

ULTRAPLAN

Ultra-fast drying self-levelling compound with very low VOC's (volatile organic compounds)



CLASSIFICATION ACCORDING TO EN 13813

The material properties of **Ultraplan** comply with the norms referred to in this technical data sheet and are classified as CT-C30-F7-A2fl-s1 according to EN 13813.

WHERE TO USE

Ultraplan is used for levelling and smoothing differences in thicknesses from 1 to 15 mm on new or existing substrates, preparing them to receive any type of flooring where a high resistance to loads and traffic is required. **Ultraplan** is especially suitable for areas subject to wheeled chairs. **Ultraplan** is for interior use only.

Some application examples

- Levelling concrete slabs and cementitious screeds or **Topcem**, **Mapecem**, **Mapecem Pronto**, **Topcem Pronto** based screeds.
- Levelling anhydrite substrates.
- Levelling underfloor heating systems.
- Substrate preparation under quality epoxy coatings (ie. **Mapecfloor I 300**).
- Levelling existing concrete pavements, terrazzo, ceramic, natural stone and magnesite floors.

TECHNICAL CHARACTERISTICS

Ultraplan is a grey powder consisting of special rapid setting and hydrating cements, blended with graded silica sand, resins and special additives, according to a formula developed in the MAPEI research laboratory.

Mixed with water, **Ultraplan** becomes a fluid and easily workable mortar, perfectly self-levelling, with a high bond strength and ultra-fast drying

Ultraplan can be applied using an automatic pressure pump. **Ultraplan** can be spread in thicknesses up to 15 mm per coat without shrinkage, cracking or crazing, and develops very high compressive and flexural strength as well as resistance to indentation and abrasion.

For thicknesses greater than 15 mm, it is recommended to add up to 50% of graded aggregate from 2-5 mm. Installation of flooring can begin approx. 12 hours after the application of **Ultraplan**, regardless of thickness.

RECOMMENDATIONS

- Do not add more water to a mix which has already begun to set.
- Do not add lime, cement or gypsum to the mix.
- Do not use **Ultraplan** for exterior levelling works.
- Do not use **Ultraplan** on substrates subject to continuous rising damp.
- Do not apply an additional coat of **Ultraplan** if the previous layer has completely dried without first applying a coat of **Eco Prim T Plus** diluted 1:2 with water.
- Do not use **Ultraplan** on metal surfaces.
- Do not use **Ultraplan** when the temperature is below +5°C.
- Do not apply **Ultraplan** in thicknesses less than 3 mm if timber is to be installed.

APPLICATION PROCEDURE

Preparing the substrate

Substrates must be dry, solid and free of dirt, loose materials, paint, wax, oils, rust, traces of gypsum, curing and sealing compounds and all other materials which may interfere with bonding. All curing and sealing compounds, irrespective of the type (including dissipating curing compounds) must be completely mechanically removed. A minimum concrete surface profile (CSP) of CSP #3 is required.

If a moisture vapour barrier is required, please contact MAPEI Technical Assistance Department for further details.

Cement based substrates which are not sufficiently solid must be removed or wherever possible consolidated with **Profas**, **Primer EP** or **Primer MF**. Cracks or crazing in cement substrates must be repaired with **Eporip**.

Porous substrates and anhydrite screeds must be treated with a primer such as **Eco Prim T Plus** (both diluted 1 part primer mixed with 2 parts water) to prevent potential debonding and to make the substrate uniformly absorbent.

Non-porous substrates (such as ceramic tiles and natural stone) must be carefully cleaned to eliminate traces of wax and then treated with a primer such as **Eco Prim T Plus** (both undiluted) or **Eco Prim Grip**.

Magnesite substrates must be primed with **Mapeprim SP**.

For all other forms of substrates and for further Surface Preparation information, please refer to **MAPEI's Surface Preparation Requirements brochure – Floor Covering Installation System** available on our website www.mapei.com.au or alternatively email technical-au@mapei.com.au and request a copy.

Preparing the mix

Pour a 20 kg bag of **Ultraplan** into a bucket containing 4.6-4.8 litres of clean water and mix with a low speed electric mixer to obtain a homogeneous, lump free mix.

Larger quantities of **Ultraplan** can be prepared in mortar mixers.

After 2-3 minutes of slackening, the mix should be restirred and is then ready for use.

When **Ultraplan** is to be used in thicknesses greater than 15 mm, it is recommended to add up to 50% aggregate (2-5 mm). Please consult MAPEI Technical Services for further clarification.

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

Applying the mix

Apply **Ultraplan** in a single coat from 1 to 15 mm thick with a large metal trowel or a squeegee, keeping the trowel slightly inclined to obtain the desired thickness.

Ultraplan can also be applied with an automatic pressure pump.

Due to its remarkable self-levelling characteristic, **Ultraplan** immediately eliminates small imperfections (trowel marks, etc.). If a second coat of **Ultraplan** 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).

The levelling coat of **Ultraplan** will be ready to receive resilients, carpet, ceramic and timber floor coverings fixed with adhesives after 12 hours at +23°C (time can vary depending on the thickness of the levelling, the room temperature and humidity).

When installing timber over a concrete substrate, the levelling coat of **Ultraplan** must be no less than 3 mm thick.

Carefully check the humidity content with a carbide hygrometer or an electric moisture meter, keeping in mind that the latter only gives indicative values.

Cleaning

When fresh, **Ultraplan** can be removed from tools and hands with water.

CONSUMPTION

1.6 kg/m² per mm of thickness.



Application of Ultraplan with pump and squeegee



Application of Ultraplan with a metal trowel on an existing ceramic tile floor after the application of Eco Prim T Plus





Taber abrasion executed on Ultraplan (right specimen) and on conventional levelling (left specimen) after 200 cycles



An example of an installation of inlaid PVC on a surface levelled with Ultraplan - CD2 - Milan - Italy



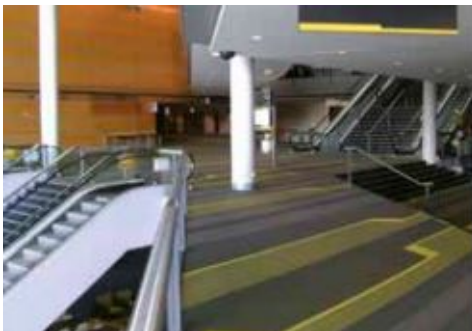
Slab levelled with Ultraplan ready for fixing a floating floor



An example of an installation of timber flooring on a surface levelled with Ultraplan - Messagerie Musicali - Rome - Italy



An example of an installation of linoleum on a surface levelled with Ultraplan - Monzòn Conservatory - Spain



Brisbane Convention Centre - Carpet installed at the Brisbane Convention Centre after the concrete was levelled with Ultraplan



Geelong Hospital - Vinyl installed at the Geelong Hospital Emergency Department after the concrete was levelled with Ultraplan



PACKAGING

Ultraplan is available in 20 kg bags.

STORAGE

Ultraplan is stable for at least 12 months stored in a dry, elevated area.

A longer storage (over 12 months) could determine a slower setting time of Ultraplan, however the final characteristics of the product do not alter

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultraplan 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.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

In compliance with:

- EN 13813 - CT-C30-F7-A2fl-s1
- GREEN STAR™ - Ultraplan can contribute valuable points towards Green Star™ projects due to the very low VOC content of this product. Refer SDS Section 9 for further details

PRODUCT IDENTITY

Consistency:	fine powder
Colour:	grey
Bulk density (kg/m ³):	1,300
Dry solids content (%):	100
GREEN STAR™:	meets and exceeds VOC content g/l - contributes valuable points towards Green Star™ credits

APPLICATION DATA (at +23°C - 50% R.H.)

Mixing ratio:	23-24% litres of clean water per 20 kg bag of Ultraplan
Thickness per coat:	from 1 to 15 mm
Self-levelling:	yes
Density of the mix (kg/m ³):	2,000
pH of mix:	approx. 12
Application temperature range:	from +5°C to +35°C
Pot life:	20-30 minutes
Setting time:	50-70 minutes
Set to light foot traffic:	3 hours
Waiting time before subsequent bonding:	12 hours

FINAL PERFORMANCE DATA

Compressive strength (N/mm ²):	
– after 1 day:	18
– after 3 days:	22
– after 7 days:	25
– after 28 days:	33
Flexural strength (N/mm ²):	
– after 1 day:	3.5
– after 3 days:	5.5
– after 7 days:	6.0
– after 28 days:	8.0
Resistance to abrasion TABER Abrasimer (Abrading wheel H22-550 g-200 revolutions) expressed as weight loss (g):	1
– after 7 days:	0.7
– after 28 days:	

Brinell hardness:	
– after 1 day:	60
– after 3 days:	80
– after 7 days:	85
– after 28 days:	110

WARNING

Although the technical details and recommendations contained in this product 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.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com.au

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, 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.au

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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