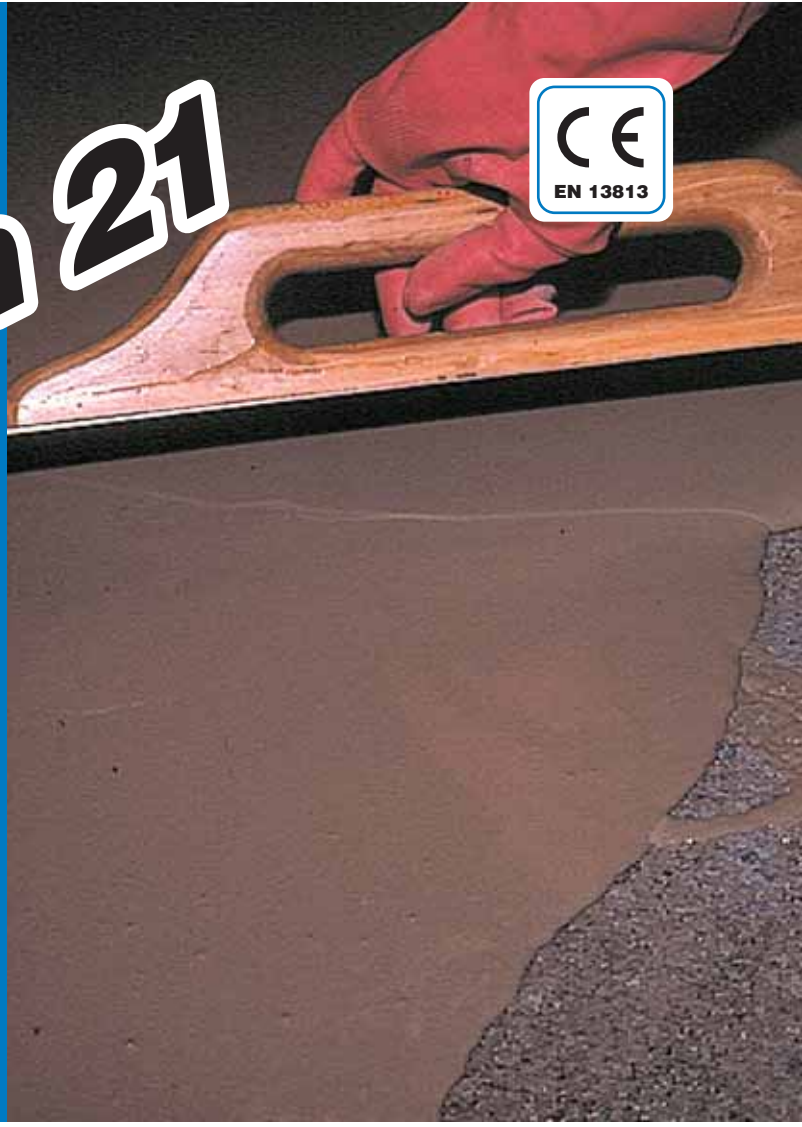
MAPEI

Novoplan 21

CE
EN 13813

CT
LEVELLING COMPOUNDS
C20-F7
A2fl
MAPEI
IN COMPLIANCE WITH EUROPEAN STANDARDS
EN 13813



Fast hardening self-levelling smoothing compound for thicknesses from 1 to 5 mm

CLASSIFICATION ACCORDING TO EN 13813

The smoothing compounds made with **Novoplan 21** in compliance with the norms referred to in this very technical data sheet are classified as CT-C25-F7-$A2_{fl}$ according to EN 13813.

WHERE TO USE

Novoplan 21 is used for levelling and smoothing new or existing substrates and provides an underlayment for receiving PVC, linoleum, rubber, cork, textile and non-woven flooring in areas where a good resistance to loads and traffic in offices and public areas is required.

Novoplan 21 must only be used in interior conditions in thicknesses from 1 to 5 mm.

Some application examples

- Smoothing of concrete slabs and cement-based screeds or **Topcem, Topcem Pronto**, **Mapecem** or **Mapecem Pronto** screeds.
- Smoothing of anhydrite screeds.
- Smoothing of under-floor heating installations.
- Smoothing over existing ceramic tile, terrazzo, natural stone and magnesite floors.

TECHNICAL CHARACTERISTICS

Novoplan 21 is a grey powder comprising of special fast-setting and hydrating cements, specially graded silica sand, special resins and additives prepared and developed in the MAPEI research laboratories.

When mixed with water, **Novoplan 21** becomes a very fluid, easily workable mix with excellent self-levelling properties and cures rapidly.

Novoplan 21 can also be applied with an appropriate pump.

Novoplan 21 is strong enough to withstand wheelchair traffic.

Novoplan 21 can be applied in thicknesses up to 5 mm per single coat without significant shrinkage that might cause cracks or crazing.

Once completely dry **Novoplan 21** has good compressive and flexural strength as well as resistance to impact and abrasion.

Flooring can be installed once **Novoplan 21** has dried, after 24-48 hours, depending on the thickness, temperature and moisture of the environment.

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Applying the Novoplan 21 paste on the substrate

Applying Novoplan 21 with a metal trowel on a cementitious screed primed with Primer G

Using a spiked roller over a fresh coat of Novoplan 21

RECOMMENDATIONS

- Do not add more water to the mix once it has begun to set.
- Do not add lime, cement or gypsum to the mix.
- Do not use for smoothing in exteriors or for substrates subject to rising damp.
- Do not apply another coat of **Novoplan 21**, once the previous one has dried completely, without first applying diluted **Primer G** (1 part by weight of **Primer G** diluted with 3 parts water).
- Do not use **Novoplan 21** at temperatures below +5°C or above +35°C.
- Not suitable for installing wood and parquet floor and wall coverings.
- Do not apply **Novoplan 21** in thicknesses less than 1 mm.
- Do not use for levelling over wooden substrates.

APPLICATION PROCEDURE

Preparing the substrate

The substrates must be dry, solid, free from dust, loose materials, paints, wax, oils, rust and traces of gypsum.

Cement based surfaces which are not sufficiently solid must be removed, or wherever possible, consolidated with **Prosfas, Primer EP** or **Primer MF**.

Cracks or crazing in substrates must be repaired with **Eporip**.

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 **Primer G** (1 part **Primer G** with 3 parts of water) or with **Livigum** (1 part **Livigum** with 5 parts water).

Anhydrite screeds can be levelled with **Ultraplan** only after the application of a coat of **Primer G** or **Primer EP**.

On existing ceramic or natural stone surfaces apply a coat of **Mapeprim SP** after the surfaces have been cleaned with detergents and mechanically abraded. Level before **Mapeprim SP** has dried completely (it must still be tacky).

Preparing the mix

While mixing with a low speed electric mixer, pour a 25 kg bag of **Novoplan 21** into a bucket containing 6.5 litres of clean water and mix until a uniform lump-free paste is obtained. Larger quantities of **Novoplan 21** can be prepared in suitable mortar mixers.

Let the mix stand for several minutes before remixing for a short time, the mix is then ready to be applied.

The amount of mixed **Novoplan 21** must be used within 30 minutes (at a temperature of +23°C).

Applying the mix

Apply **Novoplan 21** in a single coat from 1 to 5 mm thick with a large metal trowel or a squeegee, keeping the trowel slightly inclined to obtain the desired thickness.

Novoplan 21 can be also applied with a suitable pump.

When a second coat is required, it is recommended to apply it as soon as the previous coat is set to light foot traffic (approx. 3 hours at +23°C).

Installing the flooring

Once **Novoplan 21** dries, resilient, textile and ceramic flooring can be installed over it.

All of the MAPEI adhesive products are designed to be applied over **Novoplan 21**.

Waiting time before installation can vary according to the humidity and ambient temperature, and the thickness and type of flooring to be installed (from 24 to 48 hours).

Cleaning

While it is still fresh, **Novoplan 21** can be removed from tools with water.

CONSUMPTION

1.6 kg/m^2 per mm of thickness.

PACKAGING

Novoplan 21 is available in 25 kg bags.

STORAGE

12 months in a dry place and unopened packing.

Novoplan 21 could, over time, have a

TECHNICAL DATA (typical values)	EN 13813 - CT - C20 - F7 - $A2_{fl}$
PRODUCT IDENTITY	
Consistency:	fine powder
Colour:	grey
Bulk density (kg/m³):	1,200
Dry solids content (%):	100
Storage:	12 months in a dry place in original packing
Hazard classification according to EC 1999/45:	irritant. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3824 50 90
APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	approximately 25-26 parts water for 100 parts by weight of **Novoplan 21**
Thickness per coat (mm):	from 1 to 5
Self-levelling:	good
Density of mix with water (kg/m³):	2,000
pH of mix:	approx. 12
Application temperature range:	from +5°C to +30°C
Pot life:	approx. 20-30 minutes
Setting time:	approx. 50-70 minutes
Set to light foot traffic:	3-4 hours
Waiting time before bonding:	24 hours
FINAL PERFORMANCES	
Compressive strength (EN 196) (N/mm²): **– after 28 days:**	22.0
Flexural strength (EN 196) (N/mm²): **– after 28 days:**	7.0
Resistance to abrasion-weight loss (with Taber abrasion meter, H22 disk, weight 550 g after 200 rev.): **– after 28 days curing:**	3.5 g

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shortened setting time, however this will not affect its performance in service.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Contains cement, that in contact with sweat or other body fluids produces an irritant alkaline reaction and allergic reactions to those predisposed.
Avoid contact with the eyes.
Use protective gloves and goggles.

For further information consult the safety data sheet.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this data sheet 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 for the product are available upon request and from www.mapei.com

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