MAPEI

CT
SEMENTBASERT AVRETTINGSMASSE
C50-F10
MAPEI
I SAMSVAR MED EUROPEISKE STANDARDER
EN 13813

# Uniplan FR

## Frost resistant and viscous cement based compound for indoor and outdoor use


**PRODUCT DESCRIPTION**
**Uniplan FR** is a white colour, cement-based, pumpable levelling compound that can be used for the levelling and filling of floor surfaces indoors and outdoors.
The thinset may only be applied on surfaces with good rigidity - for example, concrete, tiles, etc.
Feel free to contact your supplier for advice.

**Uniplan FR** is supplied as dry mortar and is a mixture of cement, grit (up to 0.5 mm), plasticizing, and adhesion-enhancing substances.

**Uniplan FR** requires only the addition of water, and can be applied in thicknesses from 3 to 10 mm in one go.
Floor and room temperature must be minium +10 °C.
**Uniplan FR** is CE-marked and classified as CT-C50-F10 according to EN13813.

**AREA OF USE**
**Uniplan FR** is well-suited for areas subjected to water and frost- on balconies and terraces, in storerooms, workshops, garages and in light industrial areas, but it should then be coated with tiles laid out on a cement-based membrane (e.g. **Mapelastic**) or other suitable thermosetting coating. Before doing so, the surface must be lightly sanded and vacuumed. Vehicles with studded tires may damage the surface.

**INSTRUCTIONS FOR USE**
**Basis**
Concrete surfaces must be cleaned of laitance and other contaminants, as well as being free of dust. The surface must have a surface strength of > 1.5 N/mm$^2$.
For outdoor application, the surface must be frost resistant. The surface temperature should be between +10 °C and 25 °C when the thinset is added, and the immediate hours after application. **Uniplan FR** should not normally be applied to a concrete floor when humidity is higher than 90% relative humidity.

**Preparation**
The surface must be cleaned, weak and porous concrete must be removed, and the floor vacuumed thoroughly.
Indoor: Absorbent surfaces should be primed with **Eco Prim T** with ratio of 1:2 (primer:water). When applying several layers, each layer must be primed before the next is applied.
Outdoor: Before application of **Uniplan FR**, the substrate must be primed with **Primer SN**, sprinkled with sand; 0.8 – 1.2mm.

Proper priming is essential for a pinhole-free and level floor with good adhesion to the surface. The primer is applied by brush or spray. Application of primer with a stiff brush can enhance the penetration ability of the primer. After spraying, the primer may be smoothed out with a brush. The primer is preferably applied the day before, or so early that it is dry before spatula application starts. After doing so the primer will have the opportunity to form a dense “film.” The time it takes until the primer is dry (transparent) varies with temperature and humidity, but is approx. 4 hours.
Air pinholes are usually caused due to too little

primer applied too thinly or too diluted, low temperature of the surface or a combination of all these factors.

**Movement joints**
These prevent uncontrolled shrinkage cracks in the thinset layer, and large areas should generally be divided into smaller, mostly square areas not exceeding 5 x 5 m, i.e. 25 $m^2$ with movement joints leading the way through the thinset layer down to the underlying structure. The floor's geometry and usage must be assessed in each case. On floors with large mechanical loads one may consider using prefabricated joint profiles, areas such as parking lots, shopping centres, commercial kitchens, dairies, and other places with heavy traffic. Where there is rolling traffic with hard wheels it's important that joints should be made with joint profiles that take up lateral forces and prevent edge breakage. There should also be movement joints alongside walls, columns, foundations, pipes and other penetrations. During laying out the thinset, grooves alongside walls and the like may be armed with **Mapefonic Strip** - which is an adhesive tape that prevents maintained shrinkage.

**Mixing**
**Uniplan FR** is sprinkled into a container with 5 to 5.3 litres of clean water per 25 kg bag and mixed using an agitator for about 2 - 3 minutes until all lumps are gone. Alternatively you can use an automatic mixing pump. The dry material should be at room temperature when the mixing takes place (approximately +20 °C) and the temperature of the final product should be above +15 °C.

**Application**
Ready-mixed mortar must be used within 15 - 20 minutes. Pour the mixture onto the floor or distribute it through a hose. **Uniplan FR** can be smoothed out with a studded roller where the studs should be twice as long as the layer is thick. The mortar is not self-levelling. The temperature during application should not fall below +10ºC during the first days. Rapid drying out due to sunlight, heating etc. after application must be avoided. Once the layer of thinset is walkable. The surface must be treated with **Eco Prim T**, mixed with water at a ratio of 1:2 in order to avoid that the filler dries too quickly. This prevents cracks and fissures.

**CONSUMPTION**
At thickness:
- 5 mm: approx. 8.5 kg/$m^2$
- 10 mm: approx. 17.0 kg/$m^2$

**STORAGE**
9 months if the product is stored dry in the original unopened packaging.

**SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**
Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

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.*

**Please refer to the current version of the technical data sheet, available from our website www.mapei.no**

**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.no***
***ANY ALTERATION 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.no**

## TECHNICAL DATA (typical values)

| PRODUCT IDENTITY | EN 13813 CT-C50-F10-$E_{FL}$ | |
|---|---|---|
| **Colour:** | | white |
| **Type:** | | powder |
| **Solid contents powder (kg/m³):** | | 1700 |
| **Solids %:** | | 100 |
| **APPLICATION DATA (at +20°C and 50% R.H)** | | |
| **Thickness per layer:** | | from 3 - 10 mm |
| **Recommended amount of water:** | | 5.0 - 5.3 litres per sack (20 - 21.2%) |
| **Flow w/5.3 l water:** | SS 923519 | 140 mm |
| **Density (kg/m³):** | | 2060 |
| **pH:** | | approx. 12 |
| **Application:** | | from +10° to +25°C |
| **Pot life:** | | 15 - 20 minutes |
| **Setting time:** | EN 13454-2 | NPD |
| **Set to pedestrian traffic after:** | | 4 - 5 hours |
| **Can be covered after:** | | Tiles/slabs: 24 hoursr<br>Other coverings: 5 - 7 days |
| **FINAL PERFORMANCE** | | |
| **Reaction to fire:** | EN 13501-1 | $E_{FL}$ |
| **Compressive strength after 24 hours (N/mm²):** | EN 13892-2 | 20.0 |
| **Compressive strength after 28 days (N/mm²):** | EN 13892-2 | 51.1 (C50) |
| **Tensile strength after 28 days (N/mm²):** | EN 13892-2 | 12.88 (F10) |
| **Shrinkage:** | EN 13454-2/<br>EN 13872 (< 10 mm) | < 1.0 mm/m |
| **Consistency:** | EN 12706 | NPD |
| **Cohesive strenght:** | > 3.0 | |
| **Adhesion N/mm²:** | UNI EN 13892-8:2004 | - dry storage 2.6 N/mm²<br>- warm storage 1.5 N/mm²<br>- wet storage 1.4 N/mm²<br>- stored in freeze/thaw cycle |

*Production is controlled according to ISO 9001 and ISO 14001.*

Uniplan FR



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