

1. PRODUCT NAME

Tenon® Ultimate Barrier ES
(solvent based VOC compliant curing & sealing compound)

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® Ultimate Barrier ES is a VOC compliant, clear, non-yellowing, fast drying acrylic-silicone blended concrete sealer for curing, dustproofing, and weatherproofing of freshly-placed and/or existing concrete, terrazzo, brick, stone, architectural concrete, and other cementitious materials. Tenon® Ultimate Barrier ES is designed to be a single application for curing, sealing, and weatherproofing. Tenon® Ultimate Barrier ES forms a membrane film on new concrete to seal and retain hydration water, providing optimum curing of the substrate, resistance to abrasion, damage caused by salt, oil, grease, mild acids, alkali, and stains from soot, smog, fumes, and gases. Tenon® Ultimate Barrier ES reacts chemically within the capillaries of the concrete or masonry to protect against moisture penetration and the spalling, freeze damage, and rebar corrosion which moisture can cause. It is suitable for use to cure, protect, and seal fully-cured, new concrete, existing concrete, stucco, architectural concrete, and other cementitious materials.

Features and Benefits

- Cures in 1–2 hours
- Dries tack free
- Increases optimum cure of new concrete
- Protects and seals concrete surfaces from dirt and damage
- Enhances colors, darkens the appearance of concrete, brick, stone, terrazzo, and exposed aggregate
- Ready to use (no diluting)
- Goes on clear, dries clear, non-staining, non-yellowing
- Chloride ion resistant
- Meets Federal EPA's VOC requirements
- VOC content makes it compliant in OTC & LADCO—regulated states and Canada
- Easy to apply with sprayer or roller
- Makes job site clean-up easier, construction debris do not adhere
- Compatible with resilient tile and carpet adhesives and can improve adhesion efficiency for longer life to floor covering

- Often recommended for concrete surfaces that will be carpeted
- Protects from effects of rain and other water penetration, chemicals, salt, freeze-thaw, and smog

Uses

- Cure and seal surfaces
- Exterior applications or interior when properly ventilated
- Vertical or horizontal applications
- Concrete or masonry applications
- New or existing applications
- Terrazzo, brick, stone, pavers, and other cementitious materials
- Industrial, Commercial, and Residential applications

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 Results of Tenon® Ultimate Barrier ES | |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Composition and Materials | A clear acrylic copolymer blended with fast-drying aromatic hydrocarbon and silane. No fillers are used and there are no oils, waxes or saponifiable resins. Tenon™ products are manufactured with only the finest quality raw materials available and close quality-control is practiced. |
| Percent Solids | 25% |
| Flash Point | <100°F (37°C) |
| Moisture Efficiency: | Meets ASTM C-1315 when applied to 300 sq. ft. per gal. (Max. allowed 0.40 kg/m ²) |
| Typical Drying Time @ 70°F | 1 hour (touch) 2 hours (traffic) |
| VOC Content | < 300 g/L |

| Typical Results of Tenon® Ultimate Barrier ES | |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OTC Category | Curing and Sealing Compound Maximum VOC 350 g/l |
| Applicable Standards | ASTM C-1315, Type 1, Class A ASTM C-309, Type 1, Class A, B and Type 1D with a red dye added. Fed. TT-C-800A, Type 1, Class 1 AASHTO Des. M-148, Type 1, Clear Resilient Tile Institute approval for compatibility with most resilient tile, carpet adhesives, and paints |

Note: These dry times are dependent on normal drying conditions. Cool temperatures or high humidity will slow the drying time.

Packaging

- 1 gal. bottle (3.78 L) – Product #114163
- 5 gal. pail (18.93 L) – Product #114173
- 55 gal. drum (208 L) – Product #114164

Shelf Life

The recommended shelf life is 12 months. If shelf life is beyond 12 months, please contact your distributor. Store in the original labeled container, tightly sealed, away from moisture, out of direct sunlight. DO NOT STORE NEAR HEAT OR OPEN FLAME.

5. INSTALLATION

Preparation

- Read all directions before starting work. Read and understand SDS pages for safety precautions prior to use.
- Remove all loose or unsound materials prior to application. Thoroughly clean surface of dirt, dust, oil, grease or other contaminants before using.
- Apply only to dry surfaces for optimal performance. Do not apply when rain is expected within 4–6 hours of application.
- If rain has preceded the application, the surface should be allowed to dry for at least 24 hours.
- All pressure washed substrates must dry for a minimum of 7 days prior to application.
- Allow 6–12 hours cure time of all caulking and sealant materials before application of sealer.
- Use only in well-ventilated areas.

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

- Mixture may be gently stirred to blend prior to use. Do not entrain air.
- Do not dilute.

Application

Apply when both air and surface temperatures are above 40°F (4.4°C) and the Tenon® Ultimate Barrier ES is above 50°F (10°C). For best results, apply uniformly at the specified rate of coverage. When using an airless sprayer, it should be equipped with PVC, viton, or other compatible fittings and hoses as solvents can damage rubber.

NOTE: Tenon® Ultimate Barrier ES will darken the appearance of new concrete, especially if it is applied too heavily. A small mock-up in an inconspicuous area is often done to test compatibility with the substrate prior to full application.

New Concrete (Curing / Weatherproofing):

Finish troweling new concrete. Allow surface water to dissipate. Use low-pressure or power sprayer to apply uniformly at the specified rate of coverage. Avoid heavy accumulation.

Existing Concrete (Sealing / Weatherproofing):

Remove all loose or unsound materials prior to application. Thoroughly clean surface of dirt, dust, oil, grease or other contaminants before using. Apply only to dry surfaces for optimal performance. Using a short-nap roller or low-pressure sprayer to apply product evenly. Avoid heavy accumulation. A second coat may be applied on very porous surfaces with rapid absorption. Allow the product to become tack-free between coats.

Cleaning

Use mineral spirits or solvent-based cleaners, such as Tenon® Xylene on tools and equipment. For sprayers, pump the solvent through the spray equipment to remove residue and prevent clogs. For skin contact, wash thoroughly with soap and warm water.

Limitations

- Apply when both surface and air temperatures are above 40° F (4.4°C).
- Not for use on asphalt or surfaces that are subject to immersion or constant liquid contact.
- Not for use where spillage of solvents, fuels, brake, transmission, or hydraulic fluids, etc. are expected.
- Sprayers must be equipped with PVC, Viton, or other compatible fittings and hoses as rubber or other materials will disintegrate from the solvent.
- Some fumes may be present during application. Use best practices when applying on interiors for proper ventilation.
- Concrete mixes containing calcium chloride will remain dark longer when sealed. Some extenders and additives, such as fly ash for example, can create inconsistent porosity and coverage ratios will need to be adjusted to compensate for these variations.
- Popout or scaling issues can occur with any concrete installation, but are more likely in extreme hot weather conditions (above 90°F / 32°C), and when finished by heavy steel troweling. In certain regional areas a reaction between the silica in the shale particles and the sodium and potassium alkali in the Portland cement can increase the occurrence. Where this type of shale is present, and extremely hot weather conditions prevail, it is recommended that liquid membrane curing compounds should not be used until the concrete has been completely cured by water ponding, continuous water spray mist, or wet burlap covering for a period of three days. A seal coat can then be applied for dustproofing and protection (when concrete is completely dry).
- When using a liquid release, you must check with the manufacturer to ensure proper washing has taken place before using Tenon® Ultimate Barrier ES. If the liquid release has an abundance of oil, it will deter adhesion of the sealer. When using a powder release, care needs to be taken to ensure that the proper amount of release is washed off the surface or delaminating of the sealer may occur. This happens more often with lighter colors.
- SAFETY: Eliminate all sources of ignition. In case of fire use foam, CO2, dry chemical. Do not use water spray. If spilled, contain spilled material and remove with inert absorbent.

Dispose of the contaminated absorbent, container, and any unused contents in accordance with local, state, and federal regulations.

- Do not dilute with water or solvents.
- Allow sealer to warm to 50°F (10°C) before application.
- Keep containers tightly sealed when not in use.
- Keep out of reach of children.

| Approximate Coverage @ 70°F (21°C) | Sq. Ft./Gal. | M ² /L |
|------------------------------------|--------------|-------------------|
| Curing / Seal / Weather-proof | 300–500 | 7.3–12.3 |
| Dustproof / Seal | 300–500 | 7.3–12.3 |
| Second Coat | 400–800 | 9.8–19.6 |
| Renovation Dustproof / Seal | 300–400 | 7.3–9.8 |

Coverage

Note: Coverage is per coating and may vary due to porosity, wind, temperatures, and condition of surfaces.

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

Minimal maintenance is required other than normal sweeping, dusting, or mopping. If wear patterns do occur, or if spillage removes the coating, reapply to the affected area.

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 9



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