



# Nivorapid



**Ultra-fast setting,  
thixotropic, cementitious  
levelling compound  
for horizontal and  
vertical surfaces, from  
1 to 20 mm thick layer**



## **CLASSIFICATION ACCORDING TO EN 13813**

The smoothing compounds prepared with **Nivorapid** in compliance with the prescriptions present in this very technical data sheet are classified as CT-C40-F10-A2fl according to European Norm 13813.

## **WHERE TO USE**

**Nivorapid** is used for repairing, levelling and smoothing interior floors, walls, steps and arrises where very rapid hardening and drying are required.

## **Some application examples**

- Smoothing concrete slabs and screeds made with **Mapecem, Mapecem Pronto, Topcem, Topcem Pronto**, anhydrite, and magnesium based screeds as well as cast asphalt.
- Smoothing terrazzo, ceramic, natural stone or heated floors.
- Smoothing concrete walls, cementitious renders, foamed concrete blocks and ceramic.
- Repair or levelling steps, landings and edges of pillars.
- Filling depressions and holes in floors, walls and ceilings.

By adding **Latex Plus** to **Nivorapid**, levelling with excellent bonding strength on metal surfaces,

old rubber floors, PVC, needlepunch, chipboard, parquet, linoleum or similar (see Technical data sheet for **Latex Plus**) is obtained.

## **TECHNICAL CHARACTERISTICS**

**Nivorapid** is a grey-brown powder composed of cementitious binders, selected graded aggregates and synthetic additives prepared according to a formula developed in the MAPEI research laboratories.

**Nivorapid** mixed with water becomes an easily workable thixotropic paste with high bonding strength to substrates and rapid drying which allows subsequent installation operations for floor and wall coverings, or painting, within only 4-6 hours after application.

**Nivorapid** hardens without shrinkage and without the formation of cracks or crazing. It develops high compressive and flexural strength and is very resistant to impact and abrasion.

## **RECOMMENDATIONS**

- In case of very high temperature and if more than 10 mm is needed, it is recommended to add approx. 30% graded sand 0-4 mm to avoid that the high hydration heat provokes alterations in the final characteristics of the product.
- Do not exceed the quantity of water indicated and

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Nivorapid mixed with mechanical mixer



Grouting a plywood substrate with Nivorapid + Latex Plus



Repairing vertical arrise with Nivorapid

do not add more water to a mix that has already started to harden.

- Use **Planipatch** when a particularly fine final surface is needed and for thicknesses lower than 1 mm.
- Do not add cement, gypsum plaster or lime to the mix.
- Do not use for exteriors.
- Do not use on substrates subject to continuous rising damp.
- Do not use when the temperature is below +5°C.
- Protect from rapid evaporation on hot and/or windy days.
- Prior to use do not leave bags of **Nivorapid** exposed to sunlight for long periods of time.
- For levelling and localised grouting on wood supports, use **Nivorapid** mixed with **Latex Plus** in place of water.

## APPLICATION PROCEDURE

### Preparing the substrate

The substrates must be sound, dry, free of dust, loose parts, paint, wax, oils, rust and traces of gypsum.

Cement based surfaces that are not sufficiently sound must be removed or where possible consolidated with **Profas**, **Primer MF**, **Eco Prim PU 1K**, etc.

Spread dry sand or **Quartz 1.2** over the surface immediately after the treatment of one of the above mentioned products.

Cracks and fissures in the substrate must be repaired with **Eporip** or **Eporip Turbo**.

In order to fix dust and to provide uniform absorbency of the substrate, dusty or very porous concrete surfaces must be treated with a coat of diluted **Primer G** (1 kg of **Primer G** with 1-3 kg of water) or **Livigum** (1 kg of **Livigum** with 5 kg of water).

Anhydrite screeds may only be levelled with **Nivorapid** after treating the surface with a suitable primer (**Primer G** or **Eco Prim T** diluted 1:1 with water). Prime existing ceramic and natural stone substrates with a coat of **Eco Prim T** after mechanically abrading and cleaning the surface with a suitable detergent. Leave the primer to dry for 2-5 hours, according to the temperature and humidity level of the surrounding environment, and then

spread on a layer of levelling mortar. Never wait more than 24 hours.

### Preparing the mix

While mixing with a low speed electric mixer, pour a 25 kg bag of **Nivorapid** into a bucket containing 5.5 litres of clean water and mix until a uniform lump-free paste is obtained.

The quantity of **Nivorapid** mixed in each batch should be used within 15 minutes (at a temperature of +23°C).

### Applying the mix

Apply the mix with a long metal trowel. When it is necessary to apply several coats in rapid succession proceed with subsequent coats (distanced about 20-30 minutes according to the temperature and the absorption rate of the substrate).

The surface of **Nivorapid** is ready to receive ceramic tile coverings already after 4-6 hours.

Wooden and resilient floors can be laid after 24 hours.

### Cleaning

While it is still fresh **Nivorapid** can be removed from hands and tools with water.

### CONSUMPTION

1.6 kg/m<sup>2</sup> per mm of thickness.

### PACKAGING

**Nivorapid** is available in 25 kg bags and 4x5 kg packs.

### STORAGE

Stored in a dry place **Nivorapid** is stable for at least 12 months.

A prolonged storage of **Nivorapid** could, over time, shorten setting time, without however altering its final characteristics.

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

### SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Nivorapid** is irritant, contains cement, that in contact with sweat or other bodily fluids produces an irritant alkaline reaction and allergic reactions in those predisposed. Wear protective clothing, gloves and eye/face protection.

If the product comes into contact with the eyes, wash well with plenty of clean water and seek medical attention.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

|                               |                                |
|-------------------------------|--------------------------------|
| Consistency:                  | fine powder                    |
| Colour:                       | grey-brown                     |
| Density (kg/m <sup>3</sup> ): | 1,400                          |
| Dry solids content (%):       | 100                            |
| EMICODE:                      | EC1 R Plus - very low emission |

### COMPOSITION AND PROPERTIES OF THE MIXTURE (at +23°C - 50% R.H.)

|   |  |
|---|--|
| Mixing ratio:                           | 21-23 parts water per 100 parts of Nivorapid |
| Thixotropic properties:                 | yes  |
| Density of mix (kg/m <sup>3</sup> ):    | 1,900-2,000                                  |
| pH of mix:                              | approx. 12                                   |
| Application temperature range:          | from +5°C to +30°C                           |
| Pot life:                               | 15 minutes                                   |
| Setting time:                           | 15-25 minutes                                |
| Set to light foot traffic:              | approx. 2 hours                              |
| Waiting time before subsequent bonding: | after 4-6 hours                              |

### FINAL PERFORMANCES

|   |     |
|---|-----|
| <b>Compressive strength (N/mm<sup>2</sup>):</b> |     |
| - after 6 hours:                                | 25  |
| - after 1 day:                                  | 30  |
| - after 3 days:                                 | 35  |
| - after 7 days:                                 | 37  |
| - after 28 days:                                | 40  |
| <b>Flexural strength (N/mm<sup>2</sup>):</b>    |     |
| - after 6 hours:                                | 4   |
| - after 1 day:                                  | 5   |
| - after 3 days:                                 | 7   |
| - after 7 days:                                 | 8   |
| - after 28 days:                                | 10  |
| <b>Brinell hardness (N/mm<sup>2</sup>):</b>     |     |
| - after 6 hours:                                | 50  |
| - after 1 day:                                  | 80  |
| - after 3 days:                                 | 90  |
| - after 7 days:                                 | 95  |
| - after 28 days:                                | 120 |



Filling holes with Nivorapid



Levelling of existing floor with Nivorapid



Repairing horizontal arrises with Nivorapid

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

PRODUCT FOR PROFESSIONAL USE.

## WARNING

*Although the technical details and recommendations contained in this product 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 application: 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.*



Steps before and after being treated with Nivorapid

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



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gesellschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



**Our Commitment To The Environment**  
More than 150 MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

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



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