

# Uncoupling Mat Premium Non-Modified Thin-Set Mortar

## 1 Product Name

Uncoupling Mat Premium Non-Modified Thin-Set Mortar

## 2 Manufacturer

Custom Building Products  
 Technical Services  
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 Santa Fe Springs, CA 90670  
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## 3 Product Description

**NOTE: This product has been discontinued.**

Dry-set mortar for use with uncoupling mats or membranes that require a non-polymer-modified mortar with high cement content. Exceeds ANSI A118.1 when mixed with water. Mix with Thin-Set Mortar Admix when applying over Exterior Grade Plywood (EGP), existing flooring or exterior applications. Exceeds ANSI A118.4 and A118.11 when mixed with Thin-Set Mortar Admix.

### Key Features

- High cement content
- For interior and exterior installations
- Exceeds ANSI A118.1 when mixed with water

### Suitable Tile Types

- Vitreous, semi-vitreous or absorptive tile: ceramic, quarry, cement
- Cement-based precast terrazzo
- Natural stone tile

### Suitable Substrates

When Mixed with Water ANSI A118.1 Specifications:

- Interior floors
- Concrete, mortar beds, masonry, Portland cement plaster
- WonderBoard® Lite, cement backerboards
- Uncoupling systems requiring a non-modified thin-set mortar

Mix with Thin-Set Mortar Admix ANSI A118.4 and A118.11 Specifications:

- Interior and exterior floors
- Areas subject to freeze-thaw cycles
- Exterior Grade Plywood (interior residential and light commercial dry areas)
- Existing ceramic tile
- Sheet vinyl flooring, VCT
- Cutback adhesive

### Composition of Product

Proprietary blend of Portland cement, inorganic aggregates and chemicals.

## Limitations to the Product

- Do not bond directly to hardwood, Luan plywood, particle board, parquet, cushion or sponge-back vinyl flooring, metal, fiberglass, plastic or OSB panels.
- When setting moisture sensitive natural stone, cement or agglomerate tile use [EBM-Lite™ Epoxy Bonding Mortar 100% Solids](#) or [CEG-Lite™ 100% Solids Commercial Epoxy Grout](#).
- Do not use to install resin-backed stone use [EBM-Lite™ Epoxy Bonding Mortar 100% Solids](#), [CEG-Lite™ 100% Solids Commercial Epoxy Grout](#) or contact Custom's® Technical Services for recommendations.
- Not recommended for glass tile installations.
- When setting dimensional stone larger than 12" x 12" (30 x 30 cm), contact Custom's® Technical Services for recommendations regarding subfloor deflection requirements.
- Not for use in submerged installations.

## Packaging

- 50 lb (22.68 kg) bags
- Gray or white

## 4 Technical Data

### Applicable Standards

American National Standards Institute (ANSI) - ANSI A108.5, A118.1, A118.4 and A118.11 of the American National Standards for the Installation of Ceramic Tile ASTM International (ASTM)

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
- ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester

Resilient Floor Covering Institute (RFCI) "Recommended Work Practices for Removal of Resilient Floor Coverings"  
 Tile Council of North America (TCNA) TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171



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## Technical Chart

Property	Test Method	Requirement	Typical Results
Pot Life			90 Minutes
Open Time	A118.1 Section 5.3	> 20 Minutes	Pass
4 Week Shear Bond Strength			
<b>Mixed with Water</b>			
Glazed Wall Tile	A118.1 Section 7.1	> 200 psi	250 - 325 psi (17.6 - 22.8 kg/cm <sup>2</sup> )
Porcelain Tile	A118.1 Section 7.2	> 150 psi	200 - 250 psi (14.1 - 17.6 kg/cm <sup>2</sup> )
<b>Mixed with Thin-Set Admix</b>			
Glazed Wall Tile	A 118.4 Section 5.1.5	> 300 psi	300 - 400 psi (21.1 - 28.1 kg/cm <sup>2</sup> )
Porcelain Tile	A 118.4 Section 5.2.4	> 200 psi	250 - 350 psi (17.6 - 24.6 kg/cm <sup>2</sup> )
Quarry Tile to Plywood	A118.11 Section 4.1.2	> 150 psi	150 - 200 psi (10.5 - 14.1 kg/cm <sup>2</sup> )

## Environmental Consideration

Custom® Building Products is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product can contribute towards LEED® v3 certification:

- Up to 2 points towards MR Credit 5, Regional Materials
- Up to 2 points towards MR Credit 4, Recycled Content
- Up to 1 point towards IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants

## 5 Instructions

### General Surface Prep

**USE CHEMICAL-RESISTANT GLOVES, such as nitrile, when handling product.**

Surfaces must be structurally sound, clean, dry and free from grease, oil, dirt, curing compounds, sealers, adhesives or any other contaminant that would prevent a good bond. Glossy or painted surfaces must be sanded, stripped and cleaned of waxes, dirt or any contaminants. Concrete must be cured 28 days and accept water penetration. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a broomed or brushed finish to enhance the bond. Plywood flooring including those under resilient flooring must be structurally sound and meet all ANSI and deflection requirements. For questions about proper subfloor installation, call Technical Services. Smooth concrete surfaces, existing glazed tile, terrazzo, or polished stone should be roughened or scarified. Sheet vinyl must be well-bonded and stripped of old finish. Roughen the surface by sanding or scarifying, rinse and allow to dry. Expansion joints should never be bridged with setting material. Do not sand flooring materials containing asbestos. Ambient temperature, surfaces and materials should be maintained at a temperature above 50° F (10° C) or below 100° F (38° C) for 72 hours.

## Bonding to Concrete Surfaces

Concrete or plaster must be fully cured and must accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved; if water beads, surface contaminants are present, and loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a broomed or brushed finish to enhance the bond. Smooth concrete slabs must be mechanically abraded to ensure a good bond.

## Bonding to Plywood Surfaces

Plywood floors, including those under resilient flooring, must be structurally sound and must meet all ANSI A108.01 Part 3.4 requirements. See TCNA F150 tile installations, TCNA F141 and F250 for stone. For questions about proper subfloor installation requirements, call Custom® Technical Services.

## Bonding to Backerboards

As an alternative to an additional layer of plywood, WonderBoard® backerboard may be installed over plywood subfloors. Refer to TCNA F144 tile installations, TCNA F250 for stone. Call Custom® Technical Services when installing natural stone over plywood subfloor.

## Bonding to Existing Surfacing Material

Existing Ceramic Tile, Resilient Flooring or Plastic Laminates: Resilient flooring or plastic laminates must be well-bonded, as well as clean and free of all contaminants. Roughen the surface by sanding or scarifying; rinse and allow to dry. Do not sand flooring that contains asbestos. For existing well-bonded ceramic tile, mechanically abrade the surface. Rinse and allow to dry. When sanding, an approved respirator should be used.

## Bonding to Cutback Adhesive

Adhesive layers must be removed, as they reduce mortar bond strength to cement surfaces. Use extreme caution; adhesives may contain asbestos fibers. Do not sand or grind adhesive residue, as harmful dust may result. Never use adhesive removers or solvents, as they soften the adhesive and may cause it to penetrate into the concrete. Adhesive residue must be wet scraped to the finished surface of the concrete, leaving only the transparent staining from the glue. To determine desirable results, do a test bond area before starting. Refer to the RFCI Pamphlet, "Recommended Work Practices for Removal of Resilient Floor Coverings", for further information.

## Movement Joint Placement

Movement joints are required for perimeters and other changes of plane in all installations. Expansion joints and cold joints, as described in ANSI A108.01, should never be bridged with setting material. They must be brought through the tile work and filled with an appropriate elastomeric sealant, such as Custom's® 100% Silicone. Contact Custom's® Technical Services for the proper treatment of control or saw cut joints. Install joints or space at perimeters and changes of plane. Refer to TCNA EJ171, F125 and F125A.



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## Mixing Ratios

For installations requiring an ANSI A118.1 mortar, thoroughly mix 5.5 to 6 quarts (5.2 to 5.67 L) clean, cool water and a 50 lb (22.68 kg) bag of Uncoupling Mat Mortar together to a smooth, paste-like consistency. For mortar meeting A118.4 or A118.11 requirements, use 5.5 to 6 quarts (5.2 to 5.67 L) of Custom's® Thin-Set Mortar Admix in place of water.

## Mixing Procedures

Mix by hand or use a low 150-200 RPM speed 1/2" (13 mm) drill to achieve a smooth, paste-like consistency. Let the mixture slake or stand 5-10 minutes; stir again and use. Stir occasionally, but do not add more water. When properly mixed, troweled ridges will stand without slump.

## Application of Product

**When this mortar is used to install an uncoupling mat or membrane, follow all installation instructions from the underlayment manufacturer.** Installation must conform to ANSI A108.5. Use a properly-sized notch trowel to ensure proper coverage under tiles. Using the flat side of the trowel, apply a skim coat of mortar to the surface. With the notch side of the trowel held at a 45° angle, apply additional mortar to the surface, combing in one direction. Press the tile firmly into place in a perpendicular motion across ridges, moving back and forth. The perpendicular motion flattens ridges and closes valleys, allowing maximum coverage. With some tile, back buttering is advisable. Adjust the tile promptly and beat it in with a beating block and rubber mallet. Periodically pull up a tile and check the back to ensure proper adhesive coverage. If the material has skinned over (not sticky to the touch), recomb with the notch trowel; if too dry, remove and replace the dry material with fresh material. Thin-set mortar should not be used to fill low spots in the flooring. For large format tile and uneven flooring, use mortars designed for medium bed applications. Mortar thickness should be less than 1/4" thick.

## Curing of Product

Curing time is affected by ambient and surface temperatures and humidity. Use the following as a guideline. Allow 24 hours before grouting or light traffic.

## Cleaning of equipment

Clean with water before the material dries.

## Storage

Store in a cool, dry area.

## Health Precautions

This product contains Portland cement and free silica. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Do not breathe dust; wear a NIOSH approved respirator.

## Conformance to Building Codes

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

## 6 Availability & Cost

Item Code	Size	Color	Package
UMMW50	50 lb (22.68 kg)	White	Bag
UMMG50	50 lb (22.68 kg)	Gray	Bag

## 7 Product Warranty

Custom® Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Custom's® sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Custom's® printed instructions. Custom® makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another. This warranty is not transferrable.

## 8 Product Maintenance

Properly installed product requires no special maintenance.

## 9 Technical Services Information

For technical assistance, contact Custom technical services at 800-282-8786 or visit [custombuildingproducts.com](http://custombuildingproducts.com).

## 10 Filing System

Additional product information is available from the manufacturer upon request.

## Expected Wear

Properly installed tile will last for more than 60 years.

## Related Products

Thin-Set Mortar Admix

SpiderWeb™ II Uncoupling Mat



**CUSTOM®**

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## Coverage

Bonding uncoupling mat or membrane to subfloor:

SQUARE FOOT COVERAGE PER 50 LB BAG (SQUARE METER PER 22.68 KG)

Trowel Size	Min Coverage	Max Coverage
1/4" x 3/16" (6 x 5 mm) V-Notch	150 ft <sup>2</sup> (18 M <sup>2</sup> )	200 ft <sup>2</sup> (19 M <sup>2</sup> )

Installing tile over the surface of the uncoupling mat or membrane:

SQUARE FOOT COVERAGE PER 50 LB BAG (SQUARE METER PER 22.68 KG)

Trowel Size	Min Coverage	Max Coverage
1/4" x 3/8" x 1/4" (6 x 9.5 x 6 mm) Square-Notch	40 ft <sup>2</sup> (3.7 M <sup>2</sup> )	50 ft <sup>2</sup> (4.6 M <sup>2</sup> )
1/2" x 1/2" x 1/2" (13 x 13 x 13 mm) Square-Notch	30 ft <sup>2</sup> (2.8 M <sup>2</sup> )	40 ft <sup>2</sup> (3.7 M <sup>2</sup> )

Coverage rates may vary from those reported depending on the structure of the uncoupling mat or membrane



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