FEATHER PATCH PRO

A Portland cement-based patch and skim coat for interior floor prep

PRODUCT NAME

Tenon® Feather Patch Pro

MANUFACTURER

TCC Materials®
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA
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Web: tccmaterials.com

PRODUCT DESCRIPTION

Tenon® Feather Patch Pro is a fast-setting, polymer-modified, cement-based patch and skim coating compound for use under ceramic tile, hardwood flooring, carpet and a wide array of floor coverings. Can be applied from 1/16" to 2 in. (51 mm) thick.

Features & Benefits

- 1/16" to 2 in. (51 mm) in thickness
- Can be applied to concrete with a relative humidity (RH) up to 90%
- Can accept tile and stone applications as well as moisture-sensitive floor coverings in as little as 30 minutes or when completely dry
- Polymer-modified
- Self-drying, fast setting with initial set in 15 minutes
- Cement based
- Superior workability for easy application
- Does not require priming
- Exceptional bond strength
- Compatible with sealed gypsum-based flooring

Uses

Ideal for deeper patching jobs, interior applications.

Can be used under:

- Resilient flooring
- VCT
- Carpet
- Ceramic tile
- Wood Flooring

Can be used over (when properly prepared):

- Concrete
- Cement backer board (CBU)
- APA rated exterior grade/exposure 1 plywood or OSB underlayment grade equivalent **
- Ceramic tile**
- Properly prepared cutback adhesive**
- Properly prepared residual carpet adhesive**
- Fully adhered resilient flooring**
- Cement terrazzo**

**Replace 50% of water with Tenon Bonding Additive.

Available Sizes

- 10 lb. (4.54 kg.) pail **(BOM #120618)**
- 25 lb. (11.3 kg.) pail **(BOM #120541)**

TECHNICAL DATA

Typical Values	
Mix Ratio per 10 lb. (4.5 kg) (Liquid to Powder)	1-1¼ qt. (0.94-1.18 L) for thick applications 1¼-1½ qt. (1.18-1.4 L) for thin applications
Mix Ratio per 25 lb. (11.3 kg) (Liquid to Powder)	2¾-3 qt. (2.6-2.8 L) for thick applications 3¼-3½ qt. (3.1-3.3 L) for thin applications
Working Time @ 70°F (21°C)	Approximately 12-15 minutes
Set Time ASTM C191	
Initial Set	Approximately 15 minutes
Final Set	Approximately 30 minutes
Compressive Strength ASTM C 109 (Air Cured)	
24 hours	>1,800 psi (12.4 MPa)
28 Days	>4,000 psi (27.6 MPa)

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

Coverage

Approximate coverage per 10 lb. (4.5 kg)	
⅛ in. (3.2 mm) thickness	15 sq. ft. (1.45 m^2)
1/16 in. (1.6 mm) thickness	31 sq. ft. (2.9 m^2)
Skim coat thickness	90 sq. ft. (8.4 m^2)
Approximate coverage per 25 lb. (11.3 kg)	
⅛ in. (3.2 mm) thickness	39 sq. ft. (3.6 m^2)
1/16 in. (1.6 mm) thickness	78 sq. ft. (7 m^2)
Skim coat thickness	225 sq. ft. (21 m^2)

Note: All coverage rates are estimates and are dependent upon substrate characteristics.

LEED® Eligibility[1]

- Regional Materials (MR-c5)
- Low-Emitting Materials (IEQ-c4.3)

INSTALLATION

Preparation

- Acclimate water and powder to room temperatures of 50°F-80°F (10°C-27°C) for a minimum of 24 hours prior to installation. Proper surface repair preparation is crucial to achieving a successful application.

- Surface must be clean, dry, hard and free from dirt, loose particles, wax, sealers, curing compounds, grease, paint, efflorescence, and any foreign materials that will inhibit adhesion.
- Floors must be structurally sound, level, free from movement and dimensionally stable.
- Feather Patch Pro does not require the substrate to be primed prior to installation.

Preparation Over Cementitious Floors:

- For best results, any concrete surface to be skim coated shall be cured for a minimum of 28 days, and free of surface imperfections, such as efflorescence.
- Loose chunks or chips of concrete should be cleared and remove any resulting dust.
- New slabs should be steel troweled with a fine broom finish. Existing slabs may need to be roughened to provide a mechanical bond.
- Maximum bond over a concrete substrate can be achieved by mechanically profiling the surface either by grinding, shot blasting, sand blasting, or scarifying to achieve an ICRI CSP3 to CSP5 standard. Structurally sound concrete that is porous and has not been troweled smooth and flat may not require mechanical profiling.
- After cleaning and profiling, test for MVER (moisture vapor emission rate, reference ASTM F1869) and concrete substrate's relative humidity (RH, reference ASTM F2170). The requirements of floor covering and floor adhesive manufacturers must be followed with respect to, but not limited to, levels of moisture.
- Pre-wet surface with water Saturated Surface Dry (SSD) just prior to application of product with no residual water pooling.

Preparation Over Wood Substrates:

- Wood floors should be APA rated exterior exposure 1 plywood or OSB underlayment grade equivalent, structurally sound, securely fastened, with no flexing.

Preparation Over Existing Adhesive or Cutback Residue:

- Scrape off all ridges and remove any loose adhesive. Existing adhesive residue shall be hardened and well bonded to the substrate. Residue shall be mechanically reduced to expose the substrate and that only transparent residue shall be present.
- Mechanically remove any loose material or old patching compounds.
- Remove all dust from adhesive residue and check remaining residue to make sure it is not water soluble or will interfere with flooring adhesive.
- For difficult substrates such as existing adhesive residue, we recommend adding Tenon Bonding Additive in lieu of water to increase bond and adhesive strength (Refer to mixing instructions). The addition of a latex additive will extend the setting time.

Preparation Over Existing Other Surfaces:

- Marble, terrazzo and existing ceramic tile surfaces must be well bonded to subfloor, cleaned of any waxes, and abraded to a rough surface prior to application of Feather Patch Pro.
- For difficult substrates such as marble, terrazzo, sealed gypsum, and existing tile surfaces, we recommend adding Tenon Bonding Additive in lieu of water to increase bond and adhesive strength (Refer to mixing instructions). The addition of a latex additive will extend the setting time.
- When applying over gypsum that has not been properly sealed, prime gypsum surface twice with Tenon® Level-Flo® Primer. The first coat uses Level-Flo® Primer diluted 3:1 with clean water; the second coat uses Level-Flo® Primer diluted 1:1 with clean water. Allow sealer to dry between coats and before application of Feather Patch Pro.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

Job Mockups

The manufacturer requires that when its Tenon® products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation.

Mixing

1. Use cool, potable water, clean tools and clean containers.
2. Dry-blend Feather Patch Pro powder prior to mixing.
3. Mix only the amount that can be applied in 12-15 minutes.
4. Always add the powder to the liquid and mix with a low-speed drill (300 RPM or less) until a lump-free mix is obtained. Use a mixing paddle that does not entrap air into the mortar.
5. The amount of water can be modified for various applications and set times.

» 10 lb. (4.5 kg) powder: mix approximately 1-1¼ qt. (0.94-1.18 L) liquid for thick applications, and 1¼-1½ qt. (1.18-1.4 L) for skim coating applications
» 25 lb. (11.3 kg) powder: mix approximately 2¾-3 qt. (2.6-2.84 L) liquid for thick applications and 3¼-3½ qt. (3.1-3.3 L) for skim coating applications.
6. When going over cutback, adhesive, ceramic tile, or as an embossing leveler, substitute 50% of the water with Tenon Bonding Additive.
7. Mix thoroughly to a lump-free, trowelable consistency.
8. Re-stir as pot life nears set time, without additional water.

A mechanical mixer such as a paddle and a ½ in. heavy-duty drill will result in a better consistency and save time. Smaller batch quantities should be mixed by hand. Mix only the quantity of material that can be placed in12-15 minutes (this can be done by mixing at a ratio of 3 cups of powder to approximately 1 cup of water).

Note: Elevated temperatures will shorten the working time. Lower temperatures will delay set times.

Application

Apply only to surfaces that are frost free and between 50°F-80°F (10°C-27°C) for 24 hours prior to application and 48 hours thereafter.

Regular Applications:
1. Apply Feather Patch Pro with a steel trowel onto properly prepared surface using enough pressure to fill all defects and prepare the subfloor to the desired finish.
2. Do not exceed thickness of 2 in. (51 mm).
3. Begin to finish immediately using a flat steel trowel.
4. Flooring can be applied in as little as 30 minutes or as soon as completely dried.
5. For a smoother finish, Feather Patch Pro can be sanded once cured (usually within 1 hour).
6. This product should not be over-troweled or over-worked. Dip application trowel in water frequently to make the finishing process easier; clean tools often.
7. Clean all tools with soapy water before Feather Patch Pro dries.
8. For applications to areas greater than 4 sq. ft. (1 m2) where the uniform thickness is > ½ in. (>13 mm), use a Tenon® self-leveling underlayment.
9. If a higher build-up is needed, allow a minimum of 1 hour drying time between multiple lift applications.

When Used with Floor Installation:
- Tenon® Feather Patch Pro will accept standard floor coverings such as VCT, vinyl sheet goods, tile, and carpeting in approximately 15-30 minutes after placement.
- When using moisture sensitive adhesives such as urethanes and epoxies, employed with wood floors etc., Feather Patch Pro may necessitate 16 hours of curing.
- Feather Patch Pro is a cement-based product therefore all adhesives compatible with concrete should be acceptable. Consult adhesive manufacturer.
- Always install a test area, ensuring suitability of Feather Patch Pro for intended use.

Refer to:
- RFCI (Resilient Floor Covering Institute publication MRP-Nov95): Addressing Moisture Related Problems Relevant to Resilient Floor Coverings Installed Over Concrete
- WFNA (National Wood Flooring Association) publication: Installing Hardwood Flooring, Rev 3/10/98
- TCNA (Tile Council of North America) Handbook: Ceramic Tile Installation
- American National Standard Specifications: Installation of Ceramic Tile
- UBC (Uniform Building Code): 1997 Volume 1, Section 1906.3.10

Curing

- Feather Patch Pro is self-curing, however protect from excess heat, rapid air movement, and direct sunlight.
- The use of damp curing or the use of curing compounds is not recommended.

Clean Up

Use clean potable water to clean all tools immediately after use. Dried material must be mechanically removed. Use a wastewater hardener (e.g. Conglez™ or similar product) for cementitious waste disposal.

LIMITATIONS & PRECAUTIONS

Limitations

- Do not add any liquids other than potable water or Tenon Bonding Additive to this product.
- Do not install if the substrate moisture vapor content exceeds 90% when tested using ASTM F2170 RH probes or the surface moisture vapor transmission exceeds 10 lb. / 1000 sq. ft. / 24 hr. when tested per ASTM F1869 Moisture Vapor Transmission (Calcium Chloride) procedure.
- Do not install if the substrate moisture vapor content (RH) or surface moisture vapor transmission rate (Calcium Chloride) exceeds flooring or adhesive manufacturer's specifications.
- Do not use as an embossing leveler.
- Do not use over pressed wood.
- Keep out of contact with aluminum or galvanized surfaces.

- Do not use over unsealed gypsum or light weight concrete.
- Do not use for exterior applications.
- Do not use to level larger areas. Use a Tenon® Level-Flo® self-leveling product.
- Do not apply as a wearing surface.
- Do not overwater.
- Do not apply when there is excessive heat or rapid air movement.
- Do not cover or fill control or expansion joints.

Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com

Cautions

Read complete cautionary information printed on product container prior to use.
This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered Tenon brand product(s) under normal environmental and working conditions. Because each project is different, TCC Materials cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

STORAGE & HANDLING

Shelf Life

Shelf Life is 12 months from the date of manufacture.

Storage Conditions

Store in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.

ADMINISTRATIVE INFORMATION

Product Availability & Technical Services

Business hours are 7:30 AM to 4:00 PM CST. To locate Tenon products in your area or contact Technical Services:
Phone: 1.651.688.9116
Email: info@tccmaterials.com

To acquire technical and safety literature, please visit our website at:
Web: tccmaterials.com

Warranty

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

Filing System

Division 3 and 9

[1] Tenon® products can contribute to LEED® credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).

TCC MATERIALS
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Data sheets are subject to change without notice. For the latest version, please check the product page at www.tccmaterials.com