Polymer-Modified Mortar Bed



1. **Product Name**

   Polymer-Modified Mortar Bed

2. **Manufacturer**

   Custom Building Products Technical Services
   10400 Pioneer Boulevard, Unit 3
   Santa Fe Springs, CA 90670
   Customer Support: 800-272-8786
   Technical Services: 800-282-8786
   Fax: 800- 200-7765
   Email: contactus@cbpmail.net custombuildingproducts.com

3. **Product Description**

   Pre-blended modified floor and wall mud specifically designed to float a mortar bed for ceramic and natural stone tile. It is easy to mix and use, eliminating the need for site mixing of sand and cement and latex. Polymer Modified Mortar Bed's 3:1 mix ratio with polymer can provide a high-strength surface ideal for tiling in interior and exterior floor, shower pans and exterior applications. Mix with CUSTOM® Thin-Set & Mortar Admix for higher strengths.

   Key Features

   - No jobsite blending required
   - Just add water, no latex required
   - Easy to mix and use
   - Pumpable formula

   Uses

   Suitable as an Underlayment for:

   - Carpet
   - Wood and parquet flooring
   - Luxury Vinyl Tile/Planks (LVT/LVP)
   - Vinyl composition tile (VCT)
   - Sheet vinyl and rubber flooring
   - Laminated flooring

   Suitable Tile Types:

   - Ceramic, mosaic, quarry or cement body tile
   - Impervious porcelain and glass tile
   - Cement -based precast terazzo
   - Natural stone tile, Pavers, Brick, Stone

   Suitable Substrates

   - Concrete and masonry (wall or floor applications)
   - Gypsum drywall (interior only)
   - Exterior grade plywood & OSB / APA or CANPLY Group 1 (interior only and unbonded over exterior primary membranes)
   - Approved membranes

   *Special preparation or primers may be required. Refer to TCNA approved details.

   Composition of Product

   Polymer Modified Mortar Bed is a dry, proprietary Portland cement based mixture that includes vinyl copolymers, inorganic aggregates and chemicals.

   Limitations to the Product

   - Do not bond to plank hardwood, particleboard, parquet, cushion or sponge back vinyl flooring, or other dimensionally unstable
   - Not for use as a finished surface/wear layer.
   - Do not use when substrate temperature is below 50°F (10°C).
   - See flooring manufacture's recommendations for Relative Humidity limitations and Moisture Vapor Emissions limitations.
   - Product allows free passage of moisture and does not function as a moisture vapor barrier.

   Packaging

   - 50 lb. (22.68 kg) bags

4. **Technical Data**

   Applicable Standards

   - American National Standards Institute (ANSI) ANSI A108.1A, B or C of the American National Standards for the Installation of Ceramic Tile
   - Tile Council of North America (TCNA) TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171
   - 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
   - Tile Council of North America (TCNA) TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171.
   - American National Standards Institute (ANSI) ANSI 01 and A108.02 of the American National Standards for the Installation of Ceramic Tile
   - Terrazzo Tile & Marble Association of Canada (TTMAC) Specification Guide 09 30 00 Tile Installation Manual

   Technical Chart

Test	Method	Results (28 days)
Compressive Strength	ASTM C387	4500 to 5000 PSI (31 to 34.4 MPa)

   Environmental Consideration

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

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Complies with CA Section 01350 and CDPH V1.2-2017.



5. Instructions

General Surface Prep

Refer to Technical Bulletin 108 – General Requirements of Installing Finishes for additional information.

All surfaces must be structurally sound, clean, dry and free from contaminants such as grease, oil, dirt, dust, curing compounds, waxes, sealers, efflorescence, or any other foreign matter. Concrete must be fully cured and absorb water. Smooth concrete surfaces, existing glazed tile, terrazzo, or polished stone may need to be roughened or scarified. Refer to Custom TechPrime™ A Acrylic Primer or MBP - Multi-Surface Bonding Primer technical datasheet for use in lieu of mechanical preparation or when applying over CUSTOM® TechMVC™ Moisture Vapor and Alkalinity Barrier. For increased performance in demanding applications, concrete surfaces can be mechanically profiled and prepared by shotblasting, sandblasting, scarifying, diamond-grinding or other engineered approved methods (reference ICRI CSP 3 standards for ideal profile height). Any existing flooring must be well bonded and stripped of old finish.

CUSTOM® products may be used in assemblies over concrete with high moisture vapor emission levels provided that all other materials such as finish flooring, adhesives or membranes are approved in these conditions and moisture can pass through and out of the assembly. Consult the manufacturers for their limitations and requirements. Additionally, any sources of moisture are to be limited to initial concrete placement and not from sources such as water intrusion or from a lack of an effective vapor retarder/barrier.

Assembly mockups will determine suitability for these conditions on specific projects. Contact CUSTOM Technical Services for product information (800) 282-8786

Always wear proper protective equipment when handling the product, including IMPERVIOUS GLOVES, such as nitrile, safety glasses, and a NIOSH N95 respirator (mask).

Bonding To Concrete Surfaces

In addition to general surface preparation requirements listed above, concrete must be free of efflorescence, surface condensation or hydrostatic pressure and not subject to moisture beyond the floor covering manufacturers' limits. Concrete surfaces must have a tensile pull-off strength in excess of 200 psi (1.4 n/mm²). Concrete that was treated with curing compounds must be evaluated for suitability or mechanically removed. For more information about concrete curing compounds see CUSTOM Building Products Technical Bulletin #92 available on the website under Reference Library. Consult the flooring manufacturer's directions of the specified floor covering for maximum allowable substrate moisture content. When moisture test readings exceed the maximum allowable limitations for the finish in a bonded application, specify and install CUSTOM® TechMVC™ Moisture Vapor and Alkalinity Barrier. Prime prior to using a cement bond coat. The use of a CUSTOM® ANSI A118.4 or A118.15 dry-set adhesive mortar is recommended as a bond coat on floors. Place mortar bed into adhesive mortar before it sets or loses transfer and firmly pack into place. Mortar with bond coat can be applied from featheredge to 3" (7.62 cm) Contact technical services for recommendations of thicker beds. For masonry walls or over a scratch coat, apply mortar bed in lifts up to ¾" (19 mm). Shape and smooth before it dries. Refer to TCNA details for approved assemblies. Assembly mock-ups are always recommended and will determine suitability for these conditions on specific projects. Contact CUSTOM Technical Services for product information (800) 282-8786.

Bonding to Plywood and OSB Surfaces

Do not apply directly to plywood or OSB. For interior applications, place mortar bed over fastened metal lath with a vapor barrier below lath. It is generally accepted that wood-framed substrate deflection for Porcelain tiles is limited to <L/360; natural stone <L/720. Dimensionally weaker finishes such as natural stone, Saltillo, cement, glass tile and resilient flooring installations may require additional plywood layers based on area size/span; deflection; leveler thickness and project usage, live and dead loads. Subfloors and framing shall be structurally compliant to building codes and area usage including joist blocking or bracing, be sound, clean, dry, and free from contaminants that would prevent adhesion. Any loose plywood or deflecting areas must be addressed prior to leveler installation. Floors may be prepared by sanding. Do not use sweeping compounds, or chemicals or solvents to clean the floor. Refer to ANSI A108 AN2 "General Requirements for Subsurfaces" and TCNA details for further information for assembly recommendations or contact CUSTOM Technical Services. **Non-Bonded Applications** For interior horizontal applications, place mortar bed over a cleavage membrane and reinforce with 16 gauge 2"x2" galvanized welded wire in a non-bonded application. Mortar bed is to be ≥1-1/4" (32mm) thick. For exterior applications, it is recommended to place a wire-reinforced mortar bed over a drainage mat over a roofing membrane. Mortar bed is to be ≥1-1/4" (32mm) thick and to be troweled smooth and without excessive deviation to avoid water pooling. To evacuate water, prevent efflorescence from the mortar bed, and provide anti-fracture protection, apply RedGard® Crack Prevention and Waterproofing Membrane. Substrate is to be pre-sloped ¼" per linear ft. (6mm in 300mm) under waterproofing membrane. Refer to ANSI recommendations for assembly recommendations and thickness requirements in various service conditions.

Movement Joint Placement

Expansion joints and cold joints, as described in ANSI A108.01, should never be bridged with setting material. They must be brought through the mortar bed and tile then 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. Refer to TCNA EJ171, F125 and F125A.

Mixing Ratios

Mix with 3 quarts (2.84L) of cool clean water for floor dry pack.

Mix with 4 quarts (3.78L) of cool clean water for walls, curbs, seats.

When using CUSTOM® Thin-Set & Mortar Admix dilute 1:1 with water.

Mixing Procedures

When mixing by hand in a mixing box or wheelbarrow or with an auger in a pail, add water gradually to powder until meeting desired consistency. When mixing in automated mixer or when using a drill, add water first. Mortar should be damp and stay intact when formed into a ball by hand for dry-pack applications.

Application of Product

Refer to ANSI A108.1 A, B, or C for installation methods.

Curing of Product

Curing time is affected by ambient and surface temperatures and humidity. Use the following as a guideline:
- Tiling floors when walkable hardness in 3-4 hours
- Tiling walls when mud is firm in 1 to 2 hours.

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- Allow 24 hours before grouting and light traffic
- 4 days for pool applications
- 7-10 days before heavy or vehicular traffic.

Before exposure to heavy or vehicular traffic, assure assembly is rated “Heavy or Extra Heavy” per TCNA Service Requirements. As necessary, use plywood or other load distributing protection when moving heavy equipment across tiled assembly.

Cleaning of Equipment

Clean with water before material dries.

Health Precautions

DANGER: CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. PROLONGED OR REPEATED INHALATION OF DUST MAY CAUSE LUNG DAMAGE OR CANCER. DO NOT BREATHE DUST OR SWALLOW. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization. A NIOSH N95 respirator (mask) is recommended, especially in poorly ventilated areas, when use is frequent, or when permissible exposure limits may be exceeded. Immediately wash contaminated body and clothing thoroughly. If in eyes: rinse cautiously with water for several minutes; remove contact lenses if easy to do; continue rinsing. If inhaled: remove person to fresh air and keep comfortable for breathing. If swallowed: rinse mouth; do NOT induce vomiting. If you experience a burn, rash or skin irritation: immediately see a doctor. Immediately seek medical attention if any symptoms are significant or persist. In Emergency: 1-800-535-5053. **Contains silica sand and portland cement**. Before handling read Safety Data Sheet at www.custombuildingproducts.com. **KEEP OUT OF REACH OF CHILDREN.** **WARNING:** This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer, and hexavalent chromium compounds, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Conformance to Building Codes

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

6. Size & Availability

Location	Item Code	Size	Package
USA	PMMB50	50 lbs. (22.68 kg)	Bag

Contact your distributor about product cost and visit custombuildingproducts.com for more information and availability.

7. Product Warranty

NOTICE: Obtain the applicable **LIMITED PRODUCT WARRANTY** at www.custombuildingproducts.com/warranties or send a written request to Custom Building Products, Inc., Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured by or under the authority of Custom Building Products, Inc. © 2024 Quikrete International, Inc

8. Product Maintenance

Properly installed product requires no special maintenance.

9. Technical Services Information

For technical assistance, contact Custom Building Products.

10. Filing System

Additional product information is available from the manufacturer upon request.