



Uncoupling Membrane Mortar

Updated November 2023

1. PRODUCT NAME

TEC® Uncoupling Membrane Mortar
(337/338)

2. MANUFACTURER

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3. DESCRIPTION

Uncoupling Membrane Mortar is a dry set mortar made for use with uncoupling membrane and waterproofing membrane.

Key Features and Benefits

- Mixed with water, meets ANSI A118.1 specifications
- Exterior applications require use with TEC mortar additive. For superior performance, use XtraFlex™ additive.
- 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.
- Ideal for use as a medium bed mortar for large format tile
- Contributes to LEED® certification
- Zero VOC
- Contains recycled materials*

*Gray formula contains 2-6.5% pre-consumer recycled material.
White formula contains 0% pre-consumer recycled material.

Packaging

50 lb. (22.68 kg) moisture-resistant bags

Gray Product #15035873
White Product #15035874

50 lb. (22.68 kg) plastic bags

Gray Product #15030006
White Product #15030007

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)
To bond Uncoupling Membrane or Waterproofing Membrane to approved substrate	
1/4" x 3/16" (6 x 4.7 mm) V-notch trowel	150-200 sq. ft. (13.9-18.6 m ²)
To bond Tile to Uncoupling Membrane	
1/4" x 3/8" (6 x 9 mm) square-notch trowel	40-50 sq. ft. (3.7-4.6 m ²)
To bond Tile larger than 12" x 12" (30 x 30 cm) to Uncoupling Membrane	
1/2" x 1/2" (12 x 12 mm) square-notch trowel	30-40 sq. ft. (2.8-3.7 m ²)
3/4" (19 mm) rounded-notch trowel	25-35 sq. ft. (2.3-3.3 m ²)
To bond Tile to Waterproofing Membrane	
1/4" x 3/8" (6 x 9 mm) square-notch trowel	65-75 sq. ft. (6.0-7.0 m ²)

To bond Tile larger than 12" x 12" (30 x 30 cm) to Waterproofing Membrane

1/2" x 1/2" (12 x 12 mm) square-notch trowel	40-50 sq. ft. (3.7-4.6 m ²)
3/4" (19 mm) rounded-notch trowel	35-40 sq. ft. (3.3-3.7 m ²)

NOTE: Maximum allowable trowel size is 3/4" x 3/4" (19 x 19 mm).

Suitable Substrates

When properly prepared per TCNA guidelines, suitable substrates include:

- Concrete and cured mortar beds
- APA Grade Trademarked Exposure 1 Plywood underlayment grade or better. **Requires use with TEC Acrylbond AMA additive or XtraFlex additive.**
- Gypsum wallboard (dry interior wall areas only)*
- Cementitious backer units (CBU)

* Follow membrane manufacturer's recommendations for installing over gypsum wallboard.

Uncoupling Membrane Manufacturers may list additional substrates, such as gypsum underlayment and oriented strand board (OSB), as suitable for uncoupling membranes. TEC Multipurpose Primer must be applied directly to gypsum underlayments or OSB prior to application of Uncoupling Membrane Mortar for bonding of the uncoupling membrane. Please see the Multipurpose Primer product data sheet for dilution ratios and application instructions. Uncoupling Membrane Mortar must also be mixed with a TEC mortar additive for these applications.

Surface Preparation

All substrates must be dry, structurally sound, in conformance with applicable building codes when subjected to live and dead loads and 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.

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 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 floors use an approved TEC Self-Leveling Underlayment.

For best results over plywood and other suitable porous substrates, wipe the surface clean with a damp sponge just prior to application of mortar.

Storage

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

Shelf Life

Maximum 1 year from date of manufacture in properly stored, unopened package.

Limitations

- Only install when the temperature is between 50°F (10°C) - 90°F (32°C).
- 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 TEC Uncoupling Membrane Mortar.
- Not for use over rubber, strip wood floors, oriented strand board, tempered hardboard (e.g. Masonite), particle board, lauan or CDX plywood or similar unstable substrates.
- Do not apply directly over approved plywood subfloors, waterproofing or crack isolation membranes unless the mortar has been mixed with additive.
- Do not use where hydrostatic pressure can occur.

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.

4. TECHNICAL DATA

Physical Properties

TEC Uncoupling Membrane Mortar (337/338)	
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
Storage	Store in cool, dry location. Do not store in open bags.
Shelf Life	Maximum 1 year from date of manufacture in properly stored, unopened package.

*Temperature and humidity will affect pot life and cure time

Applicable Standard

Exceeds ANSI A118.4 specifications
ISO 13007: Classification C2

TEC Uncoupling Membrane Mortar (337/338)		
Description	ANSI Requirement	Typical Results
<i>Tested in accordance with ANSI A118.1 Specifications for Dry Set Mortars</i>		
28 Day Shear Strength		
Glazed Wall Tile	> 250 psi (1.7 MPa)	250-325 psi (1.7-2.2 MPa)
Impervious Ceramic Tile (Porcelain)	> 150 psi (1.0 MPa)	150-200 psi (1.0-1.4 MPa)
Quarry Tile	> 100 psi (0.7 MPa)	300-400 psi (2.1-2.8 MPa)
Sag on Vertical Surfaces	≤ 1/16" (1.6 mm)	0-1/16" (0-1.6 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	9-15 hours

Description	ANSI Requirement	Typical Results when mixed with Acrylbond AMA
<i>Tested in accordance with ANSI A118.4 Specifications for Latex-Modified Dry Set Mortars</i>		
28 Day Shear Strength		
Glazed Wall Tile	> 300 psi (2.1 MPa)	500-600 psi* (3.4-4.1 MPa)
Impervious Ceramic Tile (Porcelain)	> 200 psi (1.0 MPa)	225-300 psi (1.5-2.1 MPa)
Quarry Tile	> 150 psi (1.0 MPa)	350-450 psi (2.4-3.1 MPa)
*ANSI-specified glazed wall tile failed at 600 psi (4.1 MPa)		
Sag on Vertical Surfaces	≤ 1/16" (1.6 mm)	1/16" (1.6 mm)
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

<i>Tested in accordance with ANSI A118.11 Specifications for Latex-Modified Dry Set Mortars over Exterior Grade Plywood</i>		
Description	ANSI Requirement	Typical Results
28 Day Shear Strength		
Quarry Tile	150 psi (1.0 MPa)	> 150 psi (1.0 MPa)

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

5. INSTALLATION INSTRUCTIONS

Mixing

For best results, maintain all tiling materials, substrates, room and mortars at 50°-70°F (10-21°C) for 24 hours before and 48 hours after installation. Thoroughly mix 50 lbs. (22.68 kg) TEC Uncoupling Membrane Mortar with 5 to 6 quarts (4.7 to 5.7 L) clean, cool water. Where needed, mix TEC Uncoupling Membrane Mortar with TEC Acrylbond AMA or XtraFlex additive in place of 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.

Uncoupling Membrane Installation Instructions

IMPORTANT: Installation shall be in accordance with the most recently published manufacturers literature and applicable industry standards. Read information completely prior to installation. Contact the manufacturer with any questions regarding construction of the tile assembly. Follow applicable TCNA and ANSI industry standard guidelines.

Uncoupling Membrane Installation: Key in mortar using flat side of trowel to promote better substrate contact. Apply additional mortar with a 1/4" x 3/16" (6 x 4.7 mm) or 5/16" x 5/16" (8 x 8 mm) V-notched trowel held at a 45° angle to the surface, combing in one direction. Spread only an area that the Uncoupling Membrane can be installed while surface is still tacky (typically 20-30 minutes). If any evidence of skinning or setting occurs, remove and replace with fresh mortar. Apply Uncoupling Membrane to the mortar fleece side down. Work Uncoupling Membrane into the mortar using the flat side of the trowel, float or roller to embed the mortar into the fleece throughout the entire surface. Periodically lift up a corner of the membrane to assure proper coverage of the fleece.

Waterproofing Membrane Installation*: Key in mortar using flat side of trowel to promote better substrate contact. Apply additional mortar with a 1/4" x 3/16" (6 x 4.7 mm) V-notched trowel or 1/8" x 1/8" (3 x 3 mm) square-notched trowel held at a 45° angle to the surface, combing in one direction. Spread only an area that the Waterproofing Membrane can be installed while surface is still tacky (typically 20-30 minutes). If any evidence of skinning or setting occurs, remove and replace with fresh mortar. Apply Waterproofing Membrane to the mortar. Work Waterproofing Membrane into the mortar using the flat side of the trowel to ensure proper adhesion and remove air pockets. Periodically lift up a corner of the membrane to assure proper coverage of the fleece.

*For membranes that require ANSI A118.4 mortar, mix with TEC Acrylbond AMA or XtraFlex.

Tile Installation

Over Uncoupling Membrane, key in TEC Uncoupling Membrane Mortar with the flat edge of the trowel to completely fill the cavities on the surface of the membrane and achieve a mechanical bond to the membrane. Over Waterproofing Membrane, apply a coat of TEC Uncoupling Membrane Mortar with flat edge of trowel to fully engage the fleece and achieve a mechanical bond to the membrane. Comb additional mortar over the surface using a trowel that is appropriate for the size of the tile. Apply additional mortar with an appropriate square-notched or U-notched trowel held at a 45° angle to the surface, combing in one direction. Press tiles into setting bed, then push in a direction perpendicular to the notched trowel ridges to achieve optimum coverage. Apply mortar to an area no greater than to which tile can be installed in 15-20 minutes. If any evidence of skinning or setting occurs, remove and replace with fresh mortar. 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. No traffic is permitted over the tiles prior to grouting. Material in bucket will remain workable approximately 2 to 3 hours. **Do not add additional water.**

Note: It is the sole responsibility of the installer to determine the suitability and compatibility of the product for the intended application.

Clean-up

Clean tools, hands, and excess materials from face of tile, while mortar is still fresh, with warm soapy water. Do not allow material to dry on surface of tile.

Curing/Protection

Grouting may be accomplished when tiles are held firmly in place, typically 12 to 16 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. 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 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



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