

# Ultrabond G21

Premium, Two-Part, Urethane Flooring Adhesive



## DESCRIPTION

*Ultrabond® G21* is a two-part, reactive adhesive with low volatile organic compounds (VOCs), designed for extreme indoor and outdoor flooring installations. This adhesive aggressively adheres all types of floor coverings to properly prepared metal, asphalt pavement and many other difficult-to-bond-to substrates.

## FEATURES AND BENEFITS

- Excellent for occupied areas (such as hospitals and schools)
- Outstanding adhesion in areas with extra heavy traffic and rolling loads (such as wheelchairs and carts)
- Excellent for freezer and surface water-spray areas (such as produce departments in grocery stores)

## INDUSTRY STANDARDS AND APPROVALS

- RFCI IP #1 – Recommended Installation Practice for Homogeneous Sheet Flooring, Fully Adhered
- RFCI IP #2 – Recommended Installation Practice for Vinyl Composition Tile (VCT)
- RFCI's Recommended Work Practices for Removal of Resilient Floor Coverings

## WHERE TO USE

- Interior and exterior residential (rental apartments, condominiums, etc.)
- Interior and exterior commercial (office buildings, cafeterias)
- Interior and exterior heavy commercial (shopping malls, grocery stores, department stores)
- Interior and exterior institutional (hospitals, schools, universities, libraries, government buildings)

## LIMITATIONS

- Do not install over any substrates containing asbestos.
- Do not install when the moisture vapor emission rate (MVER) exceeds 5 lbs. per 1,000 sq. ft. (2,27 kg per 92,9 m<sup>2</sup>) per 24 hours, when using the anhydrous calcium chloride test (ASTM F1869).
- Do not install with relative humidity of concrete slabs 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 below 65%.

## SUITABLE SUBSTRATES

- Exterior-grade plywood, Group 1, CC type
- Other approved wood underlayments (per manufacturer recommendations)
- Concrete and properly prepared cement terrazzo
- Cement-based self-leveling underlayments and patching compounds
- Embossing levelers applied over existing, properly prepared and fully bonded ceramic tile
- A single layer of properly prepared, fully bonded VCT
- Properly prepared and primed gypsum underlayments that meet the requirements for compressive strength according to ASTM F2419
- Asphaltic surfaces that are sound and free from contamination

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.
- The 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. All surfaces must be level, even, flat and smooth.
- 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 MVER according to ASTM F1869.
- Concrete slabs exceeding 5 lbs. (2,27 kg) in MVER should be treated with a moisture vapor reduction product. Refer to Technical Data Sheets at [www.mapei.com](http://www.mapei.com) for information on these products.
- Use a moisture meter to check the relative humidity of the flooring, substrate surface and general jobsite area. Follow the flooring manufacturer's guidelines.
- Refer to MAPEI's "Surface Preparation Requirements" document for floor-covering installation systems at [www.mapei.com](http://www.mapei.com).

## MIXING

- Wear rubber gloves and avoid skin contact during mixing, application and cleaning.
- Parts A and B are packaged to exact quantity ratios for maximum performance.
- Protect flooring from adhesive spills.
- Pour all material out of the Part B (liquid) container into Part A (paste). Place the cap back on the Part B container and turn the container upside-down to ensure that all remaining material drains into the cap. Pour the remaining material into Part A. Always mix complete units. Do not add other materials to this mixture.
- Use a low-speed mixer to ensure that the material is mixed thoroughly to a smooth, homogenous paste consistency (generally within 3 minutes). Do not allow the mixed product to sit in the container. Immediately after mixing, apply the adhesive to the substrate.
- Wash all tools with mineral spirits immediately after mixing. Once cured, *Ultrabond G21* can be removed only by mechanical means.

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

## PRODUCT APPLICATION

1. Use a typical notched trowel (see “Product Performance Properties” section) and consult the floor-covering manufacturer’s recommendation regarding the proper trowel to use, ensuring 100% coverage of the flooring material’s backing.
2. Do not spread more adhesive than can be covered with floor covering within 40 minutes. After spreading the adhesive, immediately install the flooring material into the adhesive while it is still fresh. Periodically lift the material to confirm proper adhesive transfer to the backing. Note: The floor temperature directly affects setting time. The warmer it gets, the faster it sets; the cooler it gets, the slower it sets.
3. Roll the flooring surface across the width and length with the manufacturer’s recommended roller to break down adhesive ridges and to ensure complete removal of trapped air. Pull (rather than push) the roller, so that footprints are not left on the floor.
4. Complete the installation per the flooring manufacturer’s instructions.
5. Because the initial grab of *Ultrabond G21* is low, it is sometimes necessary to apply weights, particularly at the seams, to maintain contact until the adhesive sets.

## CLEANUP

- While the adhesive is still fresh, promptly use mineral spirits to clean adhesive smudges from the flooring material’s surface and the tools. Once cured, the adhesive can only be removed by mechanical means.

## PROTECTION

- Do not walk on the flooring until 12 hours after the installation. If walking on the floor is necessary before this time, lay plywood boards across the floor to disperse the load. Movement of the flooring while the adhesive is setting may affect the bond. Do not allow heavy traffic until 36 hours after the installation.

### Product Performance Properties

Laboratory Test	Results
Polymer type	Epoxy modified polyurethane
Percent solids	90% to 100%
VOCs (Rule #1168 of California's SCAQMD)	36 g/L
Pot life	60 minutes
Trowelability	Light, easy
Density	11.1 +/- 0.8 lbs. per U.S. gal. (1,33 +/- 0,1 g per mL)
Consistency	Creamy
Color	Off-white
Shelf life	2 years when stored in original packaging at 73°F (23°C)
Storage conditions	40°F to 100°F (4°C to 38°C)
Flash point	Part A: > 200°F (93°C) Part B: > 200°F (93°C)
Protect from traffic	24 hours for light traffic, 72 hours for heavy traffic

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

### Application Properties

	Flash time*	Working time**
All flooring types	0 minutes	80 minutes

\* *Flash time: Amount of time recommended for the adhesive to remain exposed to the air following application before the installation of floor covering.*

\*\* *Working time: The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.*

Flash time and working time may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

### Packaging

Size
Kit: 2 U.S. gals. (7,57 L)

Approximate Coverage\*\*\*

Flooring Type	Typical Trowel	Coverage
Solid vinyl sheet, tile and plank; vinyl composition tile	1/32" x 1/16" x 1/32 (1 x 1,5 x 1 mm), U-notch	185 to 245 sq. ft. per U.S. gal. (4,53 to 6,0 m <sup>2</sup> per L)
Rubber flooring, linoleum, cork flooring	1/16" x 1/16" x 1/16" (1,5 x 1,5 x 1,5 mm), square-notch	125 to 185 sq. ft. per U.S. gal. (3,06 to 4,53 m <sup>2</sup> per L)
Wood parquet	1/8" x 1/8" x 1/8" (3 x 3 x 3 mm), square-notch	40 to 50 sq. ft. per U.S. gal. (0,98 to 1,22 m <sup>2</sup> per L)
Rough-backed carpet, reground rubber flooring (sport floors)	3/32" x 3/32" x 3/32" (2,5 x 2,5 x 2,5 mm), V-notch	60 to 80 sq. ft. per U.S. gal. (1,47 to 1,96 m <sup>2</sup> per L)

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

## RELATED DOCUMENTS

- Reference Guide: Surface Preparation Requirements for floor- covering installation systems†

† At [www.mapei.com](http://www.mapei.com)

## ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI’s commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact [sustainability\\_USA@mapei.com](mailto:sustainability_USA@mapei.com) (USA) or [sustainability-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com) (Canada).

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For the most current product data and BEST-BACKED<sup>SM</sup> warranty information,  
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