Blend-Pro®

1. PRODUCT NAME
Tenon® Blend–Pro®

2. MANUFACTURER
TCC Materials®
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA

Phone: 1.651.688.9116
Fax: 1.651.688.9164
Internet: tccmaterials.com

3. PRODUCT DESCRIPTION
Tenon® Blend–Pro is a fast–setting, one component, poly–mer–modified, calcium aluminate cement–based concrete and masonry patching compound designed for vertical and over–head repair applications.

Features and Benefits
- Interior/Exterior
- Can be applied overhead and vertically without using expensive forming procedures
- Apply to ¼– 2 in. (6 mm – 51 mm)*
- Fast–setting, low slump repair mortar that can be troweled, shaped and shaved after taking an initial set
- Easy shaping and molding
- One component incorporating a water activated polymer system
- Integrated corrosion inhibitor
- Tenacious bond to substrates
- Normal set time of approximately 30 minutes
- Available in 15 minute set time formula

* For applications ¼ in. to ½ in., use a 50/50 mixture of water and Tenon Mighty Bond additive for better bond and durability.

Uses
- Used interior or exterior, above or below grade, on vertical and overhead
- Suited for patching distressed vertical and overhead surfaces including precast products, concrete pipe, curbs, sidewalks, bridges, panels, and walls.
- Used to fill honeycombs, formed high rise holes, spalls or irregularities due to misaligned forms or unconsolidated concrete

SAFETY
READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: tccmaterials.com or contact TCC Materials® at 651–688–9116 (7:30 AM to 4:00 PM, M–F, Central US Time).

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, neither Tenon® nor TCC Materials® can be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA

Typical Values • Blend–Pro Neat	
Working Time @ 70°F (21°C)	15 minutes
Set Time @ 70°F (21°C) – ASTM C 191	
Initial Set	±20 minutes
Final Set	±30 minutes
Compressive Strength – ASTM C928	
3 hours	3,000 psi (20.7 MPa)
1 day	4,000 psi (27.6 MPa)
7 days	5,000 psi (34.5 MPa)
28 days	5,500 psi (37.9 MPa)
Freeze/Thaw Resistance ASTM C666 Method “B”	
After 300 cycles	1% loss due to slight scaling; no spalling
Average Scaling Resistance ASTM C672–98	
No of cycles: 25	Rating 0 Condition of surface – No scaling visible
Shear Bond Strength – ASTM C882	
1 day	1,035 psi (7.1 MPa)
7 days	1,650 psi (11.4 MPa)
Flexural Strength ASTM C348	
1 day	1,150 psi (7.9 MPa)
28 days	1,180 psi (8.1 MPa)

4. TECHNICAL DATA (Cont.)

Note: Test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity. Tested using 5 qt. (4.7 L) water per 50 lb. (22.7 kg) powder. Reasonable variations can be expected due to atmospheric and job site conditions.
Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

LEED® Eligibility[1]

- Regional Materials (MR–c5)
- Low–Emitting Materials (IEQ–c4.1)

Product Enhancement

Rapid Cure Technology (RCT®) – Improves the strength, controls shrinkage, and prevents efflorescence of our products without sacrificing workability or working time.

Packaging

- #3–15 Light Gray 50 lb. (22.7 kg) bag (BOM #113529)
- #3–15 Light Gray 50 lb. (22.7 kg) pail (BOM #121158)
- #3–30 Light Gray 50 lb. (22.7 kg) bag (BOM #113532)
- #3–30 Light Gray 50 lb. (22.7 kg) pail (BOM # 114797)

Shelf Life

Best when used within 12 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight.

5. INSTALLATION

Preparation

All materials should be conditioned to 40°F–80°F (4°C–27°C) 24 hours prior to installation. Surface must be clean, hard, and free from dirt, loose particles, waxes, plastics, curing compounds, grease, paint, efflorescence, and any foreign materials that will inhibit adhesion.

- Adjoining surfaces must be sound, clean, free of loose or damaged concrete, dust, dirt and other contaminants that will interfere with bond. Completely expose and clean all reinforcing steel, ensuring a minimum clearance of ¾ in. (19 mm) behind reinforcing steel.
- Perform reinforcing steel preparation in accordance with ICRI Technical Guidelines No. 03730. For best results patch area edges should be saw cut to a depth of ½ in. (13 mm). Abrade concrete to obtain a rough surface promoting adhesion.
- The area should be saturated surface dry (SSD) with no standing water on the surface. The use of a vigorously scrubbed application of a thinly mixed Blend–Pro bond coat is recommended. This should be applied to all surfaces coming into contact with the patch.
- Do not allow bond coat to dry prior to the placement of the Blend–Pro.

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

Refer to:
ICRI Guide No. 03732
Selecting and Specifying
Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays

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

Mix as close to the area being repaired as possible.

1. Blend–Pro requires 4 – 5 qt (3.8 – 4.7 L) of water per 50 lb. (22.7 kg) of powder. Mix only the amount of material that can be placed in 15 minutes.
2. Pour the required amount of potable water into a clean mixing container, then add the measured amount of Blend–Pro while continuing to mix and blend thoroughly for 1 – 2 minutes to a lump free, putty like consistency.
3. Small amounts of Blend–Pro can be mixed using a trowel or a ½" drill (400–600 rpm) and paddle.
4. For thin applications of ¼–½ in. (6–12 mm), mix 4–5 qt. (3.8 –4.7 L) of a 50/50 blend of Mighty Bond additive and water.

Extended Mix

1. To fill areas deeper than 2 in. (51 mm), add 15 lb. (6.8 kg) of clean, saturated surface dry 3/8 in. (10 mm) pea gravel to 50 lb. (22.7 kg) of Blend–Pro. First mix the Blend–Pro as outlined, then add the pea gravel and mix for 60 seconds.
2. Total mixing time is not to exceed 2–3 minutes
3. Clean out the mixing container thoroughly after each batch to avoid getting hardened mortar into the next batch.

Application

Ideal application conditions are when air, material and substrate temperatures are between 40°F–80°F (4°C–27°C) within 24 hours of application and when rain is not expected within 12 hours. The minimum ambient and surface temperatures should be 40ºF (4ºC) at time of application. Hot weather and conditions above 80ºF (27ºC) will reduce working time and accelerate set, while cold temperatures below 60ºF (16ºC) will have a retarding effect.

- Immediately apply the fresh mortar into the entire surface, forcing Blend–Pro firmly into the previously prepared area insuring full contact with all bonding surfaces. Slightly overfill the area.
- After initial set, using a trowel, shave Blend–Pro to the desired final profile, shaving the patch from the center towards the bond edge at the existing surfaces. A wet spray may be used for final shaping.
- In deeper areas additional lifts can be made after the original patch has reached initial set. Score and roughen the original lift layer to improve bond between applications.

- Blend–Pro can be placed in lifts up to 2 in. (51 mm) on vertical and overhead applications by holding the mortar in place until initial set has occurred.

Curing

- Cure in accordance with American Concrete Institute procedure number 308. Protect patch from high temperature, high wind, low humidity and direct sun causing rapid drying, by covering with wet burlap or plastic for up to 24 hours.
- A water–based curing compound can also be used. Do not apply to frozen or frost covered areas.

Refer to:

- ACI 305 Standard on Hot Weather Concreting
- ACI 306 Standard on Cold Weather Concreting
- ACI 308 Standard Practice for Curing Concrete Wet Cure

Cleaning

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

Limitations

- Do not mix more than can be placed in 15 minutes.
- Do not overwater or retemper after mixing.

Coverage

- 50 lb. (22.7 kg) bag yields approximately 0.48 cu. ft. (0.01 m^3), or approximately 23 sq. ft. at ¼ in. thickness (2.1 m^2 at 6 mm).
- 50 lb (22.7 kg) extended with 15 lb. (6.8 kg) of 3/8" (10 mm) pea gravel yields approximately 0.60 cu. ft. (0.02 m^3).

6. AVAILABILITY

To locate Tenon® products in your area, please contact:

Phone: 1.651.688.9116
Email: info@tccmaterials.com

7. 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.

8. MAINTENANCE

Not applicable.

9. TECHNICAL SERVICES

Technical Assistance:
Information is available by calling TCC Materials®
(hours 7:30 AM to 4:00 PM, M–F, CST):

Phone: 1.651.688.9116
Email: info@tccmaterials.com
Web: tccmaterials.com

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

10. FILING SYSTEM

Division 3

[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
SPEC BLENDED CONSTRUCTION PRODUCTS®

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