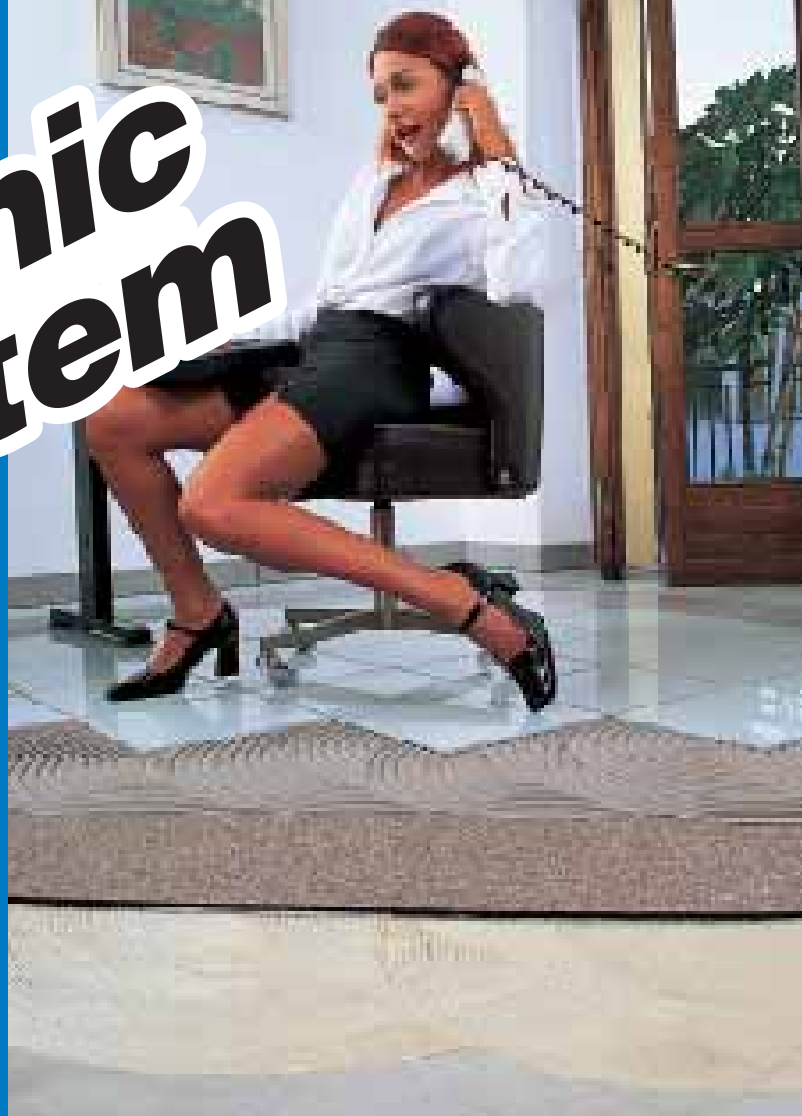




# Mapecofonic System

**Minimal thickness  
sound control system  
designed to isolate  
impact noise when  
installed under ceramic  
tiles and stone material**



## WHERE TO USE

For minimal thickness sound insulation under ceramic tiles and stone installed with a cementitious adhesive. Designed to isolate noise caused by foot traffic and impact.

## Some application examples

Sound insulation over:

- reinforced concrete slabs, concrete block, and timber substrates;
- existing ceramic tile, stone material, wood, PVC, etc. flooring.

## TECHNICAL CHARACTERISTICS

The **Mapecofonic System** is a sound-deadening underlayment designed to isolate noise caused by foot traffic and impact. Developed jointly by the MAPEI and SIPLAST research laboratories.

When installed over cementitious substrates or existing flooring, the **Mapecofonic System** forms a minimally thick (11.5 mm) underlayment for ceramic tile and stone installations (larger than 225 cm<sup>2</sup>). It provides excellent sound insulation against noise caused by foot traffic and impact, greatly adding to the comfort of the rooms below.

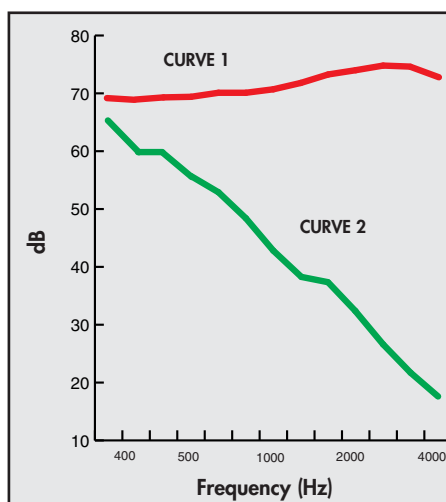
The **Mapecofonic System** is also designed for the installation of floating floors (e.g. parquet).

The **Mapecofonic System** is recommended for residences, offices, hotels, schools, museums, etc.

## MAPEFONIC SYSTEM: THE KIT

The **Mapecofonic System** kit contains five products for the installation of 24 m<sup>2</sup> of flooring and acoustic insulation.

- **Mapecofonic Pad** - Filled bituminous acoustic tile (500 x 500 x 11.5 mm) fibreglass reinforced with a composite sound-absorbing cushion back.



## Mapecofonic System

Certified minimal thickness sound control system, designed to isolate impact noise when installed under ceramic tile and natural stone floors. Developed in the Mapei R&D laboratories for residential, commercial and industrial construction.

**Graph left:** comparison of noise levels measured by the standard impact test in underlying rooms beneath a reinforced concrete floor (curve 1) and the same rooms over which the **Mapecofonic System** has been installed over the floor (curve 2).

# Mapeconic System



Applying Mapeconic Strip around the perimeter of the room



Applying Mapeconic Glue with a notched trowel

- **Mapeconic Strip** - Adhesive tape to be placed around the edges of the floor and around columns and interruption to prevent sound transmission.

- **Mapeconic Glue** - Acrylic adhesive in water dispersion for installing the Mapeconic Pad.

- **Mapeconic Mortar** is a grey coloured cementitious (C) improved (2) fast setting (F) slip-resistant (T) adhesive classified as C2FT, according to EN 12004 and deformable to class S1, according to EN 12002. Suitable for installing ceramic tiles and moisture-stable stone materials directly over **Mapeconic Pads**.

*Mapeconic Mortar is CE marked, as declared in ITT certificate No. 25040475/Gi (TUM) issued by the Technische Universität München laboratory (Germany).*

- **Mapeconic Grout** is a No. 113 cement grey coloured cementitious (C) fast-setting grout (G) improved (2) of class CG2 for joints from 2 to 20 mm wide.

## RECOMMENDATIONS

The **Mapeconic System** should not be used as sound insulation under:

- flooring in areas subject to heavy traffic;
- flooring to be polished on site (e.g. stone materials and porcelain tiles);
- bonded wooden flooring.

## APPLICATION PROCEDURE

### Preparing the substrate

The **Mapeconic System** can be installed on all cement-based or anhydrite substrates provided they are mechanically strong, dry, level, free of loose materials and cracks, and thoroughly free of dust or other materials that might interfere with bonding.

It can be applied on anhydrite substrates when the residual moisture is less than 0.5%.

The **Mapeconic System** can be installed on existing ceramic tiles, stone materials, wood, PVC and rubber provided they are well anchored to the substrate and thoroughly free from grease, oil, wax, paint, etc.

Insufficiently levelled substrates can be levelled with the relevant MAPEI products.

## APPLICATION

### 1 - Applying Mapeconic Strip adhesive tape

Before installing the **Mapeconic Pads**, remove the protective plastic film from the **Mapeconic Strip** and place around the base of the walls, columns and any other upstands. The tape must be placed without leaving gaps and cut to fit all corners of the walls.

### 2 - Installing the Mapeconic Pads

**Mapeconic Pads** must be installed with **Mapeconic Glue**.

The adhesive is ready-to-use and must be applied evenly with a No. 2 or No. 3 trowel in sufficient quantities to wet the back of the pads thoroughly. The pads must be set while the adhesive is still wet.

**In order to prevent sound transmission, the pads must be installed so that their joints are placed diagonally to the joints in the flooring.**

The **Mapeconic Pads** must be installed flush against each other and against the **Mapeconic Strip**. Where joints between the pads are wider than 1 mm, they must be covered with **Mapeconic Strip** before installing the floor tiles. To facilitate cutting the pads, draw a line on the back, cut into the cushion down to the bituminous layer and then split it by bending it along the incision.

### 3 - Installing the tiles

Approximately two hours after installing the **Mapeconic Pads**, ceramic tiles and moisture-stable stone material can be installed over them with the **Mapeconic Mortar**.

### Preparing the Mapeconic Mortar mix

A 25 kg bag of **Mapeconic Mortar** must be mixed with approximately 6.5 litres of clean water, stirring continuously until a lump-free mix is obtained.

**Mapeconic Mortar** is a fast-setting adhesive and must be used within 30 minutes at normal temperatures.

### Applying the Mapeconic Mortar

**Mapeconic Mortar** must be evenly applied with a notched trowel on the surface of the **Mapeconic Pad**.

The notch size of the trowel must be selected so that a solid bed of adhesive is achieved.

The tiles must be installed within the open time of the **Mapeconic Mortar** (approximately 15 minutes). If a skin forms on the surface of the adhesive it must be freshened by trowelling it again with the notched trowel. At normal temperatures and humidity the flooring can be walked on approx. 2 hours after installation and the joints can then be grouted. The width of the joints should correspond to the size of the tiles and must never be less than 3 mm.

### 4 - Grouting the joints

Use **Mapeconic Grout** to fill the joints.

### Preparing the mix

**Mapeconic Grout** must be mixed with clean water only, approx. 20% by weight. While continuously mixing, pour the **Mapeconic Grout** into a receptacle containing the correct amount of water and mix until a lump-free creamy paste is obtained. Let the mix stand for 2-3 minutes and then apply.

## TECHNICAL DATA (typical values)

### MAPEFONIC GLUE IDENTIFICATION DATA:

|   |  |
|---|--|
| <b>Consistency:</b>                                 | creamy paste   |
| <b>Colour:</b>                                      | light beige  |
| <b>Mass density (g/cm³):</b>                        | 1.40   |
| <b>pH:</b>  | 7  |
| <b>Brookfield viscosity (mPa·s):</b>                | 70,000<br>(6 Rotor, 5 rpm)   |
| <b>Dry solid content (%):</b>                       | 76   |
| <b>Storage:</b>                                     | 12 months in original sealed packaging.<br>Protect from frost. Keep cool.  |
| <b>Hazard classification according to EC 99/45:</b> | none<br>Before using refer to the "Safety Instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet |

### MAPEFONIC MORTAR IDENTIFICATION DATA:

|   |   |
|---|---|
| <b>Consistency:</b>                                 | powder  |
| <b>Colour:</b>                                      | dark grey   |
| <b>Bulk mass density (kg/m³):</b>                   | 1300  |
| <b>Dry solid content (%):</b>                       | 100   |
| <b>Storage:</b>                                     | 12 months in original packaging.<br>Store in a dry place. Keep cool.  |
| <b>Hazard classification according to EC 99/45:</b> | none.<br>Before using refer to the "Safety Instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet |

### MAPEFONIC GROUT IDENTIFICATION DATA:

|   |   |
|---|---|
| <b>Consistency:</b>                                 | fine powder   |
| <b>Colour:</b>                                      | grey  |
| <b>Bulk mass density (kg/m³):</b>                   | 1400  |
| <b>Dry solid content (%):</b>                       | 100   |
| <b>Storage:</b>                                     | 12 months in original packaging.<br>Store in a dry place. Keep cool.  |
| <b>Hazard classification according to EC 99/45:</b> | none.<br>Before using refer to the "Safety Instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet |

### MAPEFONIC PAD IDENTIFICATION DATA:

|  |         |
|--|---------|
| <b>Filled bituminous tiles with fibreglass mesh reinforcing and sound-absorbing cushion back</b> |         |
| – size (mm):   | 500x500 |
| – thickness (mm):  | 11.5    |
| – weight (kg/m²):  | 11.5    |

|  |         |
|--|---------|
| <b>Avis Technique C.S.T.B. 13/97-709<br/>Galileo Ferraris Institute (Turin) Certificate n. 31697-01<br/>Mapefonic System Performance according to:</b> |         |
| – ISO 140-6: 1978  |         |
| – ISO 140-8: 1997  |         |
| – ISO 717-2: 1997  |         |
| – noise reduction $\Delta_{LW}$ :  | 17.6 dB |
| – noise level index at standard impact $L_{NW}$ :  | 59.4 dB |

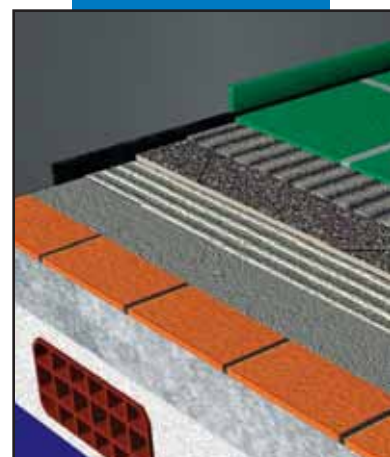
PHOTO 1



PHOTO 2



*Cutting a Mapefonic Pad: cut the fabric on the back of the pad down to the bituminous layer (photo 1), then split the pad by folding it in two along the incision (photo 2)*



*Example of an installation of the Mapefonic System over existing flooring*

**Mapeconic Grout** is fast-setting and at normal temperatures and humidity must be applied within 30 to 40 minutes after mixing.

#### Application

Fill the joints thoroughly with the **Mapeconic Grout** mix using a hard rubber squeegee without leaving voids or bumps. While the mix is still wet, remove any excess from the surface of the flooring, moving the trowel diagonally across the joints.

When the residue of **Mapeconic Grout** left on the surface of the flooring becomes opaque and the mix has hardened in the joints (approx. 15 to 20 minutes), it is time to clean the floor.

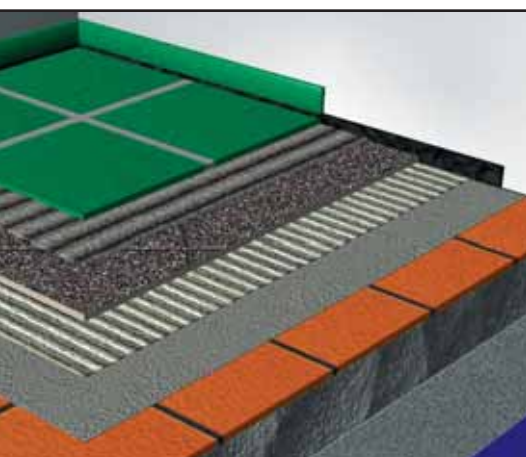
At normal temperatures and humidity the floor can be walked on after approx. 3 hours. Final hardening of **Mapeconic Grout** takes place after 24 hours.

#### 5 - Installing skirting boards

Skirting boards must be installed in such a way that they rest on top of a length of **Mapeconic Strip** that has been folded back up onto the edge of the surface of the flooring. Without this precaution sound would be transmitted to the structure of the building and weaken the effectiveness of the insulation.

Any protruding **Mapeconic Strip** wider than the thickness of the skirting boards can easily be cut away.

Joints between floors and skirting boards can be sealed with **Mapesil AC** or **Mapesil LM**.



Applying the  
Mapeconic Pads

#### PACKAGING

The **Mapeconic System** is sold as a kit containing all the products needed for installing 24 m<sup>2</sup> of flooring and sound insulation (divided into 4 units of 6 m<sup>2</sup> each).

- **Mapeconic Strip** - Adhesive tape to be placed around the sides of the floor and around columns to prevent sound transmission. 1 box containing 4 rolls of tape, each 11 m long.
- **Mapeconic Pad** - Filled bituminous acoustic tile (500 x 500 x 11.5 mm) fibreglass reinforced with a sound-absorbing cushion backing. 12 boxes containing 2 m<sup>2</sup> each.
- **Mapeconic Glue** - Acrylic adhesive in water dispersion for installing **Mapeconic Pads**. 4 buckets of 5 kg.
- **Mapeconic Mortar** - Grey fast setting cementitious adhesive for installing ceramic tiles and moisture-stable stone materials: 4 bags of 25 kg.
- **Mapeconic Grout** - Grey (No. 113 on the Mapei Coloured Grouts chart) special fast setting grout based on hydraulic binders for filling joints 2 to 20 mm wide: 12 boxes of 1 kg.

**N.B.** The above products are also available individually when other MAPEI adhesives and grouts need to be used.



Applying the  
Mapeconic Mortar over  
the Mapeconic Pads





*Installing polished porcelain tiles*



*Filling joints with Mapefonic Grout*

### **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

The **Mapefonic System** contains special hydraulic binders that in contact with sweat and other body fluids produces a slightly alkaline reaction.

Use protective gloves and goggles.  
For further information refer to the Safety Data Sheet.

### **WARNING**

*Although the technical details and recommendations contained in this report correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications; for this*

**PHOTO 1**



**PHOTO 2**



**PHOTO 3**



**INSTALLING A SKIRTING:** fold the Mapefonic Strip over the surface of the flooring (photo 1); place the skirting on top of the Mapefonic Strip (photo 2); cut away the excess Mapefonic Strip (photo 3)

# Mapeconic System



Cleaning the flooring with a damp sponge

Each kit contains:

**Mapeconic Strip:**  
4 rolls, each 11 m (44 m).

**Mapeconic Pad:**  
12 packages of 2 m<sup>2</sup> each - 48 pieces (24 m<sup>2</sup>).

**Mapeconic Glue:**  
4 buckets of 5 kg each (20 kg).

**Mapeconic Mortar:**  
4 bags of 25 kg each (100 kg).

**Mapeconic Grout:**  
12 boxes of 1 kg each (12 kg).

reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

**All relevant references of the product are available upon request**



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