PAVER BONDING MORTAR

A pre-blended cement and oven-dried sand mixture that will produce a high-strength bond

PRODUCT NAME

Tenon® Paver Bonding Mortar

MANUFACTURER

TCC Materials®
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PRODUCT DESCRIPTION

Tenon® Paver Bonding Mortar is ideally suited for adhering pavers to concrete steps, walkways, patios, terraces, and plazas. It can also be used for patching, leveling, and filling large cracks. When mixed with water and Tenon Bonding Additive, this pre-blended cement and oven-dried sand mixture will produce a high-strength bond between horizontal concrete surfaces and pavers, stone, or other veneer.

Features & Benefits

- High strength
- Durable material
- Excellent bond
- Pre-blended mixture

Uses

- Horizontal bonding of pavers & veneer
- Grout bonded pavers & veneer
- Steps/stoops
- Walkways
- Patios/plazas/terraces
- Patching/leveling concrete surfaces
- Filling large cracks
- Partial-depth repair of concrete (<2” deep)

Available Sizes

- 50 lb. (36.3 kg) bag **(BOM #116567)**
- White 50 lb. (36.3 kg) bag **(BOM #116557)**

TECHNICAL DATA

Typical Values	
Compressive Strength, psi (ASTM C39)	
24 hours	1,830
3 days	2,700
7 days	3,860
28 days	4,750
Physical Testing (ASTM C387)	
Water Demand (lb./bag)	14.87
Slump (in.)	3.5
Unit Weight (lb./ft.^{3})	132.6
Yield (ft.^{3}/bag)	.72
Air (%)	5.3

Note: *Meets the physical requirements for high-early and normal strength concrete of ASTM C387, “Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete”.*

Coverage

- 50 lb. (36.3 kg.) bag yields approximately 0.7 cu. ft.

LEED® Eligibility[1]

- Regional Materials (MR-c4, MR-c5)

INSTALLATION

Preparation

Concrete surfaces should be clean, sound, and free from any materials that may inhibit bond such as oil, asphalt, curing compounds, acids, dirt and loose debris. Roughen surface and remove all unsound concrete. Immediately prior to placement the repair surface shall be thoroughly saturated with no standing water.

For best results of direct bonding of pavers to slab-on-grade surfaces a gravel bed or other means of drainage should be present below the slab. Slab should be sloped to provide complete drainage at 1/8” per 1’ of surface. Do not place directly on gravel bed, concrete substrate is required.

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

- Depth of patches should be between ½-2 in. (13-50 mm).
- Do not mix more mortar than can be placed in 1 hour.
- Apply mixed mortar to the slab and to the back of each paver to achieve full coverage beneath the paver. Do not allow voids. Tamp / consolidate mortar fully.
- Pavers should be firmly set (minimum of 24 hours) before grouting.
- Dampen surface of pavers with clean water using a light spray or sponge just prior to grouting. Do not fill grout lines with
- water.
- Clean any residue off paver immediately while it is still wet.
- Note that any open pours or irregularities in the surface of the pavers may become filled with Partial Depth Concrete Patch and thus influence the overall color of the pavers.

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. For best results, use a mechanical batch mixer.
2. Place the desired number of bags in the mixer. Always use full bags only. Do not exceed mixer capacity.
3. Replace part of the mixing water with Tenon Bonding Additive for improved bonding. Add Bonding Additive diluted at a rate of 3 parts clean water to 1 part bonding additive.
4. Use approximately 3.1-4.4 pts. (1.47-2.06 L) of liquid per 50 lb. (22.7 kg) bag for optimal workability.
5. Add additional liquid in small increments and adjust slump to about ¾ in. (1.9 mm), maximum slump of 1 in. (2.5 cm).
6. Continue mixing for an additional 3-5 minutes to a uniform lump free consistency.
7. Maintain water and mixing time consistency among batches.

Application

Honor all cold joints and saw-cut joints by keeping joints open and free to move. (Do not lay pavers over joints or allow grout, mortar, or other material into joint cavities. Align paver joints with joints in existing concrete.) Replace part of the mixing water with Tenon Bonding Additive. Add Tenon Bonding Additive at a rate of 3 parts water to 1 part bonding additive. Apply mixed mortar to the slab and to the back of each paver to achieve full coverage beneath the paver. Do not allow voids. Grout pavers with mix and bonding additive. Clean any residue off paver immediately while it is still wet.

- For best results of direct bonding of pavers to slab-on-grade surfaces a gravel bed or other means of drainage should be present below the slab. Slab should be sloped to provide complete drainage at ⅛ in. (3 mm) per 1 ft.(0.305 m) of surface.
- Honor all cold joints and saw-cut joints by keeping joints open and free to move. Do not lay pavers over joints or allow grout, mortar or other material into joint cavities. Align paver joints with joints in existing concrete.
- Pre-wet surface just prior to application of mortar with no residual water pooling.
- Apply mixed mortar to the slab and to the back of each paver to achieve full coverage beneath the paver. Do not allow voids.
- Pavers should be firmly set (minimum of 24 hours) before grouting.
- Dampen surface of pavers with clean water using a light spray or sponge just prior to grouting. Do not fill grout lines with water.
- Clean any residue off paver immediately while it is still wet.
- Note that any open pours or irregularities in the surface of the pavers may become filled with Partial Depth Concrete Patch and thus influence the overall color of the pavers.
- Can be open to foot traffic in 24 hours after setting pavers and 24 hours after grouting. Can be open to wheeled traffic in 7 days after setting and 7 days after grouting.

Curing

Always follow industry standard practices for finishing and curing concrete patches as described in ACI Manual of Concrete Practice.

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

- Apply only to surfaces that are frost free and above 50°F (10°C) and below 90°F (32°C) within 24 hours of application and 48 hours thereafter.
- Shade and protect patch in windy and/or hot weather conditions.
- During warm weather conditions, keeping mixing water and material cool should assist in maintaining open time of the product. During cold weather conditions, the use of warm mixing water and warming surfaces should accelerate set times.
- Do not overwater, retemper, or over-mix.
- Do not bridge over existing expansion or control joints.
- Must be mixed with Tenon Bonding Additive/ water mixture according to the installation instructions. Mixing with water alone will not provide a durable bond.
- Observe and adhere to all provisions of the local building code as well as applicable ACI, ASTM, ANSI standards. Follow proper cold-weather and hot-weather construction practices for temperatures below 40 degrees F (4 C) or above 100 degrees F (38 C) respectively.

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

Best when used 12 months from the date of manufacture.

Storage Conditions

Store the product in the original, unopened container, away from moisture, under cool, dry conditions and out of direct sunlight. Product should be stored dry at 40°F-95°F (4°C-35°C).

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

[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