

1. PRODUCT NAME

Tenon® Masonry Cement

2. MANUFACTURER

TCC Materials®
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3. PRODUCT DESCRIPTION

Tenon Masonry Cement is designed to be mixed with masonry sand to create masonry mortar applications for brick and stone with consistent strength, durability, and workability. Climate conditions, exposure, and engineering requirements must be considered when selecting the mortar type.

Type N mortar is recommended for above-grade interior and exterior load-bearing and non-load bearing walls. Type N is used for applying brick or stone veneer. Type N Masonry Cement is available in 6 preblended colors

Type S mortars are recommended for walls above- or below-grade and load-bearing structural walls where higher compressive strengths are needed. Type S Masonry Cement can also be mixed for stucco applications.

Type M is designed for structural, below-grade, load-bearing walls where higher compressive strengths are needed.

Each type conforms to ASTM C-91 Standard Specification for Masonry Cement, and are used to produce ASTM C270 for Type N, Type S, or Type M mortars respectfully.

Features and Benefits

- Available in 6 preblended colors (Type N)
- Used to produce ASTM C270
- Masonry Cement meets ASTM C91

When/Where to Use

- Basic building material for mortar applications
- Interior and exterior
- New construction, tuckpointing, and repairs

4. TECHNICAL DATA

Masonry Cement meets or exceeds the requirements of ASTM C270 and ASTM C 1714.

The mortar type used should correlate with the masonry units and the design requirements, building codes, and specification requirements for the application. Submittals available upon request.

Typical Values • Tenon Masonry Cement

Compressive Strength, psi (ASTM C39), 28 days	
Type N	750 psi (5 MPa)
Type S	1,800 psi (12.4 MPa)
Type M	2,500 psi (17 MPa)

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤
Note: Test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity unless otherwise specified.

Available Size

- 70 lb. (31.75 kg) bag Type N (BOM #114094)
- 75 lb. (34.01 kg) bag Type S (BOM #114095)
- 70 lb. (31.75 kg) bag Type M (BOM #114096)

Coverage

- A typical mix design using one 70 lb. (31.75 kg.) bag of Masonry Cement and 240 lb. of ASTM C144 mason sand will yield approximately 2.75 cu. ft. of wet mortar.

* All yields are approximate and do not allow for waste and job site conditions.

5. INSTALLATION

Preparation

Approximate Coverage • Tenon Masonry Cement	
8 in. Block	35-45 per 70 lb. bag
Modular Block	100-150 per 70 lb. bag

Read all directions before starting work. When laying a new masonry wall, construct a sound footing below the frost line using Tenon 5000 Concrete Mix. When repairing mortar joints or stucco, rake out excess mortar and/or brush out the joints to remove loose mortar or sand. Dampen areas to be repaired with water just prior to application with no residual water pooling. Surfaces should be sound and free from dust, dirt, grease, oil, loose debris, etc.

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

Mixing

1. Refer to the mix design chart for proportions by volume per appropriate application. A general purpose mortar will use approximately 4¾ gal. (18 L) of clean water.
2. Add the approximate amount of potable water into the clean

Typical Mix Designs by Volume

Type N Mortar	
Masonry Cement	Masonry Sand (meets ASTM C144)
1 part	3 parts
Type S Mortar	
Masonry Cement	Masonry Sand (meets ASTM C144)
1 part	2.25 to 3 parts
Type S Stucco	
Masonry Cement	Plaster Sand (meets ASTM C897)
1 part	2.25 to 5 parts
Type M Mortar	
Masonry Cement	Masonry Sand (meets ASTM C144)
1 part	2.25 to 3 parts

mixing container. Slowly pour the contents of the bag(s) into the potable water.

- Mix until a workable consistency is reached. If more water is needed, add small increments to reach a workable mix. Machine mixing is recommended.
- Excess water reduces strength and durability and can cause cracking. In cold weather, use warm water to accelerate the set. In hot weather, use cold water to slow the set.
- Maintain consistency from batch to batch.

Application

Ideal application conditions are when air, material, and substrate temperatures are between 40°F-100°F (4°C-38°C) within 24 hours of application and placement, and when rain is not forecast 24 hours after. Set times will vary in extremely hot or cold conditions. Do not apply to surfaces that are frozen or contain frost.

- Block or brick placement: For the first layer of block or brick, spread a full bed of mortar 1 in. (25 mm) thick along the footing and position the corner block/brick carefully in the mortar bed.
- Beginning with the second block/brick apply mortar to the head joint (vertical edge) and press the block/brick down into the mortar and place into position against the previously laid block/brick.
- Mortar joints should be a consistent $\frac{3}{8}$ " (10 mm) thick. Use a level and mason's line to maintain alignment and joint width throughout the project. Make any adjustments by tapping the block/brick with the trowel handle while the mortar is still workable.
- For the remaining courses, mortar is applied to the vertical edge of each block/brick before it is placed. Once the mortar joints have become "thumbprint" hard, use a jointing tool to smooth and seal the joints.

Stucco repair:

- When repairing stucco, apply the material using a plasterer's hawk and trowel using enough pressure to completely fill and compact the material.
- Texture stucco to match the surrounding area using a plasterer's trowel.
- Tenon Masonry Cement can be painted using an alkali-resistant lime proof paint, allow a minimum of 7 days prior to painting provided the masonry is dry.

Tuck-point (repairing) mortar joints:

- Load the trowel with mortar. Pick up the mortar from the trowel with a jointer tool and pack it firmly into the joints.
- Once the mortar has become "thumbprint" hard, use the jointer tool or other appropriate tool to finish the repaired joints so that they match the existing joints.
- Clean excess mortar off the brick faces as soon as possible.

Curing

Moist curing of masonry mortars is required if conditions are hot, dry, or windy. In such cases, a gentle mist of water applied to the surface will prevent premature drying and improve the strength of the mortar. Protect mortar from freezing during the

first 48 hours. Plastic sheeting and insulation blankets should be used if temperatures are expected to fall below 32°F (0°C).

Clean Up

Use soapy water to clean hands and tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Congelz™ or similar product) for cementitious waste disposal. For more detailed information on cleaning masonry units, refer to Technical Notes "Washing of Masonry Walls".

Limitations

- Follow all industry standard safety procedures when working with concrete products including wearing impervious gloves, such as nitrile when handling.
- Maintain consistency between batches. Never change sand sources or amounts during the project
- Tool all joints to the same degree of firmness.
- Avoid excessive re-tempering, which could result in color variations.
- Mortar type should be correlated with the specific masonry unit to be used.
- Do not add aggregate.
- Do not overwater.
- Set times will fluctuate in extremely hot or cold weather. Use cold water in severely hot weather; use hot water (not exceeding 120°F (48°C) when mixing in severely cold weather.
- Use only clean mixing container and tools.
- Install in accordance with local building code provisions and all applicable ASTM standards.

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.

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.

Shelf Life	Best when used within one year in original, unopened bags
Storage Conditions	Store dry, cool, out of direct sunlight. Best to condition material to 50-80°F (10°-27°C) before using.
Color	Gray
WARNING: INJURIOUS TO EYES	
KEEP OUT OF REACH OF CHILDREN	

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