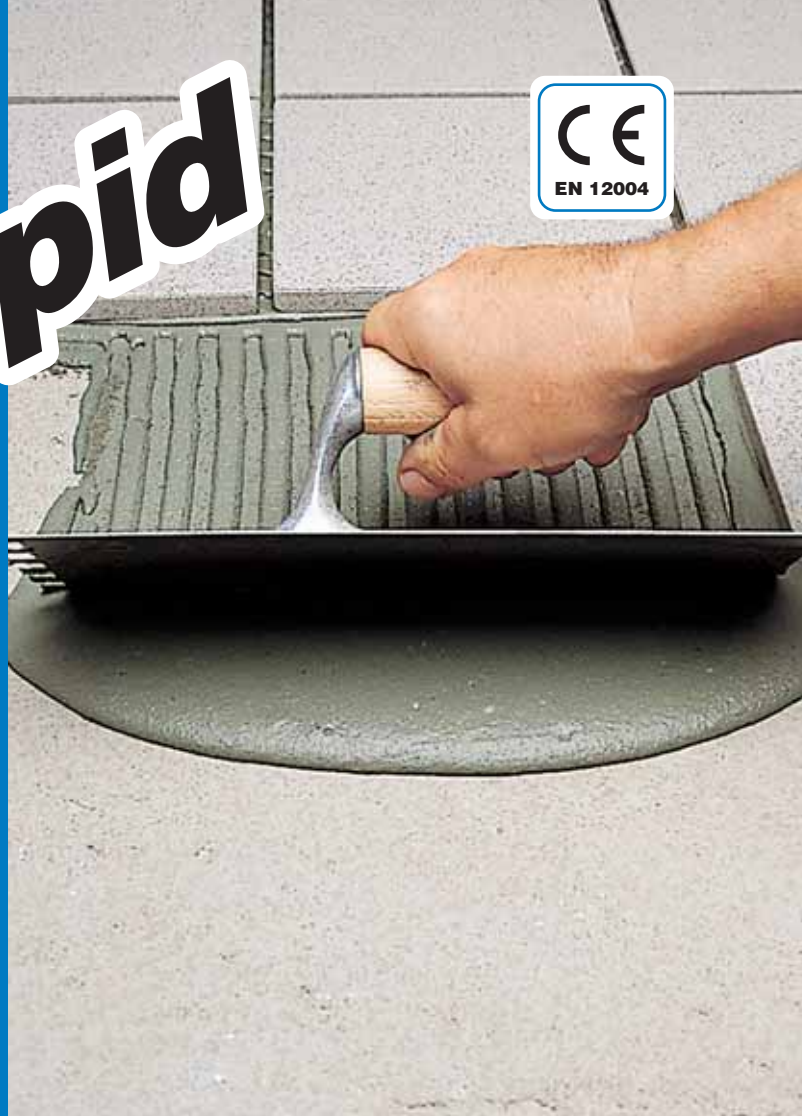




Granirapid



Two-component high performance fast-setting and hydrating 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 classified as C2F.

CLASSIFICATION IN COMPLIANCE WITH EN 12002

Granirapid is a deformable adhesive classified as S1.

Granirapid is CE marked, as declared in **ITT** certificates **N° 85330201.101 (SFV)** issued by the *Säurefliesner-Vereinigung E.V. Grossburgwedel laboratory (Germany)* and **N° LR-01-011 (CSTB)** issued by the *Centre Scientifique et Technique du Bâtiment, Champs sur Marne laboratory (France)*.

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 unbonded cement screeds provided they are sufficiently cured;

- underfloor heating installations;
- bonded or unbonded screeds in **Mapecem**, **Mapecem Pronto**, **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 traffic after 3 hours and completely cured after only 24 hours.

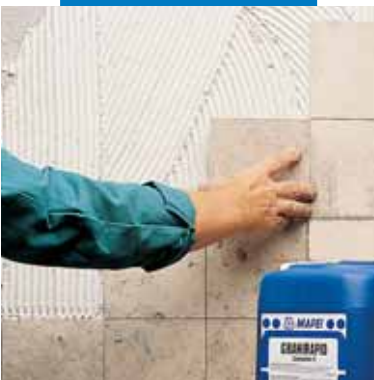
Granirapid has very low shrinkage and excellent bonding characteristics which make it suitable for all of the most difficult substrates. Its mechanical properties make it resistant to impact, vibration, temperature changes, ageing and dilute chemical agents.

RECOMMENDATIONS

Do not use **Granirapid**:

- on walls or floors subjected to intense movement (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, such as green marble, certain sandstones and slates: use **Keralastic** only.

Granirapid



Laying Jura marble with Granirapid white



Laying porcelain tiles in a factory



Laying vitreous mosaic with Granirapid white



Laying dove-tale rubber with Granirapid

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. Cementitious substrates must not be subject to shrinkage after the installation of the tiles. During warm weather, renders must be cured at least 1 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**, **Mapecem Pronto**, **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 are 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 or 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/m²).

For normal ceramic wall tiles MAPEI v. notched trowel No. 5 is recommended (consumption 3.5-4 kg/m²).

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/m²).

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/m²), 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 cm² (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 this 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 plenty of 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 ² ;
normal sizes (trowel No. 5):	3.5-4 kg/m ² ;
large sizes, exterior floors (trowel No. 6):	5-6 kg/m ² ;
uneven tile backs and uneven surfaces, natural stones (trowel No. 10):	8 kg/m ² 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.

TECHNICAL DATA (typical values)

In compliance with:

- European EN 12004 as C2F
- European EN 12002 as S1
- American ANSI A 118.4 - 1999
- Canadian 71 GP 30 M Type 2

PRODUCT IDENTITY

PART A:

Consistency:	white or grey powder
Bulk density (kg/m ³):	1300
Dry solids content (%):	100
Storage:	12 months in original unopened packing in a dry place
Hazard classification according to EC 99/45:	none. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet

PART B:

Consistency:	thick liquid
Colour:	greenish white
Density (g/cm ³):	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 EC 99/45:	none. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet
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 kg + part B: 5.5 kg
Consistency of mix:	very pasty
Density of mix (kg/m ³):	1600
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 EN 1348 (N/mm ²):	
- initial (after 28 days):	2.5
- after heating:	2.2
- after water immersion:	1.3
- after freeze/thaw cycles:	1.4
Flexural strength (N/mm ²):	
- after 24 hours	3.0
- after 7 days	5.0
- after 28 days	6.0
Compressive strength (N/mm ²):	
- after 24 hours	10.0
- after 7 days	17.0
- after 28 days	20.0
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
Deformability according to EN 12002:	S1 - deformable



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)



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

SAFETY INSTRUCTIONS FOR THE PREPARATION AND INSTALLATION

Component A of **Granirapid** contains cement, that in contact with sweat or other body fluids produces an irritant alkaline reaction. Use protective goggles and gloves. The Safety Data Sheet is available for professional users.

STORAGE

Granirapid part A can be stored 12 months in original unopened packing in a dry place. Manufactured in compliance with the regulations of the 2003/53/EC Directive. **Granirapid** part B can be stored 24 months. Protect from frost.

FOR PROFESSIONALS.

WARNING

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 on 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)



MAPEI GROUP CERTIFIED MANAGEMENT SYSTEMS (Quality, Environment and Safety)



MAPEI S.p.A. - ITALY



MAPEI SUISSE SA



MAPEI Kft. - HUNGARY



MAPEI s.r.o. - CZECH REP.



MAPEI CORP. - U.S.A.



MAPEI INC. - CANADA



MAPEI FAR EAST Pte Ltd
MAPEI MALAYSIA SDN BHD



MAPEI ARGENTINA S.A.



MAPEI FRANCE



RESCON MAPEI AS - NORWAY



www.mapei.com