

GRANIRAPID

Two-component high-performance fast-setting and hydrating cementitious adhesive for ceramic tiles and stone materials



CLASSIFICATION IN COMPLIANCE WITH ISO 13007-1 AND EN 12004

Granirapid is an improved (2) fast setting (F) cementitious (C) deformable (SI) adhesive classified as C2F S1.

WHERE TO USE

For bonding all kinds of interior and exterior ceramic tiles, agglomerate, artificial and natural stone and marble on walls or floors.

For bonding rubber flooring (stalk back or dove-tailed back) on all traditional cementitious substrates in environments subject to heavy traffic.

Some application examples

- Ceramic and vitreous mosaics, single-fired and double-fired ceramic tiles, terracotta floor-tiles, clinker tiles, porcelain tiles, etc.
- Agglomerate or artificial stones, natural stone (marble, granite, etc.) which require adhesives with fast drying times
- Bonded or unbonded cementitious screeds provided they are sufficiently cured;
- Underfloor heating or cooling installations;
- Bonded or unbonded screeds using **Mapecem**, **Mapecem Pronto**, **Topcem** or **Topcem Pronto**;
- Existing floors (ceramic tiles, natural stone, terrazzo tiles, etc.) after cleaning and degreasing;
- Gypsum/cement boards (after applying a suitable primer).

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, malls, hospitals, airports, etc.).

TECHNICAL CHARACTERISTICS

Granirapid is a two-component adhesive composed of a special hydraulic and silica sand (part A) and a synthetic rubber latex (part B).

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

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

RECOMMENDATIONS

Do not use **Granirapid**:

- on walls or floors subject to excessive movement (chipboard or wood agglomerates, asbestos cement board, etc.);
- on metal surfaces;
- on artificial, agglomerate or sensitive natural marble subject to exceptional movement in the presence of moisture, such as green marble, certain sandstones and slates: use **Keralastic** or **Keralastic T** only.

APPLICATION PROCEDURE

Preparation of the substrate

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

Cementitious substrates must not continue to shrink after the installation of the tiles. Renders must be cured at least 2 weeks and cementitious screeds must be cured for at least 3-4 weeks, unless they have been produced with special MAPEI binders for screeds such as **Mapecem** or **Topcem** or a ready mixed mortar such as **Mapecem Pronto** or **Topcem Pronto**.

Dampen the surface to reduce temperature if exposed to direct sunlight.

Gypsum substrates and anhydrite screeds must be perfectly dry (maximum residual moisture 0.5%), sufficiently hard and free from dust. They must also be treated with **Primer G** or **Eco Prim T Plus**. In areas subject to extreme damp/moisture, prime the substrate with **Primer S**.

Preparation of 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). 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 may reduce this time.

Application of 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 by the correct thickness, using the most suitable notched trowel. The general principle to follow when selecting the right trowel is to choose one that gives coverage to at least 65-70% of the back of the tiles for internal walls and 100% coverage for floor areas, wet 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 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, swimming pools, floors subject to heavy loads or to be polished in situ, tiles with deep backs 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).

Installation of the tiles

Open time in normal temperature and humidity conditions is about 20 minutes. Unfavorable 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 skin has formed, since water reacts forming 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 sunlight for at least 12 hours after laying.

Installation of the rubber

The installation of rubber onto cementitious substrates must be carried out by back-buttering. Butter the back of the slab with **Granirapid**, and spread **Granirapid** on the substrate with a No. 6 trowel. Apply the slab "wet" on "wet" and lightly rub.



Installation of porcelain tiles in an industrial environment



Overlaying rubber flooring on cement with Granirapid



Installation of white Carrara marble with white Granirapid



GROUTING AND SEALING

Joints can be grouted after 3 hours with special MAPEI cementitious or epoxy grouts, available in various colours. Expansion joints must be sealed with special MAPEI sealants.

POLISHING

Surfaces can be polished after 24 hours.

LIGHT FOOT TRAFFIC

Floors are able to take 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/m²

Normal sizes (trowel No. 5): 3.5-4 kg/m²

Large sizes, exterior floors (trowel No. 6): 5-6 kg/m²

Uneven tile backs and uneven surfaces, natural stones (trowel No. 10): 8 kg/m² or more.

PACKAGING

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.

COLOURS

Granirapid is available in white or grey.

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.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instruction on the safe use of our products can be found on the latest version of the Safety Data Sheet available on our website www.mapei.ae

TECHNICAL DATA (typical values)	
In compliance with:	
– GSO ISO 13007 as C2F S1	
– European EN 12004 as C2F S1	
– American ANSI A 118.4, ANSI 118.15	
PRODUCT IDENTIFICATION	
EMICODE:	EC1 PLUS - very low emission
PART A	
Consistency:	white or grey powder
Bulk density (g/cm³):	1.3
Dry solids content (%):	100
PART B	
Consistency:	thick liquid
Colour:	greenish white
Density (g/cm³):	1.01
pH:	10
Dry solids content (%):	21
Brookfield viscosity (mPa·s):	40
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:	creamy paste
Density of mix (kg/m³):	1600
pH of mix:	approx. 11
Application temperature range:	from +5°C to +40°C
Pot life of mix:	45 min
Open time (according to EN 1346):	approx. 20 min
Setting time:	approx. 2 h
Grouting:	after 3 h
Set to light foot traffic:	after 3-4 h
Ready for use:	after 24 hours (3 days for basins and swimming pools)
FINAL PERFORMANCE	

Tensile adhesion strength according to EN1348 (N/mm ²): – initial (after 28 days): – after heating: – after water immersion: – after freeze/thaw cycles:	2.5 2.2 1.3 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
Deformability according to ISO 13007 and EN 12004:	S1 - deformable
VOC (SCAQMD 1168):	< 1 g/l



An example of mosaic and klinker installed in a swimming pool



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



Sistine Corridors - Vaticano - Rome



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

IMPORTANT NOTES

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 installers 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. The installer 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.com

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into other project-related documents, 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.com.

ANY ALTERATIONS 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.com

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