ULTRAPLAN EC20

Fast-drying self-levelling smoothing compound for thicknesses from 1 to 10 mm per layer





BENEFITS AND FEATURES

- Excellent self-leveling and surface finish
- High bond strength to the substrate
- Fast setting and hydrating properties
- Ready for the installation of ceramic coverings: minimum 3 hours; resilient /carpet floor coverings: minimum 24 hours; wooden floor coverings: minimum 48 hours
- EMICODE EC1 Plus (very low emission of VOC)

CLASSIFICATION ACCORDING TO EN 13813

Ultraplan EC20 smoothing compound, as described in this data sheet, is classified as CT-C20-F5-$A1_{FL}$ according to the European Standard EN 13813.

WHERE TO USE

Ultraplan EC20 is used in interiors for levelling and smoothing differences in thicknesses from 1 to 10 mm on new or existing substrates, preparing them to receive flooring where high resistance to loads and traffic is required.

Ultraplan EC20 is especially suitable for areas subject to wheeled service loads such as chairs and trolleys (a minimum of 3 mm thickness is recommended).

Ultraplan EC20 is for interior use only. Typical applications would include use in hospitals, hotels, theatres, schools and shopping centres.

Some application examples

- Levelling concrete slabs and cementitious screeds or **Mapecem**, **Topcem**, **Mapecem Pronto** or **Topcem Pronto** based screeds
- Levelling anhydrite substrates (using a suitable primer such as **Primer G** or **Eco Prim T Plus ME**
- Levelling underfloor cooling/heating systems
- Levelling existing concrete pavements, terrazzo, ceramic, natural stone and magnesite floors

TECHNICAL CHARACTERISTICS

Ultraplan EC20 is a grey powder consisting of special cement with fast-setting and hydrating properties, with selected graded silica sand, resins, and special additives prepared according to a formula developed in the MAPEI Research Laboratories.

Mixed with water, **Ultraplan EC20** becomes a fast-drying yet fluid and easily workable compound, perfectly self-leveling with a high bond strength to the substrate.

Ultraplan EC20 can be applied with an automatic pressure pump for distances over 100 m.

Ultraplan EC20 can be applied in thicknesses up to 10 mm per layer without shrinkage, cracking, or crazing, and develops good compressive and flexural strength as well as resistance to indentation and abrasion. For thicknesses greater than 10 mm (max. 20 mm), it is recommended to add approx. 30% by weight of 0.5 mm quartz (**Quartz 0.5 ME**).

Ultraplan EC20 is ready for the installation of ceramic coverings: minimum 3 hours; resilient /carpet floor coverings: minimum 24 hours; wooden floor coverings: minimum 48 hours.

RECOMMENDATIONS

- Do not add more water to a mix that has already begun to set
- Do not add lime, cement, or gypsum to the mix
- Avoid using **Ultraplan EC20** for exterior levelling works, particularly when exposed to direct sunlight
- Do not use **Ultraplan EC20** on substrates subject to continuous rising dampness
- Do not apply an additional layer of **Ultraplan EC20** when the previous one is completely dry; in this case, first prime with **Primer G** diluted with 1:3 of water by volume, after first lightly abrading the surface of the previous layer, or with **Eco Prim T Plus ME** (diluted 1:1 water)
- Do not use **Ultraplan EC20** on metal surfaces
- Do not use **Ultraplan EC20** when the temperature is below +5°C
- Do not attempt to apply in large areas when the temperature is above +30°C
- For areas subject to wheeled service loads, a minimum of 3 mm thickness is recommended.

APPLICATION PROCEDURE

Preparation of the substrate

The substrates must be sound, dry, and free of dust, loose particles, wax, oils, rust, curing compounds, and traces of paint and gypsum. Any laitance or weak layers from cement-based surfaces must be removed or where possible, the surface consolidated with **Prosfas** or **Planiseal PU 1K**.

Cracks must first be repaired with **Eporip**.

Dusty or very porous concrete surfaces must be cleaned and then treated with a coat of **Primer G** (1 part **Primer G** with 3 parts of water) or **Eco Prim T Plus ME (**diluted 1:1 with water depending on the type of substrate).

If applying onto ceramic or natural stones, apply a coat of **Eco Prim T Plus ME** (diluted 1:1 with water) after the surface has been thoroughly cleaned and/or mechanically abraded. Level with **Ultraplan EC20** before it has dried completely (while indents are still possible).

Preparation of the mix

Slowly pour a 23 kg bag of **Ultraplan EC20** into a rust-free bucket containing 5.5-5.75 litres of clean potable grade water and mix with a low-speed electric mixer fitted with a suitable mixing paddle to obtain a homogeneous, self-levelling lump-free mix. Larger quantities of **Ultraplan EC20** can be prepared in mortar mixers. After allowing to settle for 2-3 minutes, the mix should be re-stirred and is then ready for use.

The quantity of **Ultraplan EC20** mixed must be used within 20-30 minutes (at a temperature of +23°C).

Application of the mix

Apply **Ultraplan EC20** in a single layer of 1 to 10 mm thick with a large metal trowel or squeegee, keeping the trowel slightly inclined to obtain the desired thickness.

Ultraplan EC20 can also be applied with an automatic pressure pump. Due to its excellent self-levelling characteristic, **Ultraplan EC20** immediately eliminates small imperfections (trowel marks, etc.).

If the second layer of **Ultraplan EC20** is required, it is recommended to apply it as soon as the first one is set to light foot traffic (approx. 3 hours at +23°C). Otherwise, if the previous layer is completely dry, prime with **Primer G** diluted 1:3 with water after first lightly abrading the surface of the previous layer or **Eco Prim T Plus ME** (diluted 1:1 with water).

The levelling layer of **Ultraplan EC20** will be ready to receive ceramic, natural stone (non-sensitive) fixed with adhesives after a minimum of 3 hours at +23°C, resilient flooring and carpet, after a minimum of 24 hours at +23°C, and wood flooring after a minimum of 48 hours at +23°C.(time can vary depending on the thickness of the levelling, the room temperature and humidity).

CLEANING

Prior to setting, **Ultraplan EC20** can be cleaned and removed from tools and hands with water.

CONSUMPTION

1.6 kg/m² per mm of thickness.

PACKAGING

Ultraplan EC20 is available in 23 kg bags.

STORAGE

When stored in dry conditions in the original, unopened bags, **Ultraplan EC20** has a shelf life of 12 months. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced.

A longer storage period could determine a slower setting time for **Ultraplan EC20.** However, the performance of the levelling layer in the long term is not significantly affected.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found in the latest version of the Safety Data Sheet, available from our website www.mapei.ae.

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION	
Consistency:	fine powder
Colour:	grey
Bulk density:	1300 kg/m³
Dry solids content:	100%
EMICODE:	EC1 Plus - very low emission

APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	24-25 parts of water per 100 parts by weight of **Ultraplan EC20**
Thickness per layer:	from 1 to 10 mm
Self-levelling:	Yes
Density of the mix:	2000 kg/m³
pH of mix:	approx. 12
Application temperature range:	from +5°C to +40°C
Pot life:	20-30 minutes
Setting time:	45-60 minutes
Set to light foot traffic:	min. 3 h
Waiting time before application of the covering:	
– ceramic tiles:	min. 3 h
– resilient and carpet:	min. 24 h
– wood flooring:	min. 48 h

FINAL PERFORMANCE (at +23°C)	
Compressive strength ((N/mm²):	
– after 28 days:	> 20.0
Flexural strength (N/mm²):	
– after 28 days:	> 5.0

IMPORTANT NOTES

While we try to ensure that any advice, recommendations, or information 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, nor can responsibility be accepted, other than the product we supply will meet our written specifications. The installer should ensure that our latest product data and safety information sheets have been consulted before use.

Please refer to the current version of the Technical Data Sheet, available on our website www.mapei.ae.

LEGAL NOTICE

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

ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDE THE RESPONSIBILITY OF MAPEI.

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