularly smooth and glossy surfaces (polished porcelain, pre-polished marble, etc.).
- Ideal for grouting thin joints.

**St. Regis Hotel, Kuala Lumpur, Malaysia**

*Construction of a luxury hotel.*

Mapei adhesives and grouts were selected for installing refined floors and wall marble coverings of high quality in the 208 hotel rooms (22,000 m²). In particular, Keraflex, Keracolor Maxi S1 and the mortar Keracolor SF, ideal for grouting marble and smooth and shiny surfaces, were used.
Thanks to their technical characteristics, epoxy grouts are particularly suitable when demanding requirements for hygiene and resistance to chemicals are needed. They are used in residential and commercial environments to guarantee a highly attractive and decorative finish and no absorption along with good performance figures. They are suitable also in all industrial environments where very high chemical resistance and high mechanical strength are required, together with resistance to acids and hydrocarbons, such as for floors in the foodstuffs industries (cured meat factories, oil mills, etc.).
Kerapoxy

**DESCRIPTION**
Epoxy mortar suitable for kitchens and for the foodstuffs industry

Two-component, high-performance, acid-resistant epoxy mortar and adhesive with no vertical slip for laying and grouting ceramic tiles and stone material (minimum width of joints 3 mm). Available in 20 colours.

**POT LIFE OF MIX**
45 minutes

**SET TO LIGHT**
Approx. 24 hours

**FOOT TRAFFIC**
Approx. 24 hours

**READY FOR USE**
4 days
Surfaces can undergo chemical attack after 4 days

**COLOURS**
20

**EMICODE**
EC1 Plus - very low emission

**STORAGE**
24 months

**CONSUMPTION**
According to the size of the joints

**PACKAGING**
10-15 kg kits and 12x2 kg boxes

**AREAS OF USE**

- Ceramics
- Stone material
- Interior and exterior use
- Floors and walls
- Can also be used as an adhesive
- Ideal for foodstuffs industries (dairies, abattoirs, breweries and wine-cellars…), kitchen worktops, laboratory benches, where a high level of hygiene is required.
- Ideal for grouting industrial floors where high mechanical resistance and resistance to acid attack is required.
- Swimming pools, including with salt or thermal water, and tanks containing chemically aggressive water (purification plants)

**EXCELLENT RESISTANCE TO ACIDS**
Suitable for industrial environments exposed to aggressive chemicals.

**HIGH MECHANICAL STRENGTH**
Particularly suitable for commercial and industrial environments subject to heavy traffic.

**WATERPROOF AND HYGIENIC GROUTS**
The surface of grouts is smooth, compact and waterproof and does not absorb any dirt, which means they are more hygienic and easier to clean.

**EASY WORKABILITY AND FINISHING**

**SUITABLE FOR KITCHENS AND FOODSTUFFS INDUSTRIES**
Allows grouting floors and worktops in compliance with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.

**UNIFORM COLOUR THAT REMAINS STABLE OVER THE YEARS**
20 colours resistant to UV rays and atmospheric agents.

**CERTIFICATIONS & TECHNOLOGIES**

**Orientierungsschule Riaz, Switzerland**
Building of a new school.

Mapel contributed to the construction of the building by providing a wide range of products of different lines: admixtures for concrete, products for the installation of ceramic and wooden flooring, solutions for sports flooring.

150 m² of 10x10 tiles were installed in the school kitchen using Kerafix Plus LD Kerapoxy, epoxy mortar with EC1 Plus certification, was used for grouting. It is particularly recommended for use in foodstuffs processing environments, where high hygiene requirements and strength are required.

**CONVENTIONS**
- EN 13888
- CONFORME ALLA NORMA EUROP
- ATTIVA PE
- R FUGHE
- EN 12004
- CONFORME ALLA NORMA EUROPEA
- ADESIVO REA
- R2T

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Aquahouse Thermal & Beach, San Costantino and Elena, Bulgaria

Building of a spa facility by the sea.

Mapei products were used for waterproofing and installing floor and wall coverings in swimming-pools and interior areas. Specifically, Topcem, Mapelastic, Keraflex Maxi S1 and Kerapoxy epoxy mortar were used.
The Well, Sofiemyr, Norway

11 swimming pools, 15 saunas and Turkish baths, more than 100 showers, waterfalls, relaxation rooms and restaurants. With a surface of 10,500 m², The Well is the biggest spa in Northern Europe.

In this important project, Mapei products were used in all the different areas and in all the construction phases. All the swimming pools were waterproofed with Mapelastic. Mosaics and ceramic coverings were installed with Elastorapid, Adesilex P10 + Isolastic or Ultralite S1. Kerapoxy and Kerapoxy Design were used for grouting joints in damp environments, together with Mapesil AC, used for sealing joints.

Kerapoxy Design

**Add value to your spaces with Mapei decorative grouts**

Two-component, acid-resistant, decorative, translucent epoxy mortar for grouting highly attractive glass mosaic, ceramic tiles and stone material, used also in combination with MapeGlitter. It can also be used as an adhesive.

**POT LIFE OF MIX**

45 minutes

**SET TO LIGHT FOOT TRAFFIC**

Approx. 24 hours

**READY FOR USE**

4 days.

Surfaces can also undergo chemical attack after 4 days

**COLOURS**

32

**EMICODE**

EC1 Plus - very low emission

**STORAGE**

24 months

**CONSUMPTION**

According to the size of the joints

**PACKAGING**

3 kg kit

**FOR GROUTS WITH ATTRACTIVE DECORATIVE FINISH**

Decorative grout with translucent finish.

**WIDE RANGE OF COLOURS**

Available in 32 colours. Mixed with MapeGlitter, allows for a wider range of colours and sparkly grouts, for particular decorative effects.

**IDEAL FOR GLASS MOSAIC**

Thanks to its particularly fine-textured consistency and its translucent finish, it makes mosaics shinier.

**STABLE AND UNIFORM COLOUR**

Resistant to UV rays and aggressive atmospheric agents; colours are highly stable to guarantee that grouts have an even colour that remains stable over the years.

**WATERPROOF: IDEAL FOR SWIMMING POOLS AND SPA CENTRES**

Water-resistant grouts, suitable for grouting surfaces and coatings in swimming pools, Turkish baths, saunas and spa centres.

**ACID RESISTANT**

Excellent chemical resistance and mechanical strength, the final surface of the grout is smooth and compact, with no absorption, and ensures a high level of hygiene.

**WHERE TO USE**

- Decorative grouting.
- Ideal for glass mosaic.
- All types of ceramics.
- Stone material.
- Interior and exterior use.
- Ideal for showers, bathrooms, thermal facilities, Turkish baths.
- Swimming pools, especially recommended for salt or thermal water.
- Grouting decorative coverings in environments with a high aesthetic value.

**CERTIFICATIONS & TECHNOLOGIES**

**AREAS OF USE**

- Decorative grouting.
- Ideal for glass mosaic.
- All types of ceramics.
- Stone material.
- Interior and exterior use.
- Ideal for showers, bathrooms, thermal facilities, Turkish baths.
- Swimming pools, especially recommended for salt or thermal water.
- Grouting decorative coverings in environments with a high aesthetic value.

**COLOURED DURABLE ADHESIVE FOR CONCRETE FLOORING / WET ATOMIC SURFACES**

Kerapoxy Design is a coloured durable adhesive for concrete flooring and wet atomic surfaces.

**DESCRIPTION**

Add value to your spaces with Mapei decorative grouts

Two-component, acid-resistant, decorative, translucent epoxy mortar for grouting highly attractive glass mosaic, ceramic tiles and stone material, used also in combination with MapeGlitter. It can also be used as an adhesive.

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45 minutes

**SET TO LIGHT FOOT TRAFFIC**

Approx. 24 hours

**READY FOR USE**

4 days.

Surfaces can also undergo chemical attack after 4 days

**COLOURS**

32

**EMICODE**

EC1 Plus - very low emission

**STORAGE**

24 months

**CONSUMPTION**

According to the size of the joints

**PACKAGING**

3 kg kit

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**CERTIFICATIONS & TECHNOLOGIES**

**AREAS OF USE**

- Decorative grouting.
- Ideal for glass mosaic.
- All types of ceramics.
- Stone material.
- Interior and exterior use.
- Ideal for showers, bathrooms, thermal facilities, Turkish baths.
- Swimming pools, especially recommended for salt or thermal water.
- Grouting decorative coverings in environments with a high aesthetic value.
Spa Rudas, Budapest, Hungary
One of the most ancient thermal baths in Budapest, renewed and enriched with a modern and stunning spa for which Mapei products were used.

Several Mapei solutions were adopted for installing both interior and exterior mosaic and ceramics in swimming pools, saunas, Turkish baths, terraces and restaurants. Glass mosaics were installed, even on curved surfaces, with Kerabond + Isolastic, while Keraquick + Latex Plus was used for installing refined, heavy and large format tiles. Kerapoxy Design and Kerapoxy CQ were used for grouting mosaic and tiles in damp environments, while Mapesil AC and Mapesil LM were used for sealing joints.
Kerapoxy CQ

**DESCRIPTION**

Antibacterial and mould-resistant epoxy mortar

Two-component acid-resistant epoxy grout, easy to apply with excellent cleanability, bacteriostatic BioBlock® technology, ideal for grouting ceramic tiles and mosaics. Can also be used as an adhesive.

Product certified by the University of Modena according to ISO 22196:2007 standards as a grouting mortar protected against the formation and proliferation of micro-organisms.

**Technical Data**

- **POT LIFE OF MIX**: 45 minutes
- **SET TO LIGHT FOOT TRAFFIC**: Approx. 24 hours
- **READY FOR USE**: 4 days. Surfaces can undergo chemical attack after 4 days
- **COLOURS**: 19
- **EMICODE**: ECI Plus - very low emission
- **STORAGE**: 24 months
- **CONSUMPTION**: According to the size of the joints
- **PACKAGING**: 3 kg or 10 kg containers for the colours 113, 114, 132, 282, 283 and 100

**Areas of Use**

- **Antibacterial and mould-resistant**
  - Certified as an anti-bacterial and anti-microbe product. Thanks to BioBlock®, it prevents the proliferation of micro-organisms and the formation of moulds, ensuring the highest hygiene.
- **Acid Proof**
  - Suitable for commercial and industrial environments subject to heavy traffic and exposed to aggressive chemicals. It is acid resistant and has high mechanical strength.
- **Suitable for food and beverage**
  - Thanks to its anti-bacterial properties, it is suitable for the food and beverage industry and for kitchens where a high level of hygiene is required.
- **Waterproof and hygienic grouts**
  - The surface of grouts is smooth, compact and waterproof and does not absorb any dirt, which means it is more hygienic and easier to clean.
- **Excellent workability**
  - It has a creamier consistency than traditional epoxy mortars which makes application easier and quicker and surfaces are easier to clean after grouting.
- **Uniform colour that remains stable over the years**
  - 19 colours resistant to UV rays and atmospheric agents.

**Certifications & Technologies**

- EN 13888 CONFORME ALLA NORMA EUROPEA MALTA RE ATTIVA PE R FUGHE
- EN 12004 R2 ISO 22196:2007

**WHERE TO USE**

- Ceramics
- Stone material
- Glass mosaic
- Interior and exterior use
- Floors and walls
- Swimming pools including with salt or thermal water, Turkish baths
- Ideal for foodstuffs industries (dairies, abattoirs, breweries and wine-cellars...), kitchen worktops, laboratory benches, where a high level of hygiene is required.

**Baladin brewery, Plozzo, Italy**

Building of the new production plant.

Porcelain tiles measuring 60x60 cm were installed in all the production and storage areas. For bonding tiles, the high-performance adhesive, specific for large format tiles Keraflex Maxi St zero was used. The product has very low emissions of volatile organic compounds (VOC) and residual greenhouse gas emissions offset, such features are in line with the ethical values of the brewery. The joints in the processing and storage areas were grouted with Kerapoxy CQ.

Thanks to its acid-resistant and bacteriostatic properties, it is ideal for foodstuff industries, where a high level of protection against the formation and proliferation of micro-organism is required. For the expansion joints, the product chosen was Mapeflex PU30, the ideal sealant for joints in ceramic floors subject to intense traffic.
Demjén Thermal Spa, Demjén, Hungary

760 m of caves and 1,500 m² of water surfaces this spa is the largest thermal cave system of Central Europe.

Baths and damp areas were levelled with Planitop Fast 330 and waterproofed with Mapelastic. Elastorapid was used for laying tiles in swimming pools, while Keraflex SI and Keraflex Maxi SI were employed in other areas. Thanks to its high chemical resistance, Kerapoxy CQ was selected for grouting joint in baths, where water rich in sulphur, sodium, calcium and iron constantly flows at 68°C.
## Kerapoxy P

**DESCRIPTION**

**Easy-to-apply mortar for large surfaces**

Easy-to-apply, two-component, acid-resistant epoxy mortar with good cleanability properties for grouting joints at least 3 mm wide.

| POT LIFE OF MIX | 45 minutes |
| SET TO LIGHT FOOT TRAFFIC | Approx. 24 hours |
| READY FOR USE | 4 days |
| Surfaces can undergo chemical attack after 4 days |

| COLOURS | 113 cement grey |
| STORAGE | 24 months |
| CONSUMPTION | According to the size of the joints |
| PACKAGING | 10 kg kit |

**WHERE TO USE**

- Grouting of:
  - ceramic
  - stone material
- Interior and exterior use.
- Floors and walls.
- Particularly suitable for grouting large surfaces where easy application is required.
- For foodstuffs industries (dairies, abattoirs, breweries and wine-cellars…), kitchen worktops, laboratory benches, where a high level of hygiene is required.
- For grouting industrial floors where high mechanical resistance and strength to acid attacks is required.
- Swimming pools; including with salt and thermal water.

**EXCELLENT RESISTANCE TO ACIDS**

**EASY TO SPREAD AND CLEAN**

Easy to apply and finish and excellent cleanability.

**STRONG AND DURABLE**

Excellent mechanical strength and chemical resistance for more durable grouts.

**HYGIENIC AND EASY TO CLEAN SURFACES**

Smooth and compact final surface, with no absorption and easy to clean, ensures a high level of hygiene.

**HARD-WEARING**

Excellent resistance to heavy traffic.

**COMPACT GROUTS, WITHOUT CRACKS**

No shrinkage and no cracks.

**UNIFORM COLOUR**

Colours resistant to atmospheric agents.

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**AREAS OF USE**

- Grouting of:
  - ceramic
  - stone material
- Interior and exterior use.
- Floors and walls.
- Particularly suitable for grouting large surfaces where easy application is required.
- For foodstuffs industries (dairies, abattoirs, breweries and wine-cellars…), kitchen worktops, laboratory benches, where a high level of hygiene is required.
- For grouting industrial floors where high mechanical resistance and strength to acid attacks is required.
- Swimming pools; including with salt and thermal water.

**CERTIFICATIONS & TECHNOLOGIES**

- EXCELLENT RESISTANCE TO ACIDS
- EASY TO SPREAD AND CLEAN
- STRONG AND DURABLE
- HYGIENIC AND EASY TO CLEAN SURFACES
- HARD-WEARING
- COMPACT GROUTS, WITHOUT CRACKS
- UNIFORM COLOUR

**AREAS OF USE**

- Grouting of:
  - ceramic
  - stone material
- Interior and exterior use.
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- For grouting industrial floors where high mechanical resistance and strength to acid attacks is required.
- Swimming pools; including with salt and thermal water.

**CERTIFICATIONS & TECHNOLOGIES**

- EXCELLENT RESISTANCE TO ACIDS
- EASY TO SPREAD AND CLEAN
- STRONG AND DURABLE
- HYGIENIC AND EASY TO CLEAN SURFACES
- HARD-WEARING
- COMPACT GROUTS, WITHOUT CRACKS
- UNIFORM COLOUR

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**Roxane Industry, Merignies, France**

The new plant of one of the biggest mineral water-bottling company in France.

The decanting and washing area is one of the most critical areas of the plant due to its working conditions and the products used for cleaning and maintenance. For this application, Kerapoxy P was used for bonding tiles and grouting joints. This product was chosen thanks to its special characteristics, which make it suitable for environments in which total hygiene is required along with resistance to aggressive chemicals, not to mention its easy application.
Kerapoxy IEG

Epoxy mortar with extremely high chemical resistance

Two-component epoxy mortar with extremely high chemical resistance for joints at least 3 mm wide. For acid-resistant grouting of ceramic and stone material where higher resistance to chemical products compared with that of conventional epoxy grouts is required (in particular, to oleic acids and aromatic hydrocarbons).

Description:
- POT LIFE OF MIX: 45 minutes
- SET TO LIGHT FOOT TRAFFIC: Approx. 24 hours
- READY FOR USE: 4 days
- Surfaces can undergo chemical attack after 4 days
- DURABLE AND STRONG: Highly compact grouts with excellent resistance to chemicals and excellent cleanability according to a formula developed in the Mapei research laboratories.
- VERY HIGH RESISTANCE TO CHEMICALS AND HIGH STRENGTH: Extremely high mechanical properties and resistance to chemicals, higher than those of normal epoxy grouts.
- MORE HYGIENIC AND EASY TO CLEAN SURFACES: Smooth and compact final surface, with no absorption and easy to clean, ensures a high level of hygiene.
- EXCELLENT WORKABILITY: Easy to spread and finish off.
- HARD-WEARING: Excellent resistance to heavy traffic.
- SOUND GROUTS, WITHOUT CRACKS: No shrinkage and no cracks.
- AREAS OF USE:
- Ceramic and stone material.
- Acid-resistance grouting with extremely high chemical resistance:
  - ham factories (especially in the areas where boning and curing are carried out)
  - sausage factories (especially in cooking areas, exposed to oleic acid)
  - oil mills
  - pickling factories
- Grouting floors and worktops in compliance with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.

WHERE TO USE:
- Musical Instrument Museum, Tempe, USA
  Musical instrument museum in Phoenix, Arizona.

Porcelain tiles of various sizes were laid on over 2000 m² of floors in galleries, corridors and in the restaurant of the museum, using the high-performance adhesive with extended open time Ultracontact.

Klinker floors in the kitchen were grouted with Kerapoxy IEG mortar, particularly recommended for application in industrial environments, in areas used for preparing and cooking food and wherever a high resistance to aggressive chemicals and dirt in general is required. This mortar is resistant to moulds and high temperatures and makes grouts’ cleaning and maintenance much easier.
Mapei has developed a range of paste products which, because of their nature, are particularly easy to use. The range includes a flexible polymer grout suitable for flexible substrates, and a highly thixotropic adhesive paste which bonds immediately with no slip.
**Flexcolor**

**Description**

Ready to use polymer mortar, ideal for flexible substrates

- Ready-to-use polymer filler paste with water-repellent DropEffect® and mould-resistant BioBlock® technology for grouting joints in ceramic tiles 2 to 10 mm wide.

**Waiting Time for Finishing**

15 to 20 minutes depending on the surrounding conditions and absorption of the tiles.

**Set to Light Foot Traffic**

48 hours

**Ready for Use**

7 days

**Colours**

- 100 White
- 110 Manhattan 2000
- 111 Silver Grey
- 112 Medium Grey
- 132 Beige 2000

**Storage**

12 months

**Consumption**

According to the size of the joints

**Packaging**

5 kg buckets

**Where to Use**

- All types of ceramic tiles.
- Interior floors and walls.
- Exterior walls only.
- For joints from 2 to 10 mm.
- Suitable for exterior façades and flexible substrates.

**Certifications & Technologies**

- DropEffect® technology significantly reduces absorption of surface water which means grouts also absorb less dirt and are easier to clean.
- BioBlock® technology prevents the formation of the microorganisms that may form mould on the grout surface at the root.
- Colour resistant at atmospheric agents.

**Areas of Use**

- UNIFIMM Tower, Bologna, Italy
  
  This triangular-base office tower, with its 26 floors and 125 metres in height, is a model of environmental sustainability.

  Mapei provided material for laying about 8400 m² of large format ceramic tiles and 600 m² of pietra serena. In the gap between external glass walls, where a laying system able to absorb stresses generated by temperature variations and flexibility of the substrate was required, slabs were installed on anti-fracture Mapetex membrane with the highly elastic two-component adhesive Elastorapid and then sealed with Mapesil LM.

  On internal walls, one-component lightweight deformable adhesive Ultralite S1 was chosen to lay large format tiles on plasterboard primed with Primer G. For the joints, the ready-to-use grouting mortar Flexcolor was used to grant good deformability and an attractive finish.
Fix & Grout Brick

**DESCRIPTION**

Single product for bonding and grouting terracotta and decorative elements

Ready to use, high-performance adhesive paste with BioBlock® mould-resistant technology for bonding terracotta slips and light weight cementitious and synthetic resin conglomerate decorative elements on internal and external surfaces.

**OPEN TIME**

20 minutes

**ADJUSTMENT TIME**

30 - 35 minutes

**GROUTING JOINTS**

Smooth the adhesive in the grouts within 20 minutes with a damp brush (may vary according to surrounding conditions)

**COLOURS**

White, grey and beige

**STORAGE**

24 months

**CONSUMPTION**

1.4-4.2 kg/m²

**PACKAGING**

12 kg buckets

**SINGLE PRODUCT FOR BONDS AND GROUITS**

Excess adhesive, which seeps out from joints, can be smoothed over with a wet brush; their subsequent filling is not necessary.

**READY TO USE AND EASY TO APPLY**

**ADHESIVE WITH NO VERTICAL SLIP**

Slips bond immediately to the wall with no slip.

**HIGH FLEXIBILITY AND EXCELLENT ADHESION**

**MOULD-RESISTANT**

BioBlock® technology prevents the formation of the microorganisms that may form mould on the surface of the joint at the root.

**ANTI-EFFLORESCENCE**

**RESISTANT TO UV RAYS AND AGEING**

**RESISTANT TO TEMPERATURES UP TO +70°C**

**WHERE TO USE**

- Bonding all types of terracotta slips and decorative lightweight cementitious composite or resin slips on internal and external walls.
- Excess adhesive, which seeps out from joints, can be smoothed over with a brush, to act as a grout for the joints.

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**AREAS OF USE**

EN 12004

CONEFORME ALLA NORMA EUROPEA AD ESIVO IN DISPERSIONE PER CERAMICA EN 12004 D2T
Complementary products

Accessory items

Fugolastic
Polymer liquid admix for Keracolor FF, Keracolor GG and Keracolor SF

USE Mixed with the cement-based grouts of the Keracolor range as a substitute for mixing water, it improves the grout adhesion and mechanical strength and reduces water absorption. It is recommended for external grouts on façades, balconies and swimming pools and for floors subject to heavy traffic.

MapeGlitter
Polyester, aluminium and epoxy resin metal-effect coloured glitter used for mixing with Kerapoxy Design

USE Mixed with Kerapoxy Design epoxy grout for allows for a wider range of colours and sparkly grouts, for a decorative, attractive finish. Ideal for glass mosaic and metallic tiles.

Cleaning solutions

Keranet
Acid-based cleaning solution for ceramic tiles with cementitious joints

USE Particularly suitable for removing efflorescence and for the final cleaning of cotto toscano. Available in powder and liquid form, supplied ready-to-use.

Kerapoxy Cleaner
Special cleaning solution for epoxy grout

USE Suitable for cleaning operations after completing laying work or for removing traces and stains of epoxy grout from the surface of ceramic and glass coverings.

Renewing grouts

Fuga Fresca
Paint to bring back the colour of grouts

USE Acrylic resin paint in water dispersion to bring back the colour of joints in ceramic tiling. Available in all colours from the Keracolor and Ultracolor Plus range.
Solutions for architectural stone paving

Stone in its various shapes and types has been used to create the most beautiful road surfaces in historical town centres and is also used to create pedestrian zones, cycle lanes and roads exposed to intense traffic. It is also used in residential buildings for exterior surfaces, stairs and landings.

Mapei has developed a range of specific products for architectural stone paving which are ideal for use under various service conditions, including when it has to withstand heavy loads and intense traffic.
Grouts for architectural stone paving on compact bedding
Mapestone PFS 2

Pre-blended mortar for grouting joints in architectural stone paving

High-performance mortar in exposure class XF4 and XS3, with high mechanical strength and good resistance to de-icing salts, freeze-thaw cycles and seawater for grouting architectural stone paving in class P4, P5, P6, P7, P8, P9 according to standard UNI 11714-1:2018.

Pot Life of the mix
Approx. 20 minutes, at +20°C

Waiting time before cleaning
20-30 minutes, at +20°C

Set to light
Approx. 24 hours, at +20°C

Areas of use

Durable and strong
Uniform grouts, without cracks
Thanks to its low water/cement ratio, Mapestone PFS 2 is characterised by a low shrinkage rate, which means it does not form cracks.

High compressive strength

Resistant to freeze/thaw cycles

Resistant to de-icing salts

Resistant to seawater

Maximum practicality
Pre-blended, ready-to-use product. Just add water and mix with a power mixer for 3 minutes.

Quick setting and quickly ready for use

Suitable for surfaces with vehicle access (combined with suitable bedding).

Complete system
With Mapestone TFB 60 bedding.

Areas of use
• Small blocks
• Cobblestones
• Blocks
• Smolkin bricks
• Slabs

Colours
Neutral, dark grey and white

Storage
12 months (for 25 kg bags)

Consumption
According to the width of grouts and the size of stone elements

Packaging
25 kg bags

DURABLE AND STRONG

UNIFORM GROUTS, WITHOUT CRACKS
Thanks to its low water/cement ratio, Mapestone PFS 2 is characterised by a low shrinkage rate, which means it does not form cracks.

HIGH COMPRESSIVE STRENGTH

RESISTANT TO FREEZE/THAW CYCLES

RESISTANT TO DE-ICING SALTS

RESISTANT TO SEAWATER

MAXIMUM PRACTICALITY
Pre-blended, ready-to-use product. Just add water and mix with a power mixer for 3 minutes.

QUICK SETTING AND QUICKLY READY FOR USE

Trieste Seafront, Lignano Sabbiadoro, Italy
Redevelopment and refurbishment of Trieste Seafront.

Giallo d’Istria marble stone with bush-hammered finishing and Pietra Piasentina with flame or bush-hammered finishing were chosen for the new waterfront of Lignano Sabbiadoro. The paving was installed on a compact bedding made with Mapestone TFB Cube, pre-blended mortar specific for highly resistant and durable bedding. Joints were grouted with Mapestone PFS 2, pre-blended mortar ideal for environments subject to severe weather conditions and high levels of sea salt thanks to its high resistance to freeze/thaw cycles, de-icing salts and seawater.
**Descriptive Text**

**Mapestone PFS 2 Visco**

**Description**

Mapestone PFS 2 Visco is a pre-blended, low viscosity mortar suitable for grouting architectural slab and block-paving. It is resistant to compression, de-icing salts, freeze-thaw cycles and seawater, making it ideal for areas exposed to dry/damp cycles (exposure class XF4). It is suitable for grouting architectural stone paving in class P4, P5, P6, P7, P8, P9 according to standard UNI 11714-1:2018.

**POT LIFE**

**OF THE MIX**

Approx. 40 minutes, at +20°C

**WAITING TIME**

**BEFORE CLEANING**

20-30 minutes, at +20°C

**SET TO LIGHT**

**FOOT TRAFFIC**

Approx. 24 hours, at +20°C

**READY FOR USE**

7 days, at +20°C

**COLOURS**

Neutral, dark grey and white

**STORAGE**

12 months (for 25 kg bags)

**CONSUMPTION**

According to the width of grouts and the size of stone elements

**PACKAGING**

25 kg bags

**Areas of Use**

- Slabs
- Blocks

**Durability and Strength**

Uniform grouts, without cracks

High compressive strength

Low viscosity of the mix

Ideal for grouting road surfaces made from irregular shaped elements. Thanks to its low viscosity, it is very effective in filling the air pockets around cobblestones and between cobblestones and the installation bed.

**Resistant to Freeze/Thaw Cycles**

Resistant to de-icing salts

Resistant to seawater

**Maximum Practicality**

Pre-blended, ready-to-use product. Just add water and mix with a power mixer for 3 minutes.

**Where to Use**

- Slabs
- Blocks

**Quick Setting and Quickly Ready for Use**

Suitable for surfaces with vehicle access (combined with suitable installation mortar).

**Complete System**

With installation of Mapestone TFB 60.

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**D’Azeglio Square, Florence, Italy**

Redevelopment of D’Azeglio Square and via della Colonna.

For the construction of the driveway of the square and of via della Colonna, the Municipality decided to install the ancient paving. Each single element is hand-made, featuring the typical, irregular trapezoid base.

Considering the characteristics of the stone material and the need for a vehicular passage, the paving was installed on a compact bedding made with Mapestone TFB 60, pre-blended mortar specific for highly resistant and durable installation beds. For grouting was chosen Mapestone PFS 2 Visco, pre-blended, low viscosity mortar, ideal for effectively filling the air pockets around the irregular slabs and in the interface with the installation bed.
Duca d’Aosta Square, Milan, Italy
Redevelopment of the Square in front of the Milan Central Railway Station.

The square paving was refurbished using granite slabs and river cobblestones. The paving was installed on Mapestone TFB 60, pre-blended mortar specific for highly resistant and durable installation beds. For grouting joints was chosen Mapestone PFS PCC 2, pre-blended mortar with a low modulus of elasticity, ideal for extreme temperature variations with high expansion coefficient large format stones.

Mapestone PFS PCC 2

**DESCRIPTION**
Pre-blended polymer-modified mortar for grouting joints in architectural stone paving

Mortar with a low modulus of elasticity, exceptional physical-chemical characteristics suitable for areas exposed to dry/damp cycles specified by exposure class XF4. Highly resistant to compression, de-icing salts, freeze-thaw cycles and seawater, it is suitable for grouting architectural stone paving in class P4, P5, P6, P7, P8, P9 according to standard UNI 11714-1:2018.

**WHERE TO USE**
- Climatic zones with large day/night temperature variations
- Lithotypes with high coefficient of thermal expansion
- Small blocks
- Smolieri bricks
- Cobblestones
- Slabs
- Blocks

**DURABLE AND STRONG**
Ideal for areas subjected to large day/night temperature variations and lithotypes with high coefficient of thermal expansion

**UNIFORM GROUTS, WITHOUT CRACKS**
Thanks to its low water/cement ratio Mapestone PFS PCC 2 is characterised by its low shrinkage rate, which means it does not generate the formation of cracks.

**HIGH COMPRESSIVE STRENGTH**
Resistant to freeze/thaw cycles

**RESISTANT TO DE-ICING SALTS**
Resistant to seawater

**MAXIMUM PRACTICALITY**
Ready-mixed, ready-to-use product. Just add water and mix with a power mixer for 3 minutes.

**POT LIFE OF THE MIX**
Approx. 20 minutes, at +20°C

**WAITING TIME BEFORE CLEANING**
20-30 minutes, at +20°C

**SET TO LIGHT FOOT TRAFFIC**
Approx. 24 hours, at +20°C

**READY FOR USE**
7 days, at +20°C

**COLOURS**
Neutral

**STORAGE**
According to the width of grouts and the size of stone elements

**READY FOR USE**
According to the width of grouts and the size of stone elements

**PACKAGING**
25 kg bags

**AREAS OF USE**

- **IDEAL FOR AREAS SUBJECTED TO LARGE DAY/NIGHT TEMPERATURE VARIATIONS AND LITHOTYPES WITH HIGH COEFFICIENT OF THERMAL EXPANSION**

- **UNIFORM GROUTS, WITHOUT CRACKS**

- **HIGH COMPRESSIVE STRENGTH**

- **RESISTANT TO FREEZE/THAW CYCLES**

- **RESISTANT TO DE-ICING SALTS**

- **RESISTANT TO SEAWATER**

- **MAXIMUM PRACTICALITY**

**QUICK SETTING AND QUICKLY READY FOR USE**
Suitable for surfaces with vehicle access (combined with suitable installation mortar).

**COMPLETE SYSTEM**
With installation of Mapestone TFB 60

**POT LIFE OF THE MIX**
Approx. 20 minutes, at +20°C

**WAITING TIME BEFORE CLEANING**
20-30 minutes, at +20°C

**SET TO LIGHT FOOT TRAFFIC**
Approx. 24 hours, at +20°C

**READY FOR USE**
7 days, at +20°C

**COLOURS**
Neutral

**STORAGE**
According to the width of grouts and the size of stone elements

**READY FOR USE**
According to the width of grouts and the size of stone elements

**PACKAGING**
25 kg bags

**AREAS OF USE**
Joints for architectural stone paving on loose bedding
**Private residence, Albiano, Italy**

Realisation of new residential flooring.

The pavement around the residence was made using split porphyry stones with opus incertum laying technique on a gravel pervious bed, bonded with **Mapestone Joint**, which was used also for sealing.

**Mapestone Joint**

**Description**

*Binder for creating elastic and pervious architectural stone paving*

One-component, solvent-free, polyurethane binder with a characteristic odour for creating elastic and pervious architectural stone paving.

Two application methods:

1 - Mapestone Joint Cube for small blocks, cobblestones and paving bricks in class P4, P5, P6, P7, P8, P9 according to standard UNI 11714-1:2018.

2 - Mapestone Joint Slab for slabs and blocks in class P4, P5, P6.

**TIME TO FORM SKIN**

Approx. 3 hours and 30 minutes

**SET TO LIGHT**

Approx. 24 hours, at +20°C

**READY FOR USE**

48-72 hours, at +20°C

**COLOURS**

Amber

**STORAGE**

12 months

**CONSUMPTION**

According to the width of grouts and the size of stone elements

**PACKAGING**

25 kg cans, 200 litre drums and 1000 litre tanks

**AREAS OF USE**

**MAPESTONE JOINT SLAB**

- Pervious
- Durable and strong
- High compressive strength
- Resistant to CICLI (freeze-thaw cycles)
- Resistant to de-icing salts
- Resistant to seawater
- Noise reducing
- Quick setting and quickly ready for use
- Suitable for surfaces with vehicle access (combined with suitable bedding)

**WHERE TO USE**

MAPESTONE JOINT CUBE

- Small blocks
- Paving bricks
- Cobblestones

MAPESTONE JOINT SLAB

- Slabs
- Blocks

**DESCRIPTION**

*Binder for creating elastic and pervious architectural stone paving*

One-component, solvent-free, polyurethane binder with a characteristic odour for creating elastic and pervious architectural stone paving.

Two application methods:

1 - Mapestone Joint Cube for small blocks, cobblestones and paving bricks in class P4, P5, P6, P7, P8, P9 according to standard UNI 11714-1:2018.

2 - Mapestone Joint Slab for slabs and blocks in class P4, P5, P6.
San Michele Appiano centre, Italy

Redevelopment of Piazza del Municipio in San Michele centre.

The centre of San Michele was redeveloped using an elastic and pervious paving on loose bedding of porphryy small blocks, Mapestone Joint was used for joints. The designers of the paving wanted to represent the grapes, excellence product of the Appiano area, creating a circular installation pattern and selecting 3 different types of porphyry colours. Paving created using Mapestone Joint is elastic and does not require joint positioning. The design is therefore unaltered and perfectly reproduced in the installation pattern.
Elastic sealants

A complete range of coloured products for any request of sealing of floorings and coatings made of ceramic tiles, natural stone and glass mosaics.

Certified according to the most severe international standards and with very low emission level of volatile organic compounds.

Mapei sealants are developed through constant research with the aim of introducing high quality products on the market to make application easy, quick and guaranteed.

Only a few of the products from the range are presented in this document, and their characteristics make them suitable for specific applications for flooring in ceramics, natural stone and glass mosaics, as well as for architectural stone paving.
Avalon Park, Miskolctapolca, Hungary

Construction of a wide touristic and multifunctional complex with the use of six Mapei product lines.

Mapei adhesives for the installation of floor and wall coverings were used in the whole complex. These included **Ultralite S2** for thin, large format porcelain tiles, **Keraflex Maxi S1** for natural stone on walls, floors and on the building’s façades, and **Elastorapid** for the installation of mosaic in the swimming-pools. **Kerapoxy CQ**, acid-resistant, bacteriostatic with **BioBlock®** technology, was used to grout the joints in the swimming-pools and in the kitchen, while the two-component decorative grout **Kerapoxy Design** mixed with golden **MapeGlitter** were used for grouting the three-dimensional installations in the wellness area. The expansion joints were sealed with **Mapesil LM** in the areas where natural stone was installed and with **Mapesil AC** on surfaces covered with tiles.

### Mapesil AC

**DESCRIPTION**

Pure, solvent-free, highly flexible and mould-resistant acetic silicone

Pure, mould-resistant, solvent-free acetic silicone sealant with BioBlock® technology, for compression and traction movements up to 25% of the width of joint. Available in all colours of Mapei grouts.

**MOVEMENT ALLOWED** 25%

**MODULUS OF ELASTICITY AT 100% ELONGATION** 0.35 N/mm²

**SHORE A HARDNESS** 20

**WORKABILITY** 10 minutes

**COLOURS** 34 colours and transparent

**EMICODE** EC1 Plus - very low emission

**CONSUMPTION** 3.1 meters per 310 ml cartridge (10x10 mm section)

**PACKAGING** 310 ml cartridges

**WHERE TO USE**

- Glass
- Ceramics
- Anodised aluminium
- Sealing joints in wall and floor ceramic and cement coverings
- Sealing joints between sanitary ware and ceramic tiles in kitchens, bathrooms and showers
- Sealing expansion joints in swimming pools
- Sealing glazing of door and window frames

**AREAS OF USE**

- Glass
- Ceramics
- Anodised aluminium
- Sealing joints in wall and floor ceramic and cement coverings
- Sealing expansion joints in swimming pools
- Sealing glazing of door and window frames

**CERTIFICATIONS & TECHNOLOGIES**

- European certification for use on façades, around windows, in healthcare settings and for pedestrian paving; CE marking and many other types of certification.
- **BONDS PERFECTLY**
- **HIGH FLEXIBILITY** Low modulus of elasticity, ideal for sealing joints subjected to large deformations.
- **HIGH THERMAL AND CHEMICAL RESISTANCE** Resistant to constant temperatures from -40°C to +180°C.
- **MOULD-RESISTANT (BIOBLOCK®)** Excellent resistance to water. Mould-resistant.
- **SOLVENT-FREE** Pure, solvent-free acetic silicone sealant.
- **EXCELLENT DURABILITY** Remains elastic and highly adhesive, does not shrink, does not yellow and does not change colour.
- **WIDE RANGE OF COLOURS** 34 colours coordinated with Mapei grouts.
Sportzentrum Gstaad, Switzerland

Extension and renovation of the Gstaad sports centre, a building of the Seventies that is recognised as a historical monument.

Mapei was chosen for the substrate preparation and the installation of 3,000 m² of porcelain tiles and glass mosaics in swimming pools, showers, changing rooms and Turkish baths. All the areas exposed to water were waterproofed with Mapelastic. Elastorapid, a highly deformable adhesive, was chosen for installing ceramics and mosaics in damp environments. For the grouts in environments subjected to washing with aggressive detergents, the epoxy grout Kerapoxy CQ was used in view of its antibacterial and acid-resistant properties. The joints were sealed with the pure acetic silicone Mapesil AC in view of its excellent resistance to water and to the formation of moulds thanks to Mapei BioBlock® technology.
Mapesil LM

DESCRIPTION

Pure, neutral, highly flexible and mould-resistant silicone sealant for natural stone

Neutral, mould-resistant, solvent-free silicone sealant with BioBlock® technology for stone, for compression and traction movements up to 25% of the width of joint.

DOES NOT STAIN, IDEAL FOR SEALING STONE
No volatile plasticisers; particularly recommended for stone, marble, stone material and all materials sensitive to acids.

SUITE FOR EXTERNAL FAÇADES
Thanks to its low modulus of elasticity, prevents the formation of stains and absorbs high rates of deformation in joints.

MOULD-RESISTANT
BioBlock® technology impedes the formation of mould on the surface of joints.

STABLE SEAL OVER THE YEARS
Excellent resistance to atmospheric agents and ageing, including when exposed to bad weather conditions, industrial surroundings, temperature changes and water.

SOLVENT-FREE, ODOURLESS
Neutral silicone, totally solvent-free, odourless.

WIDE RANGE OF CERTIFICATIONS
Suitable for stone and marble; European certification for use on façades, around windows, in healthcare centres and on pedestrian paving.

HIGHLY ADHESIVE
Bonds perfectly, including without primer, on most types of building material.

RANGE OF COLOURS
In 9 colours coordinated with the Mapei coloured grouts collection and transparent.

WHERE TO USE
• Stone (marble, granite, sandstone and quartz).
• All materials sensitive to acids and plasticising agents.
• Bricks, cellular concrete and varnished or enamelled wood.
• Non-absorbent substrates (glass, ceramics, clinker, enamelled surfaces, water and solvent-based varnishes, metals, etc.).
• Absorbent mineral substrates (concrete, render and fibre-cement).
• Sealing joints between pre-fabricated panels, window/door fittings and walls, different coating materials.

MOVEMENT ALLOWED 25%

MODULUS OF ELASTICITY AT 100% ELONGATION 0.35 N/mm²

SHORE A HARDNESS 21

WORKABILITY 15 minutes

COLOURS 9 colours and transparent

CONSUMPTION 3.1 meters per 310 ml cartridge (10x10 mm section)

PACKAGING 310 ml cartridges

University of Rome Tor Vergata, Italy
Construction of the new Rectorate and the new Faculty of Law.

The three new buildings with a trapezoid shape, were covered with travertine marble. KeraFlex Maxi S1 and Ultracolor Plus were used for installing the marble tiles on the façade and on the square, the joints were sealed with Mapesil LM, neutral silicon ideal for sealing natural stone and façade elements.
Mapeflex PU 45 FT

One-component polyurethane hybrid sealant with a high modulus of elasticity
Rapid-hardening paintable polyurethane sealant and adhesive with a high modulus of elasticity for compression and traction movements up to 20% of the width of joint.

DESCRIPTION

ONE SINGLE PRODUCT FOR SEALING AND BONDING
HIGH RESISTANCE TO TRAFFIC
SUCKER EFFECT For bonding on vertical surfaces.
PAINTABLE
HIGHLY ADHESIVE EVEN WITHOUT PRIMER
RAPID-HARDENING Quickly ready for use.
CERTIFIED PRODUCT European certification for use on façades and on pedestrian paving.

WHERE TO USE
- Sealing expansion and distribution joints in civil and industrial floors.
- Industrial floors subject to vehicular traffic, including heavy vehicles, or chemical attack by hydrocarbons.
- Concrete floors for car-parks, supermarkets, shopping centres and warehouses.
- Ceramic floors and walls, including in areas subject to intense traffic (supermarkets, industrial environments).
- Used as an adhesive for flexible bonding of construction features instead of using screws, nails and lightweight fittings.
- Compatible with all absorbent mineral substrates, metal surfaces, varnished surfaces, wood, stone, brickwork and glass.

MOVEMENT ALLOWED 20%

MODULUS OF ELASTICITY AT 100% ELONGATION 0.80 N/mm²

SHORE A HARDNESS 38

WORKABILITY 35 minutes

COLOURS White, 111 grey, 113 grey, brown, beige, black

CONSUMPTION 3 meters per 300 ml cartridge 6 meters per 600 ml sausage (10x10 mm section)

PACKAGING 300 ml cartridges, 600 ml sausages

AREAS OF USE

Canalicchio Wine Cellar, Montaltalcino, Italy
Tuscan winery

The internal floors were laid using the pre-blended mortar for screeds Topcem Pronto, on which the large format tiles were installed using the high-performance, deformable cementitious adhesive with low environmental impact Kerapoxy Maxi S1 zero. Thanks to its antibacterial and mechanical properties and its resistance to acids, the epoxy mortar Kerapoxy CQ was chosen for grouts. The joints were sealed with Mapeflex PU 45 FT, the sealant ideal for industrial floors subject to heavy traffic and to aggressive chemicals.
Mapeflex MS45

**DESCRIPTION**
One-component hybrid sealant with a high modulus of elasticity also for wet substrates

Paintable hybrid sealant and adhesive with a high modulus of elasticity also for wet substrates, for compression and traction movements up to 20% of the width of joint. Suitable for contact with drinking water.

**PERFORMANCE PROPERTIES**

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODULUS OF ELASTICITY AT 100% ELONGATION</td>
<td>0.66 N/mm²</td>
</tr>
<tr>
<td>SHORE A HARDNESS</td>
<td>43</td>
</tr>
<tr>
<td>WORKABILITY</td>
<td>35 minutes (±23°C - 50% R.H.)</td>
</tr>
<tr>
<td>MOVEMENT ALLOWED</td>
<td>20%</td>
</tr>
<tr>
<td>COLOURS</td>
<td>White, 113 grey, brown, black</td>
</tr>
<tr>
<td>EMICODE</td>
<td>ECI Plus - very low emission</td>
</tr>
<tr>
<td>CONSUMPTION</td>
<td>3 meters per 300 ml cartridge</td>
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<tr>
<td></td>
<td>6 meters per 600 ml sausage</td>
</tr>
<tr>
<td></td>
<td>(10x10 mm section)</td>
</tr>
<tr>
<td>PACKAGING</td>
<td>300 ml cartridges, 600 ml sausages</td>
</tr>
</tbody>
</table>

**AREAS OF USE**

- ONE SINGLE PRODUCT FOR SEALING AND BONDING
- ON DRY AND WET SURFACES
  - Suitable also for damp substrates. Does not blister, including at high moisture levels.
- RAPID AND EASY TO APPLY
  - Easy to extrude and smooth over, including at low temperatures. Rapid-hardening.
- VERSATILE
  - Bonds to the most widely used materials.
- PAINTABLE
- HIGHLY ADHESIVE EVEN WITHOUT PRIMER
  - Forms a strong bond, including on compact or absorbent substrates.
- HIGH RESISTANCE TO TRAFFIC
- SAFE FOR INSTALLERS
  - Solvent-free and with very low emission of volatile organic compounds.
- CERTIFIED PRODUCT
  - European certification for use on façades and around windows and on pedestrian paving; certified ECI Plus – very low emission of VOC; certified for contact with potable water; CE marking.

**WHERE TO USE**

- Sealing expansion and distribution joints in traditional and ventilated façades; residential and industrial floors also subjected to intense vehicle traffic.
- Used as an adhesive for flexible bonding of construction features instead of using screws, nails and lightweight fittings.
- Compatible with a wide range of materials: cement, brickwork, steel, copper, aluminium, pre-painted surfaces, glass, gypsum, wood, ceramic and clinker, insulating materials and many types of plastic.
- Suitable also for wet substrates.

**CERTIFICATIONS & TECHNOLOGIES**

**ACTIONS NOT TO BE TAKEN**

- Do not use near foodstuffs.
- Do not use near fuel or water.
- Do not use near flammable materials.

**PAVING**

- For paving, Mapei products were used for installing ceramic tiles in the new Prague subway. The extremely large format tiles 3x1 m were bonded with the highly deformable adhesive Ultraflex S2 Mono. For 60x60 and 150x75 cm tiles, the cementitious adhesives Keraflex Extra S1, Keraflex Maxi S1 and Keraquick were used. All the joints were grouted with the cementitious mortar Keracolor FF, while the expansion joints between the large format tiles were sealed with hybrid sealant Mapeflex MS45.
Mapeflex E-PU 21 SL

**DESCRIPTION**

High-strength, castable sealant with high modulus of elasticity

Two-component, high-strength, castable epoxy-polyurethane sealant with high modulus of elasticity for compression and traction movements up to 10% of the width of joint.

| MOVEMENT ALLOWED | 10% |
| ELONGATION AT BREAK | 90% |
| SHORE A HARDNESS | 60 |
| WORKABILITY | 40 minutes |

| COLOURS | 113 grey, colourless for custom colouring with Mapecolor Paste |
| CONSUMPTION | 0.145 kg/metre (joint section 10 x 10 mm) |
| PACKAGING | 5 kg bucket (A+B) |

**WHERE TO USE**

- Sealing horizontal joints, in exterior and interior also use subject to high mechanical stress.
- Abrasion resistant sealing of joints in industrial floors and subject to heavy traffic, both in interior and exterior.
- Sealing joints where a castable, resistant to mechanical stress and to chemicals, water and vapor proof product is required.
- Sealing expansion and contraction joints in commercial, residential and industrial floors and in architectural paving.
- Sealing joints in ceramic floors subject to heavy traffic, both pedestrian and vehicular, such as supermarkets, warehouses, production areas, sidewalks, walkways, arcades and squares.

**AREAS OF USE**

- **HIGH MECHANICAL STRENGTH**
  - Withstands high mechanical stress due to pedestrian and vehicular traffic.

- **HIGH THERMAL AND CHEMICAL RESISTANCE**
  - Withstands weathering, temperature variation and chemicals. Withstands in continual use at temperatures between -30°C and +80°C.

- **EASY TO APPLY**
  - Fluid consistency, castable within 40 minutes.

- **WITH HIGH MODULUS OF ELASTICITY**
  - Suitable for sealing joints subject to small movements up to 10% of the width of joint.

- **BONDS PERFECTLY**

- **SOLVENT-FREE**
  - Epoxy-polyurethane, solvent-free sealant.

- **EXCELLENT DURABILITY**
  - Even after several years of exposure to external stress, it remains elastic and highly adhesive. It does not shrink or yellow and its colour remains unchanged.

- **CUSTOMISED RANGE OF COLOURS**
  - Available also in the neutral version to be coloured according to the needs of the customer with the coloured pastes Mapecolor Paste.

- **CERTIFICATIONS & TECHNOLOGIES**
  - EN 12004
EVERYTHING’S OK WITH MAPEI