



# Mapeker Rapid-Set Flex



**Cement-based rapid-setting adhesive for interior and exterior floor and wall installations of ceramic and porcelain tiles and non-moisture sensitive natural stone**



## CLASSIFICATION IN COMPLIANCE WITH EN 12004

**Mapeker Rapid-Set Flex** is an improved (2), fast setting (F) cementitious (C) adhesive classified as C2F. Available in grey or white.

## WHERE TO USE

Interior and exterior bonding of ceramic and porcelain tiles and mosaics and natural stone materials that are not sensitive to moisture. Use **Mapeker Rapid-Set Flex** white for the installation of light coloured natural stone.

Spot bonding of insulating materials such as expanded polystyrene and polyurethane, gypsum board, glass and rock wool, wood-cement panels, formed-concrete blocks, sound-deadening panels etc.

## Some application examples

- Rapid installation or renovation in areas subjected to pedestrian traffic.
- Rapid repair work in bathrooms, showers, kitchens, terraces and balconies.
- Installing marble and other natural stone not sensitive to moisture.
- Rapid installation onto rigid plywood overlaid floors (min. 15 mm ply).
- Underfloor Heating Installations

## TECHNICAL CHARACTERISTICS

**Mapeker Rapid-Set Flex** is a powder composed of a mixture of special cements, selectively-graded

aggregates, synthetic resins and setting accelerators that develop high bond strength only 3 hours after setting.

For this reason floor and wall installations can be completed very quickly. Floors can be walked on after only 3 hours and are ready for general traffic after 24 hours.

**Mapeker Rapid-Set Flex** when hardened is frost-proof and water resistant.

## RECOMMENDATIONS

- On walls or floors subject to flexing or vibration (wooden or cement-fibre boards, gypsum boards, cement boards etc.) use a highly flexible adhesive (for example **Keraquick** mixed with **Latex Plus**).
- Mechanically abrade anhydrite screeds and prime with **Eco Prim T** or **Primer G**.
- On gypsum boards use flexible adhesives (for example **Mapegrip D2** / **Keraflex**).
- On gypsum walls or gypsum plasters, apply a coat of **Primer G** before fixing with cement-based adhesives.
- On metal surfaces use **Keralastic**.
- For bonding expanded polystyrene insulating panels with a protective film use **Mapegrip D2**.
- Plywood overlaid floors must use a minimum of 15 mm WBP or marine grade plywood and be fixed at maximum 300 mm centres in all directions to provide a rigid substrate.



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Application of Mapeker Rapid-Set Flex on 15 mm plywood

- Not suitable for use on plywood direct to joists or for floating floors.

### APPLICATION PROCEDURE

#### Preparing the substrate

**Mapeker Rapid-Set Flex** can be applied to all stable substrates that are free of oils, grease, waxes and that are sound and free of loose plaster, laitance and crazing. Damp cement screeds can noticeably prolong the setting time of **Mapeker Rapid-Set Flex**.

Gypsum plasters must be perfectly dry (min. 4 weeks), sufficiently hard and free of dust.

It is absolutely essential that they are treated with **Primer G** before applying **Mapeker Rapid-Set Flex**. In areas subject to extreme damp (showers etc.) **Mapegum WPS** should be used to waterproof the substrate.

#### Preparing the mix

**Mapeker Rapid-Set Flex** should be mixed with clean water and stirred continuously until it becomes a smooth lump-free paste. It is preferable to use a mechanical mixer. The mix must be used within 15-20 minutes, after which it begins to set.

A 20 kg bag of grey **Mapeker Rapid-Set Flex** should be mixed with about 4.6-5 litres of water (4.8-5.2 litres for the white version), and a 10-kg bag with about 2.3-2.5 litres of water.

Allow the mix to stand for a few minutes then mix again briefly before applying.

#### Applying the mix

**Mapeker Rapid-Set Flex** is applied to the substrate with a notched trowel to a max of 5 mm thick.

When selecting the trowel, choose one that transfers the adhesive to at least 65% to 70% of the back of the tiles for interior dry walls and 100% coverage for floor areas, exterior and wet wall areas:

- for mosaics up to 5x5 cm, the MAPEI square-notched trowel No. 4 is recommended;
- for normal ceramic wall tiles in dry areas, the MAPEI V-notched trowel No. 5 is recommended;
- for floors, use a trowel appropriate to tile size, substrate regularity etc. to achieve a solid bed fix.
- for very demanding applications such as exteriors subject to freezing, floors subject to loads, large-size tiles, **Mapeker Rapid-Set Flex** should also be applied to the backs of the tiles (back-buttering). Large format includes tiles over 30x30 cm;
- for very absorbent substrates or during hot weather, the substrate should be dampened to extend the open time of the adhesive.

#### Laying the tiles

It is not necessary to wet the tiles before fixing; if, however, the backs are very dusty, they should be wiped over with a wet sponge.

**Mapeker Rapid-Set Flex's** open time in normal temperature and humidity is about 10 minutes; unfavourable weather conditions (strong sun, drying wind, high temperature), or a highly absorbent substrate will shorten this open time, sometimes to just a few minutes.

For this reason, there must be constant checks to see whether the adhesive has formed a surface skin or is still fresh to the touch.

Should a surface skin have formed, the adhesive should be removed and fresh adhesive applied. Do not wet the adhesive when it has formed a skin because, a non-adhesive film will be formed.

Adjustment of the tiles, if necessary, should be carried out within 5-10 minutes after placing the tiles.

Tiling fixed with **Mapeker Rapid-Set Flex** must not be subjected to washout or rain for at least 3 hours and must be protected from frost and strong sun for at least 24 hours after laying.

#### Grouting

Tile joints can be grouted 2-3 hours after application with MAPEI products (**Keracolor** and **Ultracolor Plus**).

If the joints need to have good chemical resistance or where hygiene is of importance, use **Kerapoxy**, a two-component acid-resistant epoxy grouting compound.

Expansion joints to should be filled with **Mapesil AC**, **Mapesil LM** or **Mapeflex PU21**.

#### Spot-bonding insulating materials

Spot bonding to sound-deadening or insulating panels should be applied using a float or trowel, the trowel type and size to be determined by the flatness of the surface and the weight of the panels.

In these cases, the open time must also be observed, bearing in mind that a few spots of adhesive on heavy panels may require temporary shoring which should then only be removed after the **Mapeker Rapid-Set Flex** has begun to set.

#### Cleaning

Tools and hands can be cleaned with water, tiled surfaces should be cleaned with a damp cloth; water should be used only in moderate quantities and after a few hours.

#### CONSUMPTION

Ceramic-tiling mosaics and small size tiles (trowel no. 4): 2 kg/m<sup>2</sup>;

normal size tiles (trowel no. 5): 2.5-3 kg/m<sup>2</sup>;

large sizes, floors, exteriors (trowel no. 6 or 10 or larger): 4-5kg/m<sup>2</sup>;

Spot-bonding foamed materials etc.: 0.5-0.8 kg/m<sup>2</sup>;

gypsum wallboard, foamed concrete: 1.5 kg/m<sup>2</sup>;

full-bonding on rough surfaces: 2.5 kg/m<sup>2</sup>.

**TECHNICAL DATA (typical values)**

In compliance with:

- EN 12004 C2F
- European UEAtc directive
- DIN 18156 - Part 2
- American ANSI A 118.4 - 1992
- Canadian 71 GP 30 M type 2

**PRODUCT IDENTITY**

<b>Type:</b>	powder
<b>Colour:</b>	dark grey and white
<b>Bulk density (kg/m<sup>3</sup>):</b>	1,400 (grey)                      1,400 (white)
<b>Dry solids content (%):</b>	100
<b>Storage life:</b>	12 months in a cool dry place in the original packaging
<b>Hazard classification according to EC 1999/45:</b>	none. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet
<b>Inflammability:</b>	no
<b>Customs class:</b>	3824 50 90

**APPLICATION DATA (at +23°C - 50% R.H.)**

<b>Mixing ratio:</b>	<b>Mapeker Rapid-Set Flex Grey</b> 100 parts of powder with 23-25 parts (white 24-26) by weight of water
<b>Consistency of mix:</b>	very viscous paste
<b>Density of the mix (kg/m<sup>3</sup>):</b>	1,500
<b>pH of mix:</b>	over 12
<b>Setting time:</b>	45 minutes
<b>Application temperature range:</b>	from +5°C to +35°C
<b>Pot life of mix:</b>	20 minutes
<b>Open time:</b>	10 minutes
<b>Adjustability time:</b>	about 5-10 minutes
<b>Ready for traffic on dry substrate:</b>	3 hours
<b>Cure time on dry substrate:</b>	24 hours
<b>Grouting on dry substrate:</b>	2-3 hours

**FINAL PERFORMANCES**

<b>Moisture resistance:</b>	excellent
<b>Ageing resistance:</b>	excellent
<b>Resistance to solvents and oils:</b>	excellent
<b>Resistance to temperature:</b>	from -30°C to +90°C
<b>Flexibility:</b>	moderate
<b>Bonding strength EN 1348 (N/mm<sup>2</sup>):</b>	<b>grey                      white</b>
- after 28 days +23°C - 50% R.H.:	1.5                      1.5
- after heat ageing:	1.3                      1.3
- after water immersion:	1.0                      1.0
- after freeze-thaw cycles:	1.2                      1.2

# Mapeker Rapid-Set Flex

## PACKAGING

Mapeker Rapid-Set Flex grey is supplied in 20 and 10 kg paper bags.

Mapeker Rapid-Set Flex white is supplied in 20 kg paper bags.

## STORAGE

Mapeker Rapid-Set Flex should be stored in a dry place, where it will have a maximum shelf life of 12 months in the original unopened packaging.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

## SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Mapeker Rapid-Set Flex contains cement which, when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction and allergic reactions to those predisposed. It is recommended to use gloves and eye protection. For further information refer to the Safety Data Sheet.

FOR PROFESSIONALS.

## WARNING

*Although the technical details and recommendations contained in this data sheet 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 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  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**

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