EC PRIM PU 1K

One-component, solvent-free, moisture curing polyurethane primer with a very low emission level of volatile organic compounds (VOC) for consolidating and waterproofing cementitious screeds





WHERE TO USE

- Surface consolidation of cementitious, anhydrite and heating substrates.
- *Waterproofing* cementitious screeds with a residual humidity content higher than the level recommended for laying parquet.

EC Prim PU 1K can be applied to substrates with humidity up to 6% CM (measured with carbide hygrometer - UNI 10329), up to 92% R.H. for one coat, or up to 98% R.H. for two coats (measured with in situ probe test - ASTM F2170 - BS 8203).

Some application examples

- Consolidating cementitious screeds which are mechanically weak.
- Waterproofing treatment before laying wooden flooring, to prevent moisture damage due to excessive residual humidity in the cementitious screed.
- Anti-dust treatment for cementitious and dry anhydrite screeds with a crumbly surface.

TECHNICAL CHARACTERISTICS

EC Prim PU 1K is a one-component polyurethane primer which hardens with the moisture present in the surrounding air and in the screed. It is low viscosity and, therefore, has a high capacity for penetrating into the porosity of the screeds.

EC Prim PU 1K does not contain solvents and, therefore, is odourless and is not flammable.

EC Prim PU 1K has a very low emission level of volatile organic compounds (EMICODE EC1).

Because of the total absence of solvents, **EC Prim PU 1K** may also be used on sites which are located close to inhabited areas (such as flats, schools, offices, etc.).

After application and cure of the resin, the substrate treated with **EC Prim PU 1K** becomes more consistent, harder and is resistant to abrasion.

RECOMMENDATIONS

- Do not dilute **EC Prim PU 1K** with water or solvents.

- Do not apply **EC Prim PU 1K** on wet surfaces or in the presence of rising damp.
- If a cementitious smoothing and levelling compound has to be applied, or if the parquet is to be laid after more than 72 hours (three days), apply **EC Prim PU 1K** so that a thin layer remains on the surface. Completely blind this layer with **Quartz 1.2** while the primer is still fresh.
- The product is suitable for consolidating heated screeds and anhydrite substrates *which cannot be waterproofed*. Make sure that these kinds of substrate are dry before applying the primer.
- The laying of wooden flooring on substrates treated with **EC Prim PU 1K** must be carried out using reactive polyurethane adhesives (such as **Ultrabond P990 1K**), epoxy-polyurethane adhesives (such as **Lignobond** or **Ultrabond P902 2K** or sililated-based adhesives.

APPLICATION PROCEDURE

Preparation of the substrate

The screed must be clean and free of oil, wax and dirt. Traditional screeds must be cured for at least 7-10 days per centimetre of thickness, while quick-hydrating or rapid-hydrating screeds must be cured according to the manufacturer's instructions for each particular product.

Cracks and surface crazing must be opened and then repaired with **Eporip** or **Eporip Turbo** in order to avoid any discontinuity.

Once the screed is dry and cured, if there are any areas with surface bleeding or that are weak and detached from the screed, the surface must be mechanically abraded before applying **EC Prim PU 1K**.

Before applying **EC Prim PU 1K**, remove all dust and any loose material from the surface.

If used for consolidating purposes, make sure that the porosity of the surface is sufficient to allow **EC Prim PU 1K** to penetrate to the depth requiring consolidating.

If the screed is excessively smooth, the surface must be abraded in order to open the pores.

Application of the product

Apply **EC Prim PU 1K** with a roller or a brush. On porous substrates, a single application is usually sufficient to obtain a good consolidating and waterproofing effect. On particularly porous or deteriorated substrates, the application of a second coat is recommended; wait at least 3 hours between each coat. Do not wait more than 12-24 hours between each application in order to guarantee that the two coats bind sufficiently together.

If the substrate needs to be rectified with a cementitious smoothing and levelling compound, apply a coat of **EC Prim PU 1K**.

Make sure there is a thin layer on the surface, and while it is still fresh, apply **Quartz 1.2** until it is completely saturated. Wait at least 36 hours, then apply a layer of cementitious smoothing and levelling compound after removing all quartz which is not sufficiently bonded.

If the parquet is to be laid directly after 72 hours, prepare the substrate with a sprinkling of quartz sand, as described above for the cementitious smoothing and levelling compound.

As an alternative, it may be laid directly on the primer after at least 24 hours, and after no more than 72 hours of its application, using a reactive adhesive (such as Ultrabond P990 1K or **Ultrabond P902 2K).**

CLEANING

EC Prim PU 1K may be removed from clothing and tools while still fresh using **Thinner PU** or **Cleaner L**.

Once set, it may only be removed using **Pulicol 2000**.

CONSUMPTION

0.2-0.4 kg/m² per coat.

PACKAGING

The product is available in 10 kg drums.

STORAGE

12 months in its original, well-sealed container stored 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 Safety Data Sheet, available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	liquid
Colour:	brown
Density (g/cm³):	1.05 ± 0.02
Maximum residual humidity permitted for waterproofing:	– 6% CM (carbide hygrometer - UNI 10329). – 92% R.H. for 1 coat or 98% for 2 coats (in situ probe test - ASTM F2170 - BS 8203)
Brookfield viscosity at +23°C (mPa·s):	65 ± 5 (# 1 - 10 rpm)
Dry solids content (%):	100
EMICODE:	EC1 - very low emission

APPLICATION DATA (at +23°C - 50% R.H.)	
Application temperature range:	from +5°C to +35°C
Loss of stickiness:	3-4 hours
Set to light foot traffic:	7-8 hours
Final hardening time:	24 hours
Waiting time between each coat:	min. 3 hours, max. 24 hours
Waiting time before laying directly with adhesive:	minimum 24 hours, maximum 72 hours
Minimum waiting time before successive treatments on final coat (sprinkled with sand):	36 hours

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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