



# Ultrabond 1K P990

**Single component, solvent-free, ready-to-use flexible polyurethane adhesive with an extremely low emission level of volatile organic compounds (VOC), for all types of wooden flooring**



## WHERE TO USE

Bonding pre-finished and traditional solid wood parquet, pre-assembled worktops and all shapes and types of multi-layered elements.

## Some typical application examples

Ultrabond P990 1K is used for bonding pre-finished elements, lamparquet, slats, planks and all types of wood on: cementitious screeds; screeds made using **Mapecem, Mapecem Pronto, Topcem, Topcem Pronto** and similar products; old wooden floors; ceramic, marble, etc.; anhydrite screeds. Suitable for heated floors.

## TECHNICAL CHARACTERISTICS

Ultrabond P990 1K is a hygro-hardening, polyurethane resin-based adhesive, produced using technology developed in MAPEI's own laboratories, with the following characteristics:

- ready-to-use single component product, does not require catalyser and successive mixing. If stored correctly, leftover quantities of the product may be used at a later date;
- suitable for floor-layers allergic to epoxy-polyurethane products;
- easy to apply, even at low temperatures;
- 30% higher yield compared with conventional two-component products, thanks to the low viscosity and free-flowing properties of the adhesive when applied by trowel, even at low temperatures;
- excellent straight line hold and excellent buttering on the back of tiles;

- extremely low expansion, parquet remains flat after laying;
- does not contain solvents or substances which give off unpleasant odours;
- low environmental impact, certified by the GEV (EC1 R) Institut as a product with extremely low emission levels of volatile organic compounds.



## RECOMMENDATIONS

- Before laying, make sure all rooms have suitable windows or other sealing systems;
- the humidity level in the screed must be according to current norms and standards;
- if the substrate is not completely dry, or if the humidity is higher than the recommended level, we recommend applying a coat of suitable waterproofing primer, such as **Eco Prim PU 1K, Primer MF**, etc.;
- if there is a risk of rising damp, a vapour barrier must be laid before installing the screed;
- the humidity level in the wood must be according to current norms and standards;

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- do not lay if the temperature is lower than +10°C or higher than +35°C;
- only lay floors if the walls and floors in the room are completely dry;
- in particularly dry weather, the hardening time of the product is longer;
- do not let the product come into contact with fresh two-component adhesive, otherwise it will deteriorate;
- non-absorbent surfaces such as ceramic do not require a coat of primer. Conventional bonding promoters may not be compatible with **Ultrabond P990 1K**;
- apply a coat **Primer M** on metallic surfaces.

## APPLICATION PROCEDURE Preparation of the substrate

The condition of the substrate must be carefully checked to make it is suitable for laying parquet.

- **Cementitious screeds:** must be well-cured, dry, flat and strong. The surface must be free of dust, crumbly portions, traces of oil, paint, etc. The level of humidity in the screed must be measured with a carbide hygrometer. If the level of humidity is higher than the recommended limit, wait until the screed is dry or apply a special waterproofing primer, such as **Eco Prim PU 1K**, **Eco Prim PU 1K Turbo**, **Primer MF**, **Triblock P**, etc. Substrates which are not solid enough must be removed or, where possible, consolidated with a primer, such as **Eco Prim PU 1K**, **Eco Prim PU 1K Turbo**, **Primer MF**, **Primer EP**, **Primer PU60**, **Profas**, etc. Cracks may be repaired with products such as **Eporip**, **Eporip Turbo**, **Epojet**, etc. Excessively rough or uneven surfaces may be smoothed over with high-strength smoothing and levelling compound, such as **Fiberplan**, **Ultraplan**, **Ultraplan Maxi**, **Nivorapid**, etc. according to the thickness to be applied. Laying may then be carried out once dry (see relative Technical Data Sheet). Use Mapei special hydraulic binders to make quick-drying, controlled-shrinkage screeds: **Mapecem**, which allows floors to be laid after only 24 hours, or **Topcem** after 4 days. As an alternative, use **Topcem Pronto** or **Mapecem Pronto** pre-blended, ready-to-use mortar which allow wooden floors to be laid after 4 days and 24 hours, respectively. If lightened layers or insulating layers are present, or with screeds installed directly on the ground, lay a suitable vapour barrier to avoid rising damp.
- **Existing ceramic, marble, etc. floors:** must be cleaned and all traces of grease must be completely eliminated before bonding. The adhesive must only be applied once the surface is completely dry. *Do not apply a bonding promoter, e.g. **Primer KL**, before bonding. The two products are not compatible.*
- **Wooden floors:** make sure old wooden planks are well-bonded to the substrate.

Remove the varnish or wax from the surface of the floor with sandpaper down to a bare wooden surface and remove all dust with a vacuum cleaner, then lay the floor dressing.

- **Anhydrite substrates:** after sanding the substrate, remove all dust with a vacuum cleaner and apply **Eco Prim PU 1K** and **Primer MF**, wait according to the time indicated on each product's relative Technical Data Sheet and then start bonding the floor dressing.

## Spreading on the adhesive

Open the aluminium bag contained in the plastic tub and spread the contents on the substrate using a MAPEI N° 10 notched spreader for wood. The adhesive spread on the substrate must be covered with the wooden floor dressing within approximately 110 minutes at a normal temperature (23 °C). If adhesive from a previously opened pack is used, open the aluminium bag and remove the surface skin before application. The surface skin helps conserve the remaining quantity of the product.

## LAYING THE WOOD

Before laying, the parquet must be stored in a dry, condensation-free area protected against bad weather and must not be left standing directly on the floor.

Before laying, make sure the level of humidity in the wood is within the recommended limits.

When laying the parquet, press down firmly to make sure the back is well buttered. The special rheologic properties of **Ultrabond P990 1K** makes adjustment of the parquet particularly easy after laying. Leave a 1 cm-wide joint around the edge of the floor and around columns or other bodies which pass through the floor. Do not apply adhesive to the ends of the parquet strips.

## Sealing partially used containers

To conserve any remaining product after laying has been completed, remove as much air as possible from the aluminium bag to avoid the formation of surface skin and make sure it is well closed. Seal the bag with a tie or similar system. Put the aluminium bag back into its original plastic tub.

## SET TO LIGHT FOOT TRAFFIC

Floors may be stepped on after approximately 12 hours.

## FINISHING PROCESSES

The floor may be polished after 3 days. Any traces of adhesive on the surface may be easily removed with sandpaper.

## Cleaning

**Ultrabond P990 1K** may be removed from tools while still fresh with alcohol or a special cleaning product. Once hardened, it must be removed mechanically or with **Pulicol**. Traces of adhesive on pre-finished parquet must be removed within 4 hours with **Cleaner L**. Stains may be removed the day after laying with **Cleaner L**.

## CONSUMPTION

800-1000 g/m<sup>2</sup>.



Packaging of Ultrabond P990 1K



Opening and overlapping the aluminium bag around the tub



Pouring the adhesive on a screed

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

<b>Consistency:</b>	creamy paste
<b>Colour:</b>	beige, brown
<b>Density (g/m<sup>3</sup>):</b>	1.40
<b>Dry solids content (%):</b>	100
<b>Free monomer (%):</b>	< 1
<b>Brookfield Viscosity (mPa·s):</b>	28,000-36,000 (rotor 7 – 50 rpm)
<b>Storage:</b>	12 months
<b>Hazard classification according to EC 1999/45:</b>	harmful. Before using the product, refer to the “Safety guidelines for preparation and application” section and the information contained on the packaging and Safety Data Sheet.
<b>Customs class:</b>	3909 50 00

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

<b>Application temperature range:</b>	from +10°C to +35°C
<b>Open time (skin formation):</b>	110 minutes
<b>Adjustability time:</b>	3 hours
<b>Set to light foot traffic:</b>	after 12 hours
<b>Finishing processes:</b>	after 3 days

### FINAL PERFORMANCE (7 days at +23°C)

<b>Shore A hardness:</b>	58
<b>Wood-concrete bond strength (N/mm<sup>2</sup>):</b>	2.5
<b>Wood-ceramic bond strength (N/mm<sup>2</sup>):</b>	1.8
<b>Elongation at breakage (%):</b>	180
<b>In service temperature range:</b>	from -10°C to +70°C



*Cleaning the edge of the tub with the spreader*



*Spreading the adhesive*



*Closing the sack with the special tie*

# Ultrabond P990 1K



## PACKAGING

7 kg and 15 kg aluminium bags contained in plastic drums.  
Boxes containing 20 tubes, 600 cc each.

## STORAGE

12 months in its original, well-sealed packaging stored under normal conditions, at a temperature of less than 25-30°C.  
When transported over long distances, thermally insulated containers may be required.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultrabond P990 1K may cause serious damage if it comes into contact with the eyes.  
The product does not give off harmful fumes at room temperature and under normal application conditions.  
**At high temperatures (> +60°C) small quantities of isocyanates may form, which**

could cause rashes in those subjects allergic to such substances.  
Protect eyes and avoid inhaling the fumes. In the case of accidents or sickness, seek medical attention.  
For further information, please refer to the Safety Data Sheet.

**THIS PRODUCT MUST BE USED EXCLUSIVELY BY PROFESSIONAL PERSONNEL.**

## WARNING

*While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gesellschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



**Our Commitment To The Environment**  
More than 150 MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**



Spreading Ultrabond P990 1K



Laying wood