



Ultrabond ECO[®] 399

Heavy-Duty, Pressure-Sensitive, Multi-Flooring Adhesive



DESCRIPTION

Ultrabond ECO 399 is a high-moisture-resistant, heavy-rolling-load-resistant, aggressive, pressure-sensitive adhesive with enhanced dimensional control properties designed to install a wide variety of resilient flooring types.

FEATURES AND BENEFITS

- Resistant to heavy rolling loads
- Minimizes gaps in luxury vinyl tile and plank
- Resistant to high moisture
- Allows up to 6 hours of working time

WHERE TO USE

- Approved for use with vinyl composition tile (VCT), luxury vinyl tile, luxury vinyl plank, vinyl enhanced tile, quartz tile, bio-based tile, fiberglass-reinforced vinyl sheet flooring, solid vinyl sheet flooring, reground rubber underlayment, cork underlayment, and vinyl-backed and polyolefin-backed carpet tile

LIMITATIONS

- Do not install over substrates containing asbestos.
- For interior installations only
- Install flooring only in areas recommended by the flooring manufacturer.
- Do not install into wet adhesive over nonporous substrates.
- Do not apply over any adhesive residues, including cutback adhesive.

- Do not install when the moisture vapor emission rate (MVER) exceeds 15 lbs. per 1,000 sq. ft. (6.80 kg per 92.9 m²) per 24 hours, when using the anhydrous calcium chloride test (per ASTM F1869).
- Do not install when the relative humidity (RH) of the concrete slab exceeds 99% (per ASTM F2170).
- Do not install in areas with known hydrostatic moisture problems.
- Use only when the substrate temperature is between 50°F and 90°F (10°C and 32°C).
- Do not install unless the surface temperature of the substrate is 5 degrees F (2.8 degrees C) above the dew point.
- Do not install when the pH is 12 or greater.

Note: High-moisture-resistance capabilities do not apply to wet or semi-wet adhesive installations. In those cases, moisture limits revert back to 5 lbs. (2.27 kg) and 80% RH.

SUITABLE SUBSTRATES

- Concrete (at least 28 days old) installed according to ASTM F710-18
- Cement terrazzo
- Exterior-grade plywood and other approved wood substrates (per the flooring manufacturer's recommendations)
- Cement-based self-leveling underlayments and patching compounds
- Properly primed gypsum underlayments that meet the requirements for compressive strength according to ASTM F2419
- Radiant-heat systems that have been properly installed and operating at a surface temperature no higher than 85°F (29°C)



- Properly installed and sound MAPEI epoxy moisture barriers

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, and any other substance or condition that may affect the overall performance of the product.
- Substrates must be flat to 3/16" in a 10-ft. span (4.5 mm in a 3.05-m span).

See the "Surface preparation requirements" reference guide in the Floor Covering Installation Systems section of MAPEI's Website.

MIXING

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

- Ready to use, with no mixing necessary

PRODUCT APPLICATION

Refer to the flooring manufacturer's guidelines for acclimation requirements and complete installation instructions. Read all installation instructions thoroughly before installation.

1. Select the appropriately notched trowel (see the "Approximate Coverage" chart below) and spread the adhesive evenly over the subfloor, keeping the trowel at a 45-degree angle to the subfloor.
2. On nonporous substrates, allow adhesive to remain open for 30 to 60 minutes or until it is dry to the touch, and then place the flooring.
3. On porous substrates, flooring can be installed into semi-wet adhesive. Or allow the adhesive to remain open for 30 to 60 minutes until it is dry and does not transfer to the finger when touched.
4. Only apply as much adhesive as can be installed within 6 hours. Protect the open adhesive from dust and debris, which will inhibit proper bond and decrease tack.
5. Roll flooring using a 75-lb. (34.0-kg) or 100-lb. (45.4-kg) roller.

CLEANUP

- Clean adhesive smudges from the flooring surface and tools with water while the adhesive is fresh/wet.

PROTECTION

- Protect the finished installation from light traffic for at least 6 hours and from heavy traffic for at least 12 hours.

- Building owners should become aware of the 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
Solids content	50% to 55%
VOCs (Rule #1168 of California's SCAQMD)	< 60 g per L
Density	8.3 lbs. per U.S. gal. (0.99 g per mL)
Flash point (Tag)	> 201°F (94°C)

Shelf Life and Product Characteristics

Adhesive type	Acrylic latex
Consistency	Smooth paste
Color	Off-white
Shelf life	2 years when stored in original, unopened packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°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 Properties at 73°F (23°C) and 50% RH

Working time* for use with luxury vinyl tile/plank, bio-based tile, vinyl enhanced tile, VCT, fiberglass-reinforced and solid vinyl sheet flooring, and cork underlayment	< 6 hours
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* Working time may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

Packaging

Size
Pail: 1 U.S. gal. (3.79 L)
Pail: 4 U.S. gals. (15.1 L)

Approximate Coverage** per 4 U.S. gals. (15.1 L)

Flooring Type	Typical Application Tool	Coverage
Luxury vinyl tile/plank, bio-based tile, vinyl enhanced tile, VCT and solid vinyl sheet flooring on porous substrates	1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm), square-notch trowel	500 to 740 sq. ft. (46.5 to 68.7 m ²)
Luxury vinyl tile/plank, bio-based tile, vinyl enhanced tile, VCT and solid vinyl sheet flooring on nonporous substrates	1/16" x 1/32 x 1/32" (1.5 x 1 x 1 mm), U-notch trowel	740 to 980 sq. ft. (68.7 to 91.0 m ²)
Vinyl-backed and polyolefin-backed car-pet tile, and fiberglass-reinforced sheet vinyl	1/16" x 1/32 x 1/32" (1.5 x 1 x 1 mm), U-notch trowel 1/4" (6 mm) nap roller	740 to 980 sq. ft. (68.7 to 91.0 m ²) 1,000 to 1,400 sq. ft. (92.9 to 130 m ²)

** 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.

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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 (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

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Before using, the user must determine the suitability of our products for the intended use,

and the user alone assumes all risks and liability. **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:



MAPEI Headquarters of North America
1144 East Newport Center Drive
Deerfield Beach, Florida 33442
1-888-US-MAPEI (1-888-876-2734) /
(954) 246-8888

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)

Services in Mexico
0-1-800-MX-MAPEI (0-1-800-696-2734)
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