



# PermaSet® 200 Flooring Mortar

## 1. PRODUCT NAME

TEC® PermaSet® 200 Flooring Mortar  
(030/031)

## 2. MANUFACTURER

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## 3. DESCRIPTION

TEC® PermaSet® 200 Mortar is a Portland cement-based, dry-set, ceramic tile setting mortar for interior or exterior installations.

### Key Features and Benefits

- Designed for floor applications
- Interior applications when mixed with water
- Exterior applications require use with TEC® acrylic latex mortar additive
- Mixed with water, meets ANSI A118.1 and ISO 13007 C1
- Mixed with TEC® XtraFlex™ additive, *exceeds* ANSI A118.4 and A118.11  
Mixed with TEC® Acrylbond® AMA additive, *meets* ANSI A118.4 and A118.11
- Contributes to LEED® project points
- VOC 0

### Packaging

50 lb. (22.68 kg) moisture-resistant bags  
Gray  
White

Product #7070153113  
Product #7070183113

### 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 kg)
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 ¼" x ⅜" (6 x 6 x 9 mm) square-notch trowel	80-85 sq. ft. (7.4-7.9 m <sup>2</sup> )

### Suitable Substrates

When properly prepared, acceptable substrates include:

- Cementitious backer units (CBU)
- Glass mat backerboard\*
- Adhesive residue (except tacky or pressure-sensitive adhesive)\*
- Plastic laminate\*
- Cured concrete, cured mortar beds, brick and masonry (if exterior\*)
- CDX plywood\*
- APA Grade Trademarked Exposure 1 Plywood [underlayment grade or better, two layers 1⅝" (28 mm) total minimum thickness, Interior floors only.]\*
- 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 existing flooring is well-bonded to an approved substrate)

\* Requires use with TEC® acrylic latex mortar additive

### 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, or TCNA EJ171 Joint Guidelines for Ceramic, Glass and Stone.

Maximum variations in all substrates must not exceed 1/4" 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 a TEC® Self Leveling Underlayment.

### Storage

Store in a cool, dry area away from direct sunlight. Do not store open containers.

### Shelf Life

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

### Limitations

- Do not use over masonite, particle board, luan, plastic, vinyl asbestos tile or painted surfaces.
- Do not use over wood other than exterior grade plywood (for interior applications only) when mixed with TEC® acrylic latex mortar additive.
- Do not use for exterior applications unless mixed with TEC® acrylic latex mortar additive.
- Do not allow traffic on freshly installed tile for 16-24 hours.
- Do not allow heavy traffic until 72 hours after installation.
- Do not adjust tile after mortar takes its initial set or the bond will be permanently broken.
- Do not soak tile.
- Do not use worn trowels. It is important to have the ridges of the tile setting mortar the full depth of the trowel notches.
- 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

PermaSet® 200 Flooring Mortar (030/031)		
Description	ANSI Requirement	Typical Results
<i>Tested in accordance with ANSI A118.1 Specifications for Dry Set Mortars</i>		
7 Day Shear Strength Glazed Wall Tile	> 200 psi (1.4 MPa)	> 310 psi (2.1 MPa)
28 Day Shear Strength Porcelain Mosaic Tile	> 150 psi (1.0 MPa)	> 165 psi (1.1 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 a cool, dry area away from direct sunlight. Do not store open containers.
Shelf Life	Maximum 1 year from date of manufacture in properly stored, unopened package.

**5. INSTALLATION INSTRUCTIONS****Mixing—With Water**

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) PermaSet® 200 Mortar with 5 to 6 quarts (4.7-5.7 L) clean, cool water. Add powder to liquid for ease of mixing. Mix material to a thick creamy consistency, 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.

**Mixing—With Latex Additive**

For improved performance in any application, use a TEC® acrylic latex mortar additive in place of water. For installations subjected to freeze/thaw conditions; bonding over most non-cementitious substrates; bonding porcelain and other difficult-to-bond tile; or any ANSI A118.4 or A118.11 latex mortar project, the use of an additive is required.

**When using a mortar additive, always follow label directions for detailed mixing and substrate recommendations.**

**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 15 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 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. 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 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



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

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