PRIMER MF

Two-component, solvent-free epoxy primer for consolidating and waterproofing cementitious substrates

WHERE TO USE

Application on concrete slabs and cementitious screeds with a residual moisture level higher than that permitted for the installation of flooring sensitive to moisture, such as wooden and resilient floors. **Primer MF** can be applied to substrates with moisture up to 6% CM (measured with carbide hygrometer - UNI 10329) or relative moisture up to 100% (measured with in situ probe test - ASTM F2170 - BS 8203) for screeds without underfloor heating system. On underfloor heating screeds up to
3% CM or 50 % H.R. Application to consolidate inconsistent and/or weak substrates.

Some application examples

· Application, prior the laying of flooring sensitive to moisture, to avoid rising of excessive residual moisture present in concrete slabs and screeds.
· Consolidation of weak cementitious substrates.
· Dustproof treatement over superficially inconsistent screeds, both based on cement and anhydrite.
· Binder for mixing with quartz to prepare synthetic mortar for small smoothing and repair operations.

TECHNICAL CHARACTERISTICS

Primer MF is a two-component product, based on pure expoxy-resin, solvent-free, with low viscosity and high penetration properties in the pores of the substrates. Because of the total absence of solvents, **Primer MF** is not flammable and has a light odour, typical of resin-based products, therefore it can be used in building sites situated near inhabited environments (e.g. apartments, schools, offices, ecc.). After the application of and the polymerization of the resins, the permeability of the substrate treated with **PRIMER MF** is strongly reduced and, in the meantime, it becomes sound, stronger and more resistant to abrasion.

RECOMMENDATIONS

· Do not dilute **Primer MF** with water or solvents. If the product needs to be diluted, only use **Primer KL**.
· Do not apply on wet surfaces.
· Do not use **Primer MF** over smoothing or levelling compounds.
· Do not use acids to clean substrates where the product has to be applied.
· The product is suitable for consolidating heated screeds and anhydrite substrates. Make sure that these kinds of substrates have completely dried before applying the product. The moisture content must comply with the local regulations.
· To ensure a good bonding of levelling compounds or adhesives over the surface treated with **Primer MF**, sprinkle a layer of **Quartz 1.2** or clean, dry sand of the right size on the product while it is still fresh. The remains of sand and which are not well bonded must be removed, before carrying out further application, after the polymerization of **Primer MF**.
· When laying parquet directly on substrates treated with **Primer MF** that have not been sprinkled with sand, use reactive polyurethane adhesives, or silylated polymer-based adhesives.
· Always treat the surface with quartz when using one-component, polyurethane adhesives.
· If **Primer MF** has not been broadcast with sand, and has already set with a final shiny surface, before applying a cementitious smoothing and levelling compound, in order to install multilayered pre-finished parquet with silylated

adhesives, treat the surface with an adhesion promoter such as **Eco Prim Grip** or **Eco Prim T Plus**; in order to directly bond with a two-component adhesive, the surface must be well-sanded.
- To avoid condensation on the surface of the product during its polymerization, the substrate temperature at time of installation must be at least 3°C above the dew point.

APPLICATION PROCEDURE

Preparation of the substrate

The substrate must be clean, sound, free of oil, wax, dirt or any other contaminant that can compromise the adhesion. The substrate must be cured, not subject to drying shrinkage. Concrete must be cured and be porous enough. All cement laitance and anti-evaporating agents on surface must be completely removed with a mechanical abrasion. Extremely solid surfaces of concrete and cementitious substrates must be suitably abraded, using proper tools, before the application of **Primer MF** in order to obtain rough enough concrete profile (CSP -concrete surface profile #2 or #3). Cracks and surface crazing must be opened and then sealed with **Eporip** or **Eporip Turbo** before applying **Primer MF** to eliminate unevenness. MAPEI cannot be responsible against the appearance of cracks or debonding that result from subsequent substrate movement of any kind.
The product can be applied as moisture barrier to substrates with no standing water on the surface and with humidity up to 6% CM or 100% R.H. Please note that high level of humidity (above 6% CM or 98% R.H.) could be determined by external water infiltration due, for example, to an incorrect design of the drainage, of the waterproofing or sealing, to leaks, broken pipes, etc. Before proceeding to the application of **Primer MF**, it is then necessary to verify the absence of such type of situations.

Preparation of the product

The two components of **Primer MF** are supplied pre-dosed: component A: 3 parts by weight; component B: 1 part by weight. The components must be completely and thoroughly mixed together with a low speed mixer until a uniform mix is obtained.

Application of the product

1. **For reducing moisture in the substrate or for consolidating substrates**
   Apply **Primer MF** with a roller, a brush or flat trowel in at least 2 coats, waiting about 3 hours between each coat. Do not wait more than 12-24 hours between each application in order to guarantee that there is a perfect bond between each coat. The first coat may be diluted with **Primer KL** (maximum 1 l, 0,8 kg, for each 4 kg kit of **Primer MF**) to enhance the penetration of the product. To use the product as a moisture barrier, it is necessary to apply it in a continuous layer in a fairly constant thickness that is easier to obtain if the first coat is applied with a flat trowel and the second with a roller. Examine the surface immediately after the application to assure complete, uniform coverage without untreated areas. If **Primer MF** has to be used as consolidating product, it will be sufficient to apply a single coat.
2. **For repair opertionse**
   Only if small arias of screed need to be smoothed over or repaired, **Primer MF** diluted with **Primer KL** mixed with **Quartz 1.2** may be used. The mixing ratio in this case is 7/10 kg of **Quartz 1.2** per kg of **Primer MF** diluted with 1 l (0.8 kg) of **Primer KL**. The mortar obtained is easy to apply and, once set, forms a very solid repaired area on which any kind of parquet may be installed. The mortar must be applied on substrates which have been treated with **Primer M**F (if needed diluted with **Primer KL**) within the previous 24 hours.

Cleaning

Primer MF can be cleaned from tools and clothing with ethyl alcohol while the product is still fresh.

CONSUMPTION

0.200-0.400 kg/m² per coat, depending on the roughness and absorption of the substrate (200 g/m² per coat).

PACKAGING

The product is available in 1 kg (component A 0.750 kg + component B 0.250 kg) and 4 kg (component A 3 kg + component B 1 kg) units.

STORAGE

The product can be stored for 24 months in its original sealed containers under normal conditions. Protect from frost.

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.com.
When the product reacts, it generates heat. After mixing components A and B, we recommend applying the product as soon as possible and never leaving the container unattended until it is completely empty.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	Component B
Colour:	transparent yellow	Transparent yellow
Density (g/cm³):	1.12	1.12
Brookfield viscosity (mPa·s):	350 (# 2; 50 rpm)	150 (#2; 50 rpm)
APPLICATION DATA		
Mixing ratio:	component A : component B = 3 : 1	
Consistency of mix:	liquid	
Colour:	transparent	
Density (g/cm³):	1.1	
Brookfield viscosity (mPa·s):	300 (# 2; 50 rpm)	
Maximum permitted humidity to use as residual humidity barrier:	6% CM (carbide hygrometer - UNI 10329) 100% R.H. (in situ probe test - ASTM F2170 - BS 8203)	
Permeability to water vapour (ASTM E96-05):	< 0.1 perm at DFT (dry film thickness) ≥ 0.25 mm	
Reduction in vapour emission (ASTM E96-05):	> 96% at 0.25 mm DFT	
Resistance to alkaline solution pH 14 (ASTM D1308):	no effect	
Application temperature range:	from +10°C to +30°C	
Pot life – at +10°C: – at +23°C: – at +30°C:	 180 minutes 60 minutes 45 minutes	
Step on time – at +10°C: – at +23°C: – at +30°C:	 24 hours 12 hours 9 hours	
Complete hardening time at +23°C:	7 days	
FINAL PERFORMANCE		
Resistance to moisture:	excellent	
Adhesion to concrete (N/mm²):	> 3 (failure of substrate)	
Service temperature:	from -5°C to +80°C	

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

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