



Ultrabond ECO[®] 990

Premium Urethane Wood-Flooring Adhesive



DESCRIPTION

Ultrabond ECO 990 is MAPEI's premium 100%-solids, one-component, moisture-cured urethane adhesive, recommended for high-performance wood-flooring installations. *Ultrabond ECO 990*'s formulation is designed to install all types of solid wood, including exotics and bamboo, and for engineered wood flooring of all sizes. Easy to trowel, *Ultrabond ECO 990* exhibits excellent early grab to hold planks in place during installation, yet it provides enough slip time to align everything perfectly.

FEATURES AND BENEFITS

- Easy to trowel, with excellent trowel ridge hold-out for proper adhesive bonding
- 100%-solids formulation; no solvent added
- Utilizes rapidly renewable raw materials
- Excellent green strength to hold planks in place during installation
- Extremely low-odor formula with negligible VOC content
- Approved for use with all types of solid hardwood and exotic planks or shorts; parquet; bamboo flooring; acrylic impregnated wood and laminated plank; cork underlayment and all sizes of engineered wood flooring
- Approved for use with ceramic tile and stone in mixed media installations using wood flooring

* Consult MAPEI's Technical Services Department for recommendations regarding bamboo, as some bamboo flooring is not suitable for direct bonding methods.

INDUSTRY STANDARDS AND APPROVALS

LEED (Version 3.0) Points Contribution	LEED Points
MR Credit 5, Regional Materials**	Up to 2 points
MR Credit 6, Rapidly Renewable Materials	1 point
IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants	1 point

** Using this MAPEI product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.

WHERE TO USE

- Interior residential (rental apartments, condominiums, homes)
- Interior commercial (office buildings, hotel rooms and hallways, restaurant dining areas)
- Interior heavy commercial (hotel lobbies, convention centers, airports, department stores)
- Interior institutional (hospitals, schools, universities, libraries, government buildings)

LIMITATIONS

- Do not install over any substrates containing asbestos.
- For interior installations only
- Not recommended for flooring designed for nail-down installations only
- Do not install in areas not recommended by the wood flooring manufacturer.



- Do not apply over any adhesive residues including cutback adhesive.
- Do not install when the moisture vapor emission rate (MVER) exceeds 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m²) per 24 hours, when using the anhydrous calcium chloride test (ASTM F1869).
- Do not install when the relative humidity (RH) of the concrete slab exceeds 75% (ASTM F2170).
- Use only when the substrate temperature is between 50°F and 90°F (10°C and 32°C), and when the ambient relative humidity is between 20% and 80%.

SUITABLE SUBSTRATES

- Exterior-grade plywood and other approved wood underlayments (per flooring manufacturer recommendations)
- Concrete and properly prepared cement terrazzo
- Existing, properly prepared ceramic tile
- Cement-based self-leveling underlayments and patching compounds
- *Planiseal EMB* epoxy moisture-reduction barrier
- *Planiseal WFM* urethane moisture-reduction barrier
- Properly prepared, primed gypsum underlayments that meet the requirements for compressive strength according to ASTM F2419
- Radiant-heat systems that have been properly installed
- Refer to MAPEI's "Surface Preparation Requirements" reference guide RGF0409 for floor-covering installation systems at www.mapei.com.

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates must be structurally sound, dry, solid and stable.
- Substrate should be clean and free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles, old adhesive residues, and any other substance or condition that may prevent or reduce adhesion.
- Substrates must be flat to 3/16" in a 10-foot span (4,5 mm in a 3,05-meter span). Refer to wood flooring manufacturer's guidelines.
- Concrete and cement-based underlayments and patches must be fully cured and free of any hydrostatic and/or moisture problems.
- Use anhydrous calcium chloride tests to determine moisture vapor emission rates (MVER) according to ASTM F1869 or use moisture probe tests to determine RH according to ASTM F2170.
- Concrete slabs exceeding 3 lbs. (1,36 kg) MVER or 75% RH should be treated with a moisture vapor reduction product. Refer to Technical Data Sheets at www.mapei.com for information on these products.

- Use a moisture meter to check the RH of the wood flooring, surface of the substrate, and general jobsite area. Follow the flooring manufacturer's guidelines.

MIXING

Note: Utilize all appropriate personal safety equipment during product use. Refer to Material Safety Data Sheet (MSDS) for more information.

- Ready to use; no mixing necessary

PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. Select the appropriately notched trowel (see "Approximate Product Coverage" section).
3. Spread adhesive evenly over the subfloor, keeping the trowel at a 45° angle to the subfloor.
4. Only apply as much as can be installed within 45 minutes.
5. Install wood flooring in strict accordance with flooring manufacturer's written instructions.
6. Adhesive transfer to the backing should be confirmed periodically by lifting the flooring material.

CLEANUP

1. Immediately clean any adhesive smudges from the flooring material's surface with *Ultrabond® Urethane Cleaner* while the adhesive is still fresh/wet.
Note: *Ultrabond ECO 990* is extremely difficult to remove when cured.
2. Immediately clean tools with *Ultrabond Urethane Cleaner* while the adhesive is still fresh/wet.

PROTECTION

- Protect from light traffic for at least 12 hours. Protect from heavy traffic for at least 24 hours.
- Building owners should be advised of the wood flooring manufacturer's guidelines for climate control settings (temperature and humidity). These conditions must be monitored and kept constant to ensure the overall performance and long-term success of the installation.

Product Performance Properties

Laboratory Tests	Results
Polymer type	Polyurethane
Percent solids	100%
VOCs (Rule #1168 of California's SCAQMD)	< 18 g/L
Odor	Light and sweet
Trowelability	Easy
Density	13.8 lbs. per U.S. gal. (1,66 g per mL)
Consistency	Smooth paste
Color	Tan
Shelf life	1 year when stored in original packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°C)
Flash point (Tag)	> 200°F (93°C)

Protect containers from freezing in transit and storage. If frozen, material should not be stirred until it has completely thawed. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Characteristics over Porous and Nonporous Substrates

Wood Flooring	Flash Time†	Working Time††	Adjustability Time†††
At 50°F (10°C) and 80% RH	0 minutes	45 to 60 minutes	3 to 4 hours
At 73°F (23°C) and 50% RH	0 minutes	45 to 60 minutes	2 to 3 hours
At 100°F (38°C) and 20% RH	0 minutes	45 to 60 minutes	4 to 5 hours

† Flash time is the recommended amount of time for a freshly applied adhesive to remain exposed to the air before the installation of floor covering.

†† Working time is the maximum amount of time an adhesive can remain exposed to the air and still effectively bond to the floor covering.

††† Adjustability time is the window of time during which the floor covering can be repositioned without compromising the bond of the adhesive.

Note: Working time may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

Packaging

Product Code	Size
98968	Metal pail: 5 U.S. gals. (18,9 L)
98963	Metal pail: 3.5 U.S. gals. (13,2 L)

Approximate Product Coverages

Flooring Type	Typical Trowel	Coverage*
Cork underlayment	1/16" x 1/16" x 1/16" (1,5 x 1,5 x 1,5 mm) 	125 to 185 sq. ft. per U.S. gal. (3,06 to 4,53 m² per L)
Finger block parquet	1/8" x 1/8" x 1/8" (3 x 3 x 3 mm) 	70 to 80 sq. ft. per U.S. gal. (1,71 to 1,96 m² per L)
Wood flooring < 1/2" (12 mm) thick	3/16" x 5/32" (4,5 x 4 mm) 	45 to 55 sq. ft. per U.S. gal. (1,10 to 1,35 m² per L)
Wood flooring 1/2" to 5/8" (12 to 16 mm) thick	1/8" x 1/4" x 1/4" (3 x 6 x 6 mm) 	40 to 50 sq. ft. per U.S. gal. (0,98 to 1,22 m² per L)
Wood flooring 3/4" (19 mm) thick	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) 	30 to 40 sq. ft. per U.S. gal. (0,73 to 0,98 m² per L)

* Trowel dimensions are depth/width/space. Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of trowel used and setting practices.

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RELATED DOCUMENTS

Reference Guide: Surface Preparation Requirements for floor-covering installation systems	RGF0409*
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* At www.mapei.com.

Refer to MAPEI's Material Safety Data Sheet (MSDS) for specific data related to VOCs, health and safety, and handling of product.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



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Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service
1-800-42-MAPEI (1-800-426-2734)

For the most current BEST-BACKED™ product data and warranty information, visit www.mapei.com.

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