



# MAPEI



# 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.

Conformity of **Mapeker Rapid-Set Flex** is declared in **ITT certificates n° 25050215/Gi (TUM)** issued by the **Technische Universität München** laboratory (Germany).

### 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 (suitably encapsulated).

### 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



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Application of Mapeker  
Rapid-Set Flex  
on 15 mm plywood

15 mm WBP or marine grade plywood and be fixed at maximum 300 mm centres in all directions to provide a rigid substrate.

- 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 (4.6-5 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

Type:	powder	
Colour:	dark grey and white	
Bulk density (kg/m <sup>3</sup> ):	1,400 (grey)	1,400 (white)
Dry solids content (%):	100	
Inflammability:	no	

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

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

### FINAL PERFORMANCES

Damp resistance:	excellent	
Ageing resistance:	excellent	
Resistance to solvents and oils:	excellent	
Resistance to acids and alkalis:	poor	
Resistance to temperature:	from -30°C to +90°C	
Flexibility:	moderate	
Bonding strength EN 1348 (N/mm <sup>2</sup> ):	grey	white
- 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

## 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.

The product complies with the conditions of Regulation (EC) N° 1907/2006 (REACH), Annex XVII, item 47

## SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

**Mapeker Rapid-Set Flex** is an irritant containing cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed.

It is recommended to use protective gloves and goggles and to take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

## N.B.

*Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have*

*no control over the circumstances in which our product is used. It is therefore important that the end users satisfy themselves that the product and conditions are suitable for the envisaged application.*

*No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification.*

*End users should ensure that our latest product data and safety information sheets have been consulted prior to use.*

**Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.co.uk](http://www.mapei.co.uk)**

## LEGAL NOTICE

***The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.***

***The most up-to-date TDS can be downloaded from our website [www.mapei.co.uk](http://www.mapei.co.uk).***

***ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.***

**All relevant references for the product are available upon request and from [www.mapei.co.uk](http://www.mapei.co.uk)**