

1. PRODUCT NAME

Tenon[®] Self-Consolidating Concrete Mix (SCC) CI

2. MANUFACTURER

Bluestone Products[™], a TCC Materials[®] company
2025 Centre Pointe Blvd.
Mendota Heights, MN 55120 USA

Phone: 1.651.688.9116
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3. PRODUCT DESCRIPTION

Tenon[®] Self-Consolidating Concrete Mix (SCC) CI is a dry, preblended, one-component, self consolidating, cementitious, polymer-modified concrete mix containing coarse aggregate, silica fume, and an integral migrating corrosion inhibitor. Designed for application thickness minimum of 1 in. (2.5 cm) and maximum thickness of 8 in. (45.7 cm).

Features and Benefits

- Self-consolidating, excellent placement characteristics
- Polymer-modified for increased adhesion and flexural strength
- Integral penetrating corrosion inhibitor
- Enhanced with silica fume
- Convenient and consistent, made with coarse aggregate to eliminate the need to extend the material in the field, and the risk of reactive aggregate.
- Does not require mechanical vibration consolidation
- Fiber reinforced to control shrinkage cracking

Uses

- Full depth repairs
- On grade, above, and below grade on concrete
- Horizontal surfaces
- Vertical and overhead surfaces when formed and pumped, or poured
- As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, dams, and balconies
- Filler for voids and cavities

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 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 • Tenon [®] Self-Consolidating Concrete Mix (SCC) CI	
Application Time	60 minutes
Slump Flow ASTM C1611	24-30 in (61-76 cm)
Flexural Strength, psi (ASTM C78)	
24 hours	500 psi (3.4 MPa)
7 days	750 psi (5.2 MPa)
28 days	1,000 psi (6.9 MPa)
Splitting Tensile Strength, psi (ASTM C496)	
7 days	750 psi (5.2 MPa)
28 days	1,000 psi (6.9 MPa)
Slant Shear Bond Strength, psi (ASTM C882)	
24 hours	1,000 psi (6.9 MPa)
7 days	1,500 psi (10.3 MPa)
28 days	2,500 psi (17.2 MPa)
Direct Tensile Bond, psi (ACI 503)	
7 days	250 psi (1.7 MPa)
28 days	300 psi (2.1 MPa)
Compressive Strength, psi (ASTM C39)	
24 hours	2,000 psi (13.8 MPa)
7 days	5,500 psi (37.9 MPa)
28 days	6,500 psi (44.8 MPa)
Shrinkage (ASTM C157)	
28 days	<0.05%

Chloride ion permeability (ASTM C1202)	
28 days	<650 Coloumbs
Freeze / Thaw Resistance (ASTM C666)	
300 cycles	>99%
Scaling Resistance (ASTM C672)	
50 cycles	0
Sulfate Resistance (ASTM C1012)	
Length change after 6 mo.	0.006

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

Note: Independent test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity.

Packaging

50 lb. (22.7 kg.) bag – Product #112026

Shelf Life

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. Product should be stored dry.

5. INSTALLATION

Preparation

All materials should be conditioned to 65°F-75°F (18°C-24°C) 24 hours prior to installation. Proper surface repair preparation is crucial to achieving a successful application. Be sure repair area is not less than 1 in. in depth.

1. Remove all unsound concrete. Clean area and remove all grease, oil, asphalt, curing compounds, acids, dirt, loose debris, paint, and any other foreign materials that will inhibit performance.
2. The surface should be saturated with water, Saturated Surface Dry (SSD) with no puddling of water, prior to placement.

Reinforcing Steel: Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning and primed with appropriate protective primer.

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. For best results, use a low-speed drill (400-600 rpm) and paddle or in an appropriate size mortar mixer or concrete mixer.
2. Add dry mix to cool, clean potable water at the ratio of approximately 4 pt. (1.89 L) per 50 lb. (22.7 kg) bag of powder. Add additional water sparingly, if needed, up to 4.5 pt. (2.13 L), while mixing a maximum of 3 minutes to a lump-free, uniform consistency.
3. Only mix with clean potable water. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature.
4. Do not mix more material than can be placed in a 60 minute time frame.

Application

Apply only to surfaces that are frost free and above 45°F (7°C) and below 100°F (38°C) within 24 hours of application and 7 days thereafter.

1. Ensure good intimate contact with the substrate is achieved by scrubbing the material into the substrate or by other suitable means such as vibration of the material or pumping under pressure. Vibrate form while pouring or pumping. Pump with a variable pressure pump.
2. Continue pumping until a 3 to 5 psi increase in normal line pressure is evident then STOP pumping. Form should not deflect. Vent to be capped when steady flow is evident, and forms stripped when appropriate.

Limitations

- Minimum ambient and surface temperature is 45°F (7°C) and rising at time of application.
- Do not overwater or over mix.
- Install in accordance with local building codes and applicable ASTM standards.
- Use a mechanical batch type mixer, mix for 3 minutes. Hand-mixing is not recommended.
- Mixing time and water amounts should be consistent from batch to batch.
- Minimum application thickness is 1 in. (25 mm); Maximum is 8 in. (200 mm).
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure.

Curing

Begin moist curing immediately after finishing with wet burlap and polyethylene, a fine mist of water or a water-based compatible curing compound such as Tenon® Cure & Seal WB. Protect new surface from direct sunlight, wind, rain, and frost.

Refer to:

ACI 308 Standard Practice for Curing Concrete

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.

Coverage

50 lb. (27.6 kg) bag yields approximately 0.45 cu. ft. (0.013 m³)

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 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



Bluestone Products
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