



# Sturdi Flex™ Thin Set Mortar

## 1. PRODUCT NAME

TEC® Sturdi Flex™ Thin Set Mortar  
(345/346)

## 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

Sturdi Flex™ latex mortar offers steady, reliable bonding performance in most tile applications, commercial or residential.

### Key Features and Benefits

- Good handling
- Interior/exterior use
- Meets ANSI A118.4 and A118.11 specifications
- Contributes to LEED® project points
- Zero VOC

### Packaging

50 lb. (22.68 kg) moisture-resistant bags

Gray  
White

Product #3300253111  
Product #3300263111

### 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 50 lbs. (22.68 Kkg)
¼" x ¼" x ¼" (6 x 6 x 6 mm) square-notched trowel	100-110 sq. ft. (9.3-10.2 m <sup>2</sup> )
¼" x ¾" x ¼" (6 x 9 x 6 mm) square-notch trowel	80-85 sq. ft. (7.4-7.9 m <sup>2</sup> )

### 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, 1½" (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).

### 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) or 1/16" in 1 ft. (1.6 mm in 0.3 m) from the required plane. For non-level, interior surfaces use TEC® EZ Level® Premium Self Leveling Underlayment.

### 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

- Not for installing green marble, other moisture-sensitive stone tile or resin-backed marble; use TEC® AccuColor EFX® Epoxy Grout and Mortar.
- For non-green marble tile applications, use white thin set mortars.
- Not for use over rubber, strip wood floors, oriented strand board, particle board, lauan plywood.
- For CDX plywood, use TEC® Super Flex™ mortar
- Do not apply over single layer wood floors.
- Temperature of area to be tiled must remain above 50°F (10°C) for 72 hours.
- 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.

## 4. TECHNICAL DATA

### Applicable Standard

Meets ANSI A118.4 and A118.11 specifications

Sturdi Flex™ Thin Set Mortar (345/346)		
Description	ANSI Requirement	Typical Results
28 Day Shear Strength		
Glazed Wall Tile	> 300 psi (2.1 MPa)	> 350 psi (2.4 MPa)
Impervious Ceramic Tile (Porcelain)	> 200 psi (1.4 MPa)	325-350 psi (2.2-2.4 MPa)
Quarry Tile	> 150 psi (1.0 MPa)	375 psi (2.6 MPa)
Sag on Vertical Surfaces	≤ 1/16" (1.6 mm)	< 1/16" (1.6 mm)
Open Time at Room Temperature	≥ 50 minutes	50-60 minutes
Adjustability at Room Temperature	≥ 30 minutes	30-40 minutes
Final Set	9-15 hours	13-15 hours
<i>Tested in accordance with ANSI A118.11 Specifications for Latex-Modified Dry Set Mortars over Exterior Grade Plywood</i>		
28 Day Shear Strength		
Quarry Tile	150 psi (1.0 MPa)	215 psi (1.5 MPa)

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

**Physical Properties**

Description	
Physical State	Dry powder
Color	Available in white and gray
Pot Life	2 to 3 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 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. Thoroughly mix 50 lbs. (22.68 kg) Sturdi Flex™ with 6-7.5 quarts (5.7-7.1 L) clean, cool water.

Add powder to liquid for ease of mixing. Mix material for 2 to 3 minutes, then allow the mortar to stand for 10 minutes. Remix and apply. Avoid breathing dust and contact with eyes and skin. 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. It may be necessary to “back-butter” large tiles to achieve complete coverage and firm support. Periodically remove and check a tile to assure proper coverage. Keep a minimum of  $\frac{2}{3}$  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. Some 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 Tile and Stone Installation Products are available nationwide. To locate TEC® products in your area, please contact:

Phone: 800-832-9002

Website: [tecspecialty.com](http://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](http://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](http://tecspecialty.com).

**10. FILING SYSTEM**

Division 9



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



[tecspecialty.com](http://tecspecialty.com)

©Copyright 2020 H.B. Fuller Construction Products Inc.

TEC®, TEC® logo, Sturdi Flex™, EZ Level®, AccuColor EFX® and Super Flex™ are trademarks of H.B. Fuller Construction Products Inc.

LEED® is a registered trademark of U.S. Green Building Council.

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

DS345/346 R0820-20