

ULTRAPLAN ECO 20

Rapid hydrating, fast-drying self-levelling
compound



WHERE TO USE

Ultraplan Eco 20 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 Eco 20** is especially suitable for areas subject to wheeled service loads such as chairs and trolleys. Classified as CT-C20-F5 according to EN 13813.

Ultraplan Eco 20 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**)
- Levelling underfloor cooling/heating systems
- Levelling existing concrete pavements, terrazzo, ceramic, natural stone and magnesite floors

TECHNICAL CHARACTERISTICS

Ultraplan Eco 20 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 Eco 20** becomes a fast-drying yet fluid and easily workable compound, perfectly self-leveling with a high bond strength to the substrate.

Ultraplan Eco 20 can be applied with an automatic pressure pump for distances over 100 m.

Ultraplan Eco 20 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 may be necessary to add graded sand or alternatively to use a product more suitable for thicker sections such as **Ultraplan Maxi**. However, please contact your local MAPEI representative for guidelines and recommendations.

Due to its rapid hydration formulation, subsequent installation of most types of flooring can begin approx. 12 hours after the application of **Ultraplan Eco 20**, regardless of thickness. For resilient allow a minimum 24 hours of prior to application.

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 Eco 20** for exterior levelling works, particularly when exposed to direct sunlight
- Do not use **Ultraplan Eco 20** on substrates subject to continuous rising dampness
- Do not apply an additional coat of **Ultraplan Eco 20** 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** (diluted 1:1 water)

- Do not use **Ultraplan Eco 20** on metal surfaces
- Do not use **Ultraplan Eco 20** when the temperature is below +5°C
- Do not attempt to apply in large areas when the temperature is above +30°C

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 **Profas** or **Eco Prim PU 1K**.

Cracks must be first 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** (diluted 1:1 with water depending on the type of substrate).

If applying onto ceramic or natural stones, apply a coat of **Mapeprim SP** or **Eco Prim T** (diluted 1:1 water) after the surface has been thoroughly cleaned and/or mechanically abraded. Level with **Ultraplan Eco 20** before **Mapeprim SP** has dried completely (while indents are still possible to make).

Preparation of the mix

Slowly pour a 23 kg bag of **Ultraplan Eco 20** 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 Eco 20** 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 Eco 20** mixed must be used within 20-30 minutes (at a temperature of +23°C).

Application of the mix

Apply **Ultraplan Eco 20** in a single layer of 1 to 10 mm thick with a large metal trowel or a squeegee, keeping the trowel slightly inclined to obtain the desired thickness.

Ultraplan Eco 20 can also be applied with an automatic pressure pump. Due to its excellent self-levelling characteristic, **Ultraplan Eco 20** immediately eliminates small imperfections (trowel marks, etc.).

If the second layer of **Ultraplan Eco 20** 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 with 1:3 water after first lightly abrading the surface of the previous layer or **Eco Prim T** (diluted 1:1 water).

The levelling layer of **Ultraplan Eco 20** will be ready to receive ceramic, natural stone (non-sensitive) fixed with adhesives after 12 hours at +23°C and resilient flooring, and carpet, after 24 hours at +23°C (time can vary depending on the thickness of the levelling, the room temperature and humidity).

Cleaning

Prior to setting, **Ultraplan Eco 20** can be cleaned and removed from tools and hands with water.

CONSUMPTION

1.6 kg/m² per mm of thickness.

PACKAGING

Ultraplan Eco 20 is available in 23 kg bags.

STORAGE

When stored in dry conditions in the original, unopened bags, **Ultraplan Eco 20** 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 Eco 20**. However, the performance of the levelling layer in the long term is not significantly affected.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Ultraplan Eco 20 contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. It can cause damage to eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention.

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

TECHNICAL DATA (typical values) – European EN 13813 CT-C20-F5	
PRODUCT IDENTIFICATION	
Consistency:	fine powder
Colour:	grey
Bulk density (kg/m ³):	1300
Dry solids content (%):	100
APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	24-25 parts water per 100 parts by weight of Ultraplan Eco 20
Thickness per coat:	from 1 to 10 mm
Self-levelling:	yes
Density of the mix (kg/m ³):	2000
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:	3-4 hours
Waiting time before subsequent bonding:	24-48 hours
FINAL PERFORMANCE	
Compressive strength (N/mm ²): – after 28 days:	> 20.0
Flexural strength (N/mm ²): – after 28 days:	> 5.0

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 specifications. 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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