

## 1. PRODUCT NAME

Tenon<sup>®</sup> Air Entrainment

## 2. MANUFACTURER

Bluestone Products, a TCC Materials<sup>®</sup> company  
2025 Centre Pointe Blvd.  
Mendota Heights, MN 55120 USA

Phone: 1.651.688.9116

Fax: 1.651.688.9164

Internet: [tccmaterials.com](http://tccmaterials.com)

## 3. PRODUCT DESCRIPTION

Tenon<sup>®</sup> Air Entrainment is a ready to use aqueous solution of special organic materials that is used to entrain a small and stable amount of air into the desired mix. These small, stable air voids enhance the mixture and improve workability. Its chemical composition and physical properties make it ideal for many construction applications. It is intended for use when increased workability and freeze-thaw durability of concrete or mortar is preferred.

### Features and Benefits

- Improves workability & freeze-thaw resistance
- Improved plasticity, water retention, and cohesiveness of mortar
- Improved resistance to scaling from deicing salts
- Reduced permeability - increased water tightness
- Reduced segregation and bleeding
- Meets ASTM C260 *Standard Specification for Air-Entraining Admixtures for Concrete*

### Uses

- Exterior
- Concrete & cement mixes
- Masonry mortars

## SAFETY

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: [tccmaterials.com](http://tccmaterials.com) or contact TCC Materials<sup>®</sup> 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<sup>®</sup> brand product (s) under normal environmental and working conditions. Because each CAUTIONS (cont.) project is different, neither Tenon<sup>®</sup> nor TCC Materials<sup>®</sup> can be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

## 4. TECHNICAL DATA

Meets ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete

### Packaging

- 1 gal. (3.78 L) bottle – Product # 120377
- 5 gal. (18.9 L) pail – Product # 120879
- 55 gal. (3.78 L) – Product # 130070

### Shelf Life

12 months from the date of manufacture when stored in the original, unopened container, away from moisture, under cool, dry conditions, protected from freezing, and out of direct sunlight. Store dry at 40°F-95°F (4°C-35°C).

## 5. INSTALLATION

### Preparation

- Prepare surfaces per manufacturers instructions of the cement, concrete or masonry product being used.

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<sup>®</sup> 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

- Slowly stir Air Entrainment before use. Do not create bubbles by shaking the product.
- Always use clean tools and mixing containers.
- Follow typical water addition mixing instructions on the applicable cement, concrete or mortar bag to provide the desired consistency of the mix.
- Substitute Air Entrainment in place of “equal amount” of water to achieve the suggested addition rate per Tables I & of Coverage / Admixture Rate. For example, if you add 4 oz. of Air Entrainment, reduce the amount of water by the equal amount (4 oz.)
- Air Entrainment is blended into the mixing water, then the combined liquid is added to the cement, concrete, or mortar powder. Always add powder to liquid for easier mixing.

### Application

- Follow manufacturers instructions for the cement, concrete or masonry product being used.
- Ideal application conditions are when air, material, and substrate temperatures are between 50°F-90°F (10°C-32°C) within 24 hours of application, and 48 hours thereafter.
- For air entrained concrete slabs, use a broom or float finish and do not use a steel trowel finish.

### Cleaning

Follow manufacturers instructions for the cement, concrete or masonry product being used.

### Limitations

- Do not allow unused bottle of product to freeze. Store dry at 40°F-95°F (4°C-35°C).

### Coverage / Admixture Rate

The concrete ratio (*Table I*) is designed to achieve an air entrainment level of 6.5% ( $\pm 1.5\%$ ).

<b>Table I: Concrete Air Entrainment</b> Target: 6.5% ( $\pm 1.5\%$ )	
Product:	Suggested Rate:
60 lbs. (27.2 kg) Preblended Concrete	3 oz. ( $\frac{3}{8}$ cup / 88 mL)
80 lbs. (36.6 kg) Preblended Mortar	4oz. ( $\frac{1}{2}$ cup / 118 mL)
94 lbs. (42.6 kg) Portland Cement	16 oz. (2 cup / 473 mL)

The mortar ratio (*Table II*) is designed to achieve an air entrainment level of 8% ( $\pm 2\%$ ). Many factors can effect final air content when mixing concrete or mortar product in the field.

<b>Table II: Concrete Air Entrainment</b> Target: 8% ( $\pm 2\%$ )	
Product:	Suggested Rate:
60 lbs. (27.2 kg) Type N Preblended Mortar	4 oz. ( $\frac{1}{2}$ cup / 118 mL)
80 lbs. (36.6 kg) Type N Preblended Mortar	5 oz. ( $\frac{5}{8}$ cup / 148 mL)
80 lbs. (36.6 kg) Type S Preblended Mortar	6 oz. ( $\frac{3}{4}$ cup / 177 mL)

### 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](mailto:info@tccmaterials.com)

Web: [tccmaterials.com](http://tccmaterials.com)

Technical and Safety Literature:

To acquire technical and safety literature, please visit our website at: [tccmaterials.com](http://tccmaterials.com).

## 10. FILING SYSTEM

Division 3



Bluestone Products  
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Mendota Heights, MN 55120  
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