



Ultimate Large Tile Mortar

Updated February 2024

1. PRODUCT NAME

TEC® Ultimate Large Tile Mortar
(382/383)

2. MANUFACTURER

H.B. Fuller Construction Products Inc.
1105 South Frontenac Street
Aurora, IL 60504-6451 U.S.A.
800.552.6225 Office
800.832.9023 Technical Support
800.952.2368 Fax
tecspecialty.com

3. DESCRIPTION

TEC Ultimate Large Tile Mortar is a high performing, polymer-modified, A118.4HTE, A118.11 mortar for installing ceramic, porcelain and natural stone tile. It is ideal for large and heavy tile, standard and mosaic tile, gauged porcelain panels and uncoupling membrane applications. Ultimate Large Tile combines long open time, easy troweling, and non-sag/non-slump performance and is suitable for interior/exterior, submerged and in-floor heating applications.

Key Features and Benefits

- NEW – Approved for setting and tiling under and over uncoupling membranes
- Universal – Ideal for gauged porcelain panels, LHT installations & Thin-set applications
- Extended open time
- Mixes to a smooth, creamy consistency for easy troweling
- Non-sag for wall applications and non-slump for floor applications
- Superior transfer - full coverage with minimum effort
- Interior/exterior and submerged use
- Exceeds ANSI A118.4HTE and A118.11 specifications
- Contains recycled materials*

*Gray formula contains 5% pre-consumer recycled material.
White formula contains 5% post-consumer recycled material.

Packaging

40 lb. (18.14 kg) moisture-resistant bags	
Gray	Product #15035791
White	Product #15035807
40 lb. (18.14 kg) plastic bags	
Gray	Product #15030016
White	Product #15030017

Coverage

Coverage will vary with condition of substrate. Required trowel size will vary with the tile size, type and substrate uniformity. Select the trowel size that will ensure 100% coverage. Figures below are presented only as guidelines.

Trowel Size	Approximate Coverage per 40 lbs. (18.14 kg)
¼" x ¾" (6 x 4.7 mm) V-notch trowel	182-204 sq. ft. (16.9-19.0 m ²)
¼" x ¼" x ¼" (6 x 6 x 6 mm) square-notch trowel	91-102 sq. ft. (8.4-9.5 m ²)
¼" x ¾" x ¼" (6 x 9 x 6 mm) square-notch trowel	75-85 sq. ft. (7.0-7.9 m ²)
¾" x ¾" x ¾" (9 x 9 x 9 mm) square-notch trowel	60-68 sq. ft. (5.6-6.3 m ²)
¾" slant notch trowel	45-51 sq. ft. (4.2-4.7 m ²)
In an effort to improve coverage achieved by installers, H.B. Fuller is not recommending the use of a ½" x ½" notch trowel due to the challenges in fully collapsing the ridges. In place, a ¾" slant notch can be used. If using a ½" x ½" notch trowel, the coverage for a ¾" slant notch is similar for material calculations.	
¾" x ¾" x ¾" (19 x 14 x 9 mm) rounded-notch trowel	30-34 sq. ft. (2.8-3.2 m ²)

Suitable Substrates

When properly prepared, suitable substrates include:

- Cured concrete, cured mortar beds, brick and masonry (interior and exterior installations)
- APA Grade Trademarked Exposure 1 Plywood [Underlayment grade or better, two layers, 1 ½" (28 mm) total minimum thickness for joists 16" (40 cm) o.c., interior floors only].
- Gypsum wallboard (dry interior wall areas only)
- Water resistant gypsum wallboard (i.e.: greenboard, interior walls only, dry to intermittent water exposure only)
- Cementitious backer units (CBU) or glass mat backerboard
- Existing ceramic tile and natural stone, provided existing flooring is well-bonded to an approved substrate.
- Vinyl composition tile, asphalt tile, linoleum or non-cushioned vinyl sheetgoods provided such surfaces are single layered, well-bonded to an approved substrate and properly prepared.
- Adhesive residue (except tacky or pressure-sensitive adhesive). Mechanically remove the adhesive to expose at least 80% of the concrete surface. Random specks of adhesive and the appearance of a brown surface stain are acceptable.

Substrate Preparation

All substrates must be dry, structurally sound with maximum deflection per industry standards of 1/360 for ceramic tile installations and 1/720 for natural stone installations; and free from oil, grease, dust, paint, sealers or concrete curing compounds. All contaminants must be removed prior to installation of tile. Surface protrusions and tile glazes shall be removed by sanding, scraping or scarifying. After preparation, remove all dust by vacuuming.

Notes: Vinyl asbestos tile or any substrate containing asbestos must not be sanded, scored or scarified because of the potential health hazard of breathing dust. Any substrate containing asbestos must be handled in accordance with existing EPA regulations. Contact your local EPA office.

Expansion joints must be provided in the tile work over all construction, control and expansion joints in the backing and where backing materials change. Follow ANSI A108.01 Section 3.7 Requirements for Expansion Joints. Maximum variations in all substrates **must not exceed** ¼" in 10 ft. (6 mm in 3 m) and 1/16" in 1 ft. (1.6 mm in 0.3 m) from the required plane for tile less than 15" (381 mm) on all sides. Maximum variations in all substrates **must not exceed** 1/8" in 10 ft. (3 mm in 3 m) and 1/16" in 2 ft. (1.6 mm in 0.6 m) from the required plane for tile 15" (381 mm) or greater on any one side. For large non-level, interior surfaces use TEC® EZ Level® Premium Self Leveling Underlayment. For exterior surfaces or smaller areas of rough uneven substrates, use a scratch coat of TEC Ultimate Large Tile Mortar up to ¼" (6 mm) thick. Allow to cure to walkable hardness before applying mortar bond coat.

Storage

Store in cool, dry location. Do not store open containers.

Shelf Life

Maximum of 1 year from date of manufacture in unopened package.

Limitations

- Only install when the temperature is between 50°F (10°C) - 90°F (32°C).
- Not for installing green marble or other moisture-sensitive stone tile; use TEC® AccuColor EFX® Epoxy Grout and Mortar.
- For resin-backed marble see the TEC Technical Bulletin "Installation Of Resin Backed Stone Tiles" at tecspecialty.com.
- For non-green marble tile applications, use white TEC Ultimate Large Tile Mortar.
- Not for use over rubber, strip wood floors, oriented strand board, particle board, lauan plywood.
- For CDX plywood, use TEC® Super Flex™ mortar or TEC® XtraFlex™ acrylic mortar additive with TEC® Full Set Plus® thin set mortar.
- Do not apply over single layer wood floors.

Product Data

- Substrate temperature should be a minimum of 43°F (6°C) during application and air temperature maintained above 50°F (10°C) during installation and for 72 hours after installation.
- Certain natural stone tiles may be affected by mortar shadowing or staining. Test a small area prior to use to determine suitability.

Cautions

Read complete cautionary information printed on product container prior to use. For medical emergency information, call 1-888-853-1758.

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 TEC brand product(s) under normal environmental and working conditions. Because each project is different, H.B. Fuller Construction Products Inc. cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

Applicable Standard

Exceeds ANSI A118.4HTE and A118.11 specifications
ISO 13007: Classification C1TEP1

TEC Ultimate Large Tile Mortar (382/383)					
ANSI Standard	Test	Section	Test Duration/Conditions	ANSI Specification	Typical Results
A118.11	Shear Strength to Quarry Tile	4.1.2	28 day plywood	>150 psi (10.5 kg/cm ²)	220
A118.4	Glazed Wall Tile Shear Strength	7.1.2	7 day	>300 psi (2.07 MPa)	410
	Porcelain Mosaic Tile Shear Strength	7.2.5	28 day	>200 psi (1.38 MPa)	330
	Quarry Tile Shear Strength	7.3.2	28 day	150 psi (1.03 MPa)	385
A118.4E	Open Time	5.3.6	30 minute	75 psi (0.5 MPa) at 30 minutes	215

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

4. TECHNICAL DATA

Physical Properties

Description	
Physical State	Dry powder
Color	Available in white and gray
Pot Life	3 to 4 hours
Initial Cure [at 72°F (22°C)]	16 to 24 hours
Final Cure	21 days
Foot Traffic Rating (ASTM C627)	Residential to Extra Heavy Commercial (depending on substrate)
Storage	Store in cool, dry location. Do not store in open containers.
Shelf Life	Maximum 1 year from date of manufacture in properly stored, unopened package.

5. INSTALLATION INSTRUCTIONS

Mixing

For best results, maintain all tiling materials, substrates, room and adhesives at 50°-70°F (10-21°C) for 24 hours before and 48 hours after installation. In a clean mixing container, add TEC Ultimate Large Tile Mortar to clean, cool water as specified in the chart.

Application	Water
LHT or Wall Applications	6 to 6½ quarts (5.6 to 6.1 L)
Thin Set Floor Applications	6½ to 6¾ quarts (6.1 to 6.4 L)

Add clean, cool water to a clean mixing container. Add ½ bag of TEC Ultimate Large Tile Mortar and mix until all powder is consumed. Add final ½ bag and mix until powder is consumed. Be cautious not to over-water. Consistency will loosen during mixing process. Mix material for two (2) minutes to a smooth and creamy consistency. Avoid breathing dust and contact with eyes and skin. Allow the mortar to stand for 10 minutes. Remix and apply. Avoid using high speed mixing, not to exceed 300 rpm, to prevent entraining air.

Application

Apply mortar using flat side of trowel to promote better substrate contact, then comb in one direction with the notched side of the trowel. Spread only an area that can be tiled while surface is still tacky (typically 20-30 minutes). Press tiles

into setting bed, then push in a direction perpendicular to the notched trowel ridges to achieve optimum coverage. Apply mortar in a heavy enough layer so that complete contact (no voids) between mortar and tile is accomplished when tile is positioned. Irregularities in substrate may require "back-buttering" of large tiles to achieve complete coverage and firm support. Periodically remove and check a tile to assure proper coverage. Keep a minimum of ⅔ of the joint depth between tiles for grouting. Open time and tile hand adjustability may vary with job site conditions. Stir occasionally during use to maintain the smooth, creamy consistency of the product. **Do not add additional water.**

Clean-up

Clean tools, hands, and excess materials from face of tile, while mortar is still fresh, with warm soapy water.

Grouting/Curing

Grouting may be accomplished when tiles are held firmly in place, typically 16 to 24 hours after installation is completed. No traffic is permitted over the tiles prior to grouting. Cold temperatures or high humidity may extend curing time, working time, and pot life. Hot temperatures or low humidity may decrease curing time, working time, and pot life. Unglazed tiles may require sealing prior to grouting so discolorations will not occur. The use of TEC brand grouts is highly recommended.

6. AVAILABILITY

TEC premium surface preparation, tile, stone, carpet, wood and resilient floor covering installation products are available nationwide. To locate TEC products in your area, please contact:

Phone: 800-832-9002

Website: tecspecialty.com

7. LIMITED WARRANTY

The product(s) covered by this Product Data Sheet are sold subject to a Limited Warranty and related terms. **H.B. Fuller Construction Products disclaims the implied warranties of merchantability and fitness for a particular purpose and all incidental and consequential damages arising out of the sale, purchase or use of this product.** For Limited Warranty details visit tecspecialty.com. To obtain a hard copy of the Limited Warranty call H.B. Fuller Construction Products at 800-832-9023 or mail a written request to the address in Section 2 of this Product Data Sheet.

8. MAINTENANCE

Not applicable

9. TECHNICAL SERVICES

Technical and safety literature

To acquire technical and safety literature, please visit our website at tecspecialty.com.

10. FILING SYSTEM

Division 9



Conforms with LEED v4 low emitting interiors.
Compliant with (CDPH) Standard Method v1.2 VOC Emissions.



To learn more, visit TECspecialty.com



H.B. Fuller Construction Products Inc. | 1105 South Frontenac Street Aurora, IL 60504-6451

@TECInstallationSystems [tecinstallationsystems](https://www.instagram.com/tecinstallationsystems) [TECInstallationSystems](https://www.youtube.com/TECInstallationSystems) [TEC Installation Systems](https://www.linkedin.com/company/TEC-Installation-Systems)