MAPEFLOOR CPU+/PRIMER

Polyurethane-cement primer for Mapefloor CPU+ systems



DESCRIPTION

Mapefloor CPU+/Primer is a polyurethane-cement based primer, according to a formula developed by MAPEI's Research Laboratories.

TECHNICAL CHARACTERISTICS

- Compatible with all **Mapefloor CPU+** products range;
- fast hardening;
- complies with the M1 protocol which includes VOC, formaldehyde and ammonia emission requirements according to EN 16516 and sensory odour testing according to ISO 16000-28;
- low VOC content and emission;
- fulfills HACCP requirements;
- complies with all Indoor Air Comfort Gold emission requirements for indoor flooring systems, including AgBB in Germany, M1 in Finland and Afsset in France, BREEAM, CAM, Singapore Green Label and Global Green Tag. Classified A+, the best class for the lowest emissions.

ADVANTAGES

- Fast recoating time: it can over-coated with **Mapefloor CPU+** products after only 12 hours at +23°C.
- Ease for warehousing management; components A and B are common to whole **Mapefloor CPU+** product range.
- Sustainability: it can contribute to LEED credits. EPD (Environmental Product Declaration) compliant.

WHERE TO USE

Mapefloor CPU+/Primer is normally used as primer for the surface saturation of particularly porous substrates in combination with **Mapefloor CPU+** product range to prevent the potential formation of pinholes in the layer of the subsequent covering product.

RECOMMENDATIONS

- Do not apply **Mapefloor CPU+/Primer** on wet substrate or on concrete younger than 7 days.
- Do not dilute **Mapefloor CPU+/Primer** with solvents or water.
- Do not apply **Mapefloor CPU+/Primer** on dusty or crumbly substrate.

- Do not apply **Mapefloor CPU+/Primer** on substrate contaminated by oil, grease, or dirt in general.
- Do not apply **Mapefloor CPU+/Primer** on not properly prepared substrate.
- Do not mix partial quantities of the components to prevent mistakes in the mixing ratios which would cause incorrect hardening of the product.
- Do not expose the mixed product to heat sources.
- Do not apply **Mapefloor CPU+/Primer** on ceramic substrate or stone materials in general with no appropriate specific preparation of the laying surface.
- Protect **Mapefloor CPU+/Primer** from water for at least 12 hours after the application.
- In case of application at temperature above +25°C, store the material in a sheltered place at a lower temperature. In case of temperature below +15°C, store the material in a warmer place.
- The temperature of the substrate during application and hardening must be at least 3°C above the dew point and the relative humidity of the air must be max. 80%.

APPLICATION PROCEDURE

Substrate characteristics

Substrate must be solid, compact, stable, healthy, clean, and properly designed for static and dynamic loads foreseen in the operating conditions. The flatness must be defined by the needs of use. At the time of application, compressive strength of the concrete or cementitious mortar used for the repair must be higher than 25 N/mm² and the direct tensile strength at least 1.5 N/mm².

The substrate surface must appear visually dry. There must be no capillary rising damp as well.

In the case of substrates such as ceramic tiles, natural stones, or old resinous coatings, they must be perfectly stable and anchored to the substrate, intact, healthy, and clean. These substrates require specific preparation methods for the laying surfaces. In the case of old resinous coatings, it is recommended to also perform a compatibility test with the new system to be applied.

Substrate preparation

The surface of the floor must be prepared with specific mechanical equipment such as for example shotblasting or milling machine, to remove all traces of dirt, any contamination for the entire thickness concerned, cement laitance, crumbly or detached parts and make the surface rough and absorbent.

Any defects such as holes, pitting, cracks, etc. must be repaired using, for example, **Primer SN** possibly filled with quartz sand or thixotropic agent like **Additix PE** or with **Mapefloor JA** or **Mapefloor JA Fast** depending on the width and depth of the defects and cracks.

For the reconstruction of heavily degraded areas and joints, the filling of large depressions, repair, or minimal localized changes to slopes, etc., please contact the Technical Service.

Before proceeding with the application of the material, the surface dust must be carefully vacuumed.

Anchor grooves

The anchoring grooves on the concrete must be made with a suitable mechanical joint saw. The dimensions (depth and width) must be approximately double the thickness of the **Mapefloor CPU+** product applied afterwards**.**

They must be provided along the perimeter of the area, near all the vertical lines such as walls and pillars, around the drainage channels and wells, on the thresholds of the doors, around the feet of the machinery, in general along each free edge and the interruptions of the installation, such as joints that clearly define the end of the working day and the beginning following one.

The maximum distance between parallel grooves must not exceed approximately 15 meters. If it exceeds this measure, it will be necessary to make intermediate cut.

In case concrete has not fully completed its hygrometric shrinkage, it is advisable to make the anchor grooves also along the cracks control joints. It will make possible to seal the joint in case the shrinkage crack appears in

the joint (therefore also on **Mapefloor CPU+** product applied on top of **Mapefloor CPU+/Primer**) even without removing part of the floor, as the entire area straddling the joint is already well anchored.

Preparation of the product

Shake the packs containing the liquid components A and B**.**

Pour one pack of component A and one pack of component B into a clean bucket and mix for a few seconds until a homogeneous mixture is obtained.

Then slowly and gradually add one pack of component C, continuing to mix for at least three minutes until a homogeneous mixture is obtained. At temperatures lower than +23°C this time could be slightly longer.

Only mix whole packs of components A, B and C to prevent potential mistakes in the mixing ratios which could compromise the entire system.

Application of the product

Immediately after mixing, pour all **Mapefloor CPU+/Primer** on the floor and distribute it with a rubber squeegee or with a roller. Avoid clogging the anchoring cuts: in these areas take care to use a brush to spread the primer evenly on the surface of the groove.

Apply the mix within the useful pot life indicated in the table. The higher temperatures, the lower pot life; the lower the temperature, the higher pot life.

Wait till the primer is completely hard before applying the following covering product, with exception of **Mapefloor CPU+/Cove** which needs **Mapefloor CPU+/Primer** still sticky (fresh on tack free) to be properly applied on top of it.

CONSUMPTION

Mapefloor CPU+/Primer:	approx. 0.3 – 0.4 kg/m^2

The consumption is influenced by the roughness and absorption of the substrate as well as by the environmental and working conditions of the job site.

TOOLS CLEANING

Equipment used to prepare and apply **Mapefloor CPU+** product range must be cleaned with thinner for polyurethanes immediately after use. Once the product has hardened, it can only be removed mechanically.

PACKAGING

Mapefloor CPU+ Component A: 2 kg pack

Mapefloor CPU+ Component B: 2.16 kg pack

Mapefloor CPU+/Primer Component C: 2.5 kg bag

STORAGE

12 months in the original sealed packaging and kept in a dry and sheltered place at temperatures between +10°C and +30°C. Components A and B can be damaged by frost. **Mapefloor CPU+/Primer** part C is sensitive to humidity.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

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

When the product reacts, it generates considerable heat. After mixing components A, B and C, we recommend applying the product as soon as possible and to never leave the container unguarded until it is completely empty.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical value)

PRODUCT IDENTITY			
	Comp. A	**Comp. B**	**Comp. C**
Colour:	Milky white	Dark brown	White
Appearance:	Liquid	Liquid	Powder
Density:	1 - 1.05 g/cm³	1.2 g/cm³	–
Bulk density:	–	–	0.700 - 0.800 g/cm³
Viscosity a +23°C:	200 - 600 mPa·s (# 2 - rpm 20)	100 - 160 mPa·s (# 1 - rpm 50)	–

APPLICATION DATA	
Mixing ratio by weight:	A / B / C: 2 / 2.16 / 2.5
Colour of the mix:	Neutral
Consistency of the mix:	Fluid
Viscosity a +23°C:	2,500 ± 300 mPa·s (# 4 - rpm 20)
Density of the mix:	1,300-1,400 kg/m³
Pot life at +23°C:	15 min
Application temperature (refers to ambient, material and substrate):	From +10°C to +30°C
Tack free:	2-4 h
Recoating time at +23°C:	12-48 h
Adhesion strength at 7 days (EN 13898-8):	≥ 1.5 N/mm²

Indoor Air Comfort GOLD – VOC Emission	
French VOC Regulation (Decree of March /April 2011 modified in February 2012)	
French CMR components (Regulation of April/May 2009)	Pass
Italian CAM Edilizia (DM23.06.2022 n.256, GURI n.183 06/08/2022)	Pass
AgBB (Regulation AgBB/DIBt)	Pass
Belgian Regulation (Royal decree of May 2014)	Pass
Indoor Air Comfort (Indoor Air Comfort 8.0 of June 2022)	Pass
Indoor Air Comfort GOLD (Indoor Air Comfort GOLD 8.0 of June 2022)	Pass

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.com

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.

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

TECHNICAL SPECIFICATIONS

Supply and installation of odourless polyurethane-cement primer (such as **Mapefloor CPU+/Primer** by Mapei S.p.A.) spread with a roller or rubber squeegee to saturate the pores of the support before applying polyurethane-cement products with high chemical, mechanical and thermal shock resistance (such as the **Mapefloor CPU+** range by Mapei S.p.A.).

The hardened material must have the following characteristics:

Adhesion strength at 7 days (EN 13898-8):	≥ 1.5 N/mm^2
VOC Emission (EN 16516):	Indoor Air Comfort Gold including AgBB in Germany, M1 in Finland and Afsset in France, BREEAM, CAM, Singapore Green Label and Global Green Tag. Classified A+, the best class for the lowest emission
Fulfills HACCP requirements.	
Complies with the M1 protocol which includes VOC, formaldehyde and ammonia emission requirements according to EN 16516 and sensory odors testing according to ISO 16000-28.	
Contributes to obtaining LEED credits, EPD (Environmental Product Declaration) compliant.	

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