



# Granirapid



**Two-component high performance fast-setting and hydration cementitious adhesive for ceramic tiles and stone material**



## CLASSIFICATION IN COMPLIANCE WITH EN 12004

**Granirapid** is an improved (2) fast setting (F) cementitious (C) adhesive of class C2F.

### WHERE TO USE

For bonding all kinds of interior and exterior ceramic tiles; reconstructed, artificial and natural stones and marble on walls or floors.

For bonding rubber flooring for cement installations (stalk back or dove-tailed back) on all traditional substrates in interiors, exteriors and in environments subject to heavy traffic.

### Some application examples

- Ceramic and vitreous mosaics, single-fired and double-fired ceramic tiles, terra-cotta floor-tiles, klinker tiles, porcelain tiles, etc.;
- reconstructed or artificial stones, natural stone (marble, granite, etc.) which require adhesives with fast drying times;

on

- bonded or floating cement screeds provided they are sufficiently cured;
- underfloor heating installations;
- bonded or floating screeds in **Mapecem**, **Topcem** or **Topcem Pronto**;
- existing floors (ceramic tiles, natural stone, terrazzo tiles, etc.) after cleaning and degreasing.

Because of its extraordinary bonding and fast-setting characteristics, **Granirapid** is particularly suitable for rapid re-tiling jobs or flooring that has to be ready for

use within very short times (supermarkets, factories, hospitals, airports, etc.).

### TECHNICAL CHARACTERISTICS

**Granirapid** is a two-component adhesive composed of a special white or grey binder and silica sand (Part A) and a synthetic rubber latex (Part B).

**Granirapid** has particularly fast setting and hydration times so that floors and walls are set to light foot traffic after 3 hours and completely cured after only 24 hours.

**Granirapid** has a very low shrinkage and excellent bonding characteristics which make it suitable for all of the most difficult substrates. Its mechanical properties make it resistant to impact, vibration, temperature changes, ageing and dilute chemical agents.

### RECOMMENDATIONS

Do not use **Granirapid**:

- on walls or floors subjected to intense movements (chipboard or wood agglomerates, asbestos cement board, etc.);
- on metal surfaces;
- on artificial, reconstructed or natural marble subject to exceptional movement in the presence of damp, on green marble, certain sandstones and slates use **Keralastic** only.

### APPLICATION PROCEDURE

#### Preparing the substrate

All substrates onto which **Granirapid** will be applied must be flat, mechanically strong, free from loose parts, grease, oil, paint, wax, etc.



# Granirapid



Laying Jura marble with Granirapid white



Laying porcelain tiles in a factory



Laying vitreous mosaic with Granirapid white

Cementitious substrates must not be subject to shrinkage after the installation of the tiles. During warm weather, renders must be cured at least one week per centimetre of thickness and cementitious screeds must be cured for at least 28 days, unless they have been made with special MAPEI binders for screeds such as **Mapecem**, **Topcem** or **Topcem Pronto**. Dampen the surfaces with water to cool down, if they should be too warm from exposure to direct sunlight. Gypsum substrates and anhydrite screeds must be perfectly dry (maximum residual moisture 0.5%), sufficiently hard and free from dust. It is absolutely essential that they be treated with **Primer G** or **Mapeprim SP**. In areas subject to extreme damp, prime the substrate with **Primer S**.

## Preparing the mix

The **Granirapid** mix is obtained by mixing 25 kg of Part A grey and 22.5 kg Part A white (cementitious powder) with 5.5 kg of Part B (synthetic rubber latex).

If possible, use a mechanical stirrer until a smooth mix is obtained. Always pour the powder (Part A) into the latex (Part B). Pot life at +20° C is about 45 minutes, but higher temperatures can reduce this time.

## Applying the mix

To achieve a good adhesion, first spread a thin coat of **Granirapid** onto the substrate using the straight edge of the trowel followed immediately with the correct thickness, depending on the type and size of the tile, using the most suitable notched trowel. The general principle to follow when selecting the right trowel is to choose one that gives a coverage to at least 65-70% of the back of the tiles for internal walls and light traffic areas and 100% coverage for heavy traffic areas and all external work.

For mosaics up to 5x5 cm MAPEI trowel no. 4 or 5 is recommended (consumption 2.5-3 kg/m<sup>2</sup>).

For normal ceramic wall tiles MAPEI v. notched trowel no. 5 is recommended (consumption 3.5-4 kg/m<sup>2</sup>).

For floors and any uneven surfaces or tiles with highly profiled ribs or lugs or large-size tiles MAPEI v. notched trowel no. 6 is recommended (consumption 5-6 kg/m<sup>2</sup>).

For floors and any very uneven surfaces or tiles with highly profiled ribs or lugs or large-size tiles MAPEI square-notched trowel no. 10 is recommended (consumption 8 kg/m<sup>2</sup>), or a **Kerafloor** trowel (up to 1 cm thick).

For particularly demanding applications such as: exteriors subject to freezing, basins or swimming pools, floors subject to heavy loads or floors to be polished in situ, dove-tailed tiles, or tiles with large stalks or large size tiles, **Granirapid** should be applied to the back of the tiles (back-buttering). Large size tiles include those over 900 cm<sup>2</sup> (30x30 cm).

## Installing the tiles

Open time in normal temperature and humidity conditions is about 20 minutes. Unfavourable climatic conditions (strong sun, drying wind, high temperature, etc.) or a highly absorbent substrate can reduce the

time to just a few minutes.

Careful checks have to be made to ensure that a skin does not form on the surface of the spread adhesive, which should stay "fresh". Wetting the substrate before applying the adhesive helps to prolong open time. Should a skin form, the adhesive will have to be freshened up by re-spreading with the notched trowel. It is not advisable to wet the adhesive with water when a skin has formed because, instead of dissolving the skin, the water will often form an anti-adhesive film. Ceramic coverings laid with **Granirapid** must not be washed or exposed to rain for at least 3-4 hours and must be protected from strong sun for at least 12 hours after laying.

## Installing the rubber

The installation of rubber with cement installations must be carried out by back-buttering. Butter with **Granirapid**, until saturated, the back of the slab and spread **Granirapid** on the substrate with a no. 6 trowel. Apply the slab "wet" on "wet" and lightly rub.

## GROUTING AND SEALING

Joints can be grouted after 3 hours with the special MAPEI cementitious or epoxy grouts, available in various colours.

Expansion joints must be sealed with the special MAPEI sealants.

## POLISHING

Surfaces can be polished after 24 hours.

## SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after 3-4 hours.

## READY FOR USE

Surfaces are ready for use after approximately 24 hours. Basins and swimming pools can be filled after 3 days.

## Cleaning

All tools may be cleaned with abundant water before the adhesive sets. After setting, cleaning becomes very difficult, but can usually be helped by solvents such as white spirit or similar.

## CONSUMPTION

Mosaics and small sizes in general (trowel no. 4): 2.5-3 kg/m<sup>2</sup>

Normal sizes (trowel no. 5): 3.5-4 kg/m<sup>2</sup>

Large sizes, exterior floors (trowel no. 6): 5-6 kg/m<sup>2</sup>

Uneven tile backs and uneven surfaces, natural stones (trowel no. 10): 8 kg/m<sup>2</sup> or more

## PACKAGING

**Granirapid** is available in white and grey.

**Granirapid white:** 28 kg packs  
Part A: 22.5 kg bag;  
Part B: 5.5 kg drum.

**Granirapid grey:** 30.5 kg packs  
Part A: 25 kg bag;  
Part B: 5.5 kg drum.

## TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 as C2F
- DIN 18156 - M
- U.K. B.S. 5980 - 1980 Type 3 Class AA
- American ANSI A 118.1 - 1999
- Canadian 71 GP 30 M Type 2

### PRODUCT IDENTITY

#### PART A:

Consistency:	white or grey powder
Specific gravity (g/cm <sup>3</sup> ):	1.3
Dry solids content (%):	100
Storage:	12 months in original unopened packing in a dry place
Hazard classification according to EEC 88/379:	none

#### PART B:

Consistency:	thick liquid
Colour:	greenish white
Specific gravity (g/cm <sup>3</sup> ):	1.01
pH:	10
Dry solids content (%):	21
Brookfield viscosity (mPa·s):	40
Storage:	24 months in original unopened packing. Protect from frost
Hazard classification according to EEC 88/379:	none
Customs class:	3824 50 90

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

Mix ratio:	White: Part A: 22.5 kg + Part B: 5.5 kg Grey: Part A: 25.0 kg + Part B: 5.5 kg
Consistency of mix:	very pasty
Specific gravity of mix (g/cm <sup>3</sup> ):	1.6
pH of mix:	approx. 11
Application temperature range:	from +5°C to +30°C
Pot life of mix:	45 mins.
Open time (according to EN 1346):	approx 20 mins.
Setting time:	approx. 2 hours
Grouting:	after 3 hours
Set to light traffic:	after 3-4 hours
Ready for use:	after 24 hours (3 days for basins and swimming pools)

#### FINAL PERFORMANCES

Tensile adhesion strength according to EN1348 (N/mm <sup>2</sup> ):	
- initial (after 28 days):	2.5
- after heating:	2.2
- after water immersion:	1.3
- after freeze/thaw cycles:	1.4
Resistance to acids:	fair
Resistance to alkalis:	excellent
Resistance to oils:	excellent
Resistance to solvents:	excellent
Temperature when in use:	from -30°C to +90°C
Flexural strength:	
- after 24 hours	3.0 N/mm <sup>2</sup>
- after 7 days	5.0 N/mm <sup>2</sup>
- after 28 days	6.0 N/mm <sup>2</sup>
Compressive strength:	
- after 24 hours	10.0 N/mm <sup>2</sup>
- after 7 days	17.0 N/mm <sup>2</sup>
- after 28 days	20.0 N/mm <sup>2</sup>



Laying synthetic flexible granite with Granirapid grey



Laying white Carrara marble with Granirapid white



Laying agglomerate tiles over existing ceramic tiles with Granirapid grey

# Granirapid



Sistine Corridors - Vaticano - Rome

An example of an installation of granite with Granirapid Subway in Mulheim Ruhr (Germany)



## SAFETY INSTRUCTIONS FOR THE PREPARATION AND INSTALLATION

Contains cement, that in contact with sweat or other body fluids produces an irritant alkaline reaction. Use protective gloves and goggles. For further information consult the safety data sheet.

## STORAGE

Granirapid Part A can be stored 12 months in original unopened packing in a dry place.

Granirapid Part B can be stored 24 months. Protect from frost.

FOR PROFESSIONALS.

## WARNING

N.B. - Although the technical details and recommendations contained in this product 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 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**



An example of an installation of mosaic and klinker in a swimming pool



An example of an installation of mosaic and klinker in a swimming pool - Olympic Centre - Sydney (Australia)



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