



Floor Mortar

1. PRODUCT NAME

TEC® Skill Set™ Floor Mortar

2. MANUFACTURER

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3. DESCRIPTION

TEC® Skill Set™ Floor Mortar bonds floor tile. Mixed with water, it meets ANSI A118.1 specifications. Mixed with TEC® Skill Set™ Latex Mortar Additive, meets ANSI A118.4 and ANSI A118.11 specifications.

Key Benefits and Features

- For installing over cementitious surfaces
- Mix with TEC® Skill Set™ Latex Mortar Additive for improved flexibility and adhesion
- Additive allows bonding to plywood

Packaging

50 lbs. plastic bag; gray

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	
	25 lbs.	50 lbs.
3/16" X 5/32" V-notch trowel	70-75 sq. ft.	140-150 sq. ft.
1/4" x 1/4" x 1/4" square-notch trowel	45-50 sq. ft.	90-100 sq. ft.
1/4" x 3/8" x 1/4" square-notch trowel	30-35 sq. ft.	60-70 sq. ft.

Suitable Substrates

When properly prepared, suitable substrates include:

- Cementitious backer units (CBU)
- Glass mat backer board*
- 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 1 1/8" 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 sheet goods* (provided existing flooring is well-bonded to an approved substrate)

* Requires use with TEC® Skill Set™ Latex Mortar Additive

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

For non-green marble tile applications, use white thin set mortars. Not for use over rubber, strip wood floors, oriented strand board, particle board or lauan plywood. Do not apply over single-layer wood floors. Certain natural stone tiles may be affected by mortar shadowing or staining. Test a small area prior to use to determine suitability. Not for use on walls.

Cautions

FIRST AID MEASURES: In all cases, seek medical attention if symptoms develop or persist. EYES: Flush with water for 20 minutes. SKIN: Wash with soap and water. IF VAPORS INHALED: Remove to fresh air. IF SWALLOWED: Do not induce vomiting. WARNING! This product contains chemicals known to the State of California to cause cancer, birth defects or reproductive harm. KEEP OUT OF REACH OF CHILDREN. 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® Skill Set™ 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

TEC® Skill Set™ Floor Mortar

Description	ANSI Requirement	Typical Results
28 Day Shear Strength ANSI A118.1 Glazed Wall Tile	> 250 psi (1.7 MPa)	250-350 psi (1.7-2.4 MPa)
Impervious Ceramic Tile (Porcelain)	> 150 psi (1.0 MPa)	150-250 psi (1.0-1.7 MPa)
Quarry Tile	> 100 psi (0.7 MPa)	300-400 psi (2.1-2.8 MPa)
Sag on Vertical Surfaces	≤ 1/16"	0-1/16"
Open Time at Room Temperature	≥ 50 minutes	50-60 minutes
Adjustability at Room Temperature	≥ 30 minutes	30-40 minutes
Final Set	9-15 hours	9-15 hours

Description	ANSI Requirement	Typical Results when mixed with TEC® Skill Set™ Latex Mortar Additive
28 Day Shear Strength ANSI A118.4 Glazed Wall Tile	> 300 psi (2.1 MPa)	> 600 psi* (4.1 MPa)
Impervious Ceramic Tile (Porcelain)	> 200 psi (1.0 MPa)	200-325 psi (1.4-2.2 MPa)
Quarry Tile	> 150 psi (0.7 MPa)	400-500 psi (2.8-3.4 MPa)
Sag on Vertical Surfaces	≤ 1/16"	1/16"
Open Time at Room Temperature	≥ 50 minutes	60-80 minutes
Adjustability at Room Temperature	≥ 30 minutes	30-40 minutes
Final Set	9-15 hours	9-15 hours
28 Day Shear Strength ANSI A118.11 Quarry Tile to Plywood	> 150 psi (1.0 MPa)	150-200 psi (1.0-1.4 MPa)

* ANSI-specified glazed wall tile failed at 600 psi (4.1 MPa)

Physical Properties

Description	
Physical State	Dry Powder
Color	Available in gray
Pot Life	4-5 hours
Initial Cure [at 72°F (22°C)]	16-24 hours
Final Cure	21 days
Foot Traffic Rating (ASTM C627)	Residential to Extra Heavy Commercial (depending on substrate)

5. INSTALLATION INSTRUCTIONS

Surface Preparation

All substrates must be dry, structurally sound with maximum deflection per industry standards of $\frac{1}{360}$ for ceramic tile installations and $\frac{1}{720}$ for natural stone installations under all live and dead loads; and be free from oil, grease, dust, paint, sealers or concrete curing compounds. All contaminants should 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. *Note:* Vinyl asbestos tile or any substrate containing asbestos shall 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.

Notes: 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 $\frac{1}{4}$ " in 10 ft. (6 mm in 3 m) or $\frac{1}{16}$ " in 1 ft. (1.5 mm in 0.3 m) from the required plane. For non-level, interior surfaces use TEC® Skill Set™ Self Leveling Underlayment.

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. Avoid breathing dust and contact with eyes and skin. Avoid using high speed mixing, not to exceed 300 rpm, to prevent entraining air. Add powder to liquid for ease of mixing.

In a clean mixing container, slowly add product to clean, cool, water as specified in the chart below.

Size	Water
50 lbs.	5-6 quarts

Mix material for 2-5 minutes to a thick creamy consistency, then allow mortar to stand for 10 minutes. Remix for 1-2 minutes and apply.

Mixing—With Latex Additive

For improved performance in any application, H.B. Fuller Construction Products Inc. recommends the use of TEC® Skill Set™ Latex Mortar Additive in place of water. For installations subjected to freeze/thaw conditions; bonding over most non-cementitious substrates; installation of porcelain tile; or any ANSI A118.4 or ANSI A118.11 latex mortar project, the use of TEC® Skill Set™ Latex Mortar Additive is required.

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



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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 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.**

Drying Time

Grouting may be accomplished when tiles are held firmly in place, typically 16-24 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 discoloration will not occur. The use of TEC® Skill Set™ brand grouts or TEC® Power Grout™ is highly recommended.

Clean Up

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

6. WARRANTY

For details about our limited warranties, see your sales associate or tecskillset.com.

7. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the Technical Service Helpline.
Toll Free: 800-832-9023

Technical and Safety Literature

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