PremiumPlus® Premium Non-Modified Thin-Set Mortar



1. Product Name

PremiumPlus® Premium Non-Modified Thin-Set Mortar

2. Product Description

Non-modified mortar for most basic tile jobs. Covers 10%-20% more area than standard thin-sets. Long working time allows ample time to adjust tile. For dense tile or installation over exterior grade plywood use Custom Building Products' Thin-Set Mortar Admix.

Available in Canada only

Key Features

- High cement content for use with uncoupling mats and membranes
- Smooth and creamy - easy to trowel
- Meets ANSI A118.1 without additives
- Meets ANSI A118.4 and A118.11 when mixed with Thin-set Mortar Admix

Suitable Substrates

When Mixed with Water ANSI A118.1 Specifications:

- Interior floors, walls, countertops
- Concrete, mortar beds, masonry, Portland cement plaster
- Gypsum wallboard (dry areas)
- Water-resistant wallboard
- 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, walls, countertops
- Areas subject to freeze-thaw cycles
- Exterior Grade Plywood (interior residential and light commercial dry areas)
- Existing ceramic tile
- Sheet vinyl flooring, VCT
- Plastic laminates
- Cutback adhesive

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.
- When setting glass tile larger than 6" x 6" (15 x 15 cm), contact Custom's® Technical Services for recommendations.
- 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 submerged installations.

Packaging

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

3. 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

Technical Chart

Property	Test Method	Requirement	Typical Results
Pot Life			2 Hours
Open Time	A118.1 Section 5.3	> 20 Minutes	Pass
4 Week Shear Bond Strength			
Mixed with Thin-Set Admix			
Glazed Wall Tile	A118.4 Section 5.1.5	> 300 psi	300 - 400 psi (21.1 - 28.1 kg/cm²)
Porcelain Tile	A118.4 Section 5.2.4	> 200 psi	200 - 275 psi (14.1 - 19.3 kg/cm²)

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 1 point towards IEQ Credit 4.1, Low-Emitting Materials - Adhesives & Sealants

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;

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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 and OSB Surfaces

Plywood floors including those under resilient flooring must be built to industry standards. Deflection not to exceed L/360. For questions about proper subfloor installation, call Technical Services.

Bonding to Cutback Adhesive

Adhesive layers must be removed as they reduce mortar bond strength to cement surfaces. Use extreme caution as 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. Do a test bond area first, to determine desirable results. Refer to the RFCI Pamphlet, Recommended Work Practices for Removal of Resilient Floor Coverings for further information.

Movement Joint Placement

Expansion joints, control joints and cold joints should never be bridged with setting material. They must be brought through the tile work and filled with an appropriate elastomeric sealant.

Mixing Ratios

For installations requiring an ANSI A118.1 mortar, thoroughly mix 2 gallons (7.57 L) clean, cool water and a 50 lb (22.68 kg) bag of PremiumPlus® together to a smooth, paste-like consistency. For mortar meeting ANSI A118.4 or A118.11 requirements, use 2 gallons (7.57 L) of Thin-Set Mortar Admix in place of water.

Mixing Procedures

Mix by hand or use a low speed (150 - 200 RPM) 1/2" (13 mm) drill. Let slake or stand 5-10 minutes, stir again and use. Stir occasionally to keep fluffy, but do not add more water. When properly mixed, troweled ridges will stand with no slump.

Application of Product

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 and light traffic, and 7-10 days before heavy or vehicular traffic. Before exposure to heavy or vehicular traffic, assure assembly is rated €œHeavy 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 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.

4. Availability & Cost

Location	Item Code	Size	Color	Package
Canada	CPTSG50	50 lb (22.68 kg)	Gray	Bag
Canada	CPTSW50	50 lb (22.68 kg)	White	Bag

5. 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. For details and complete warranty information, visit /reference-library/warranties.aspx.

6. Product Maintenance

Properly installed product requires no special maintenance.

7. Technical Services Information

For technical assistance, contact Custom® Building Products.

8. Filing System

Additional product information is available from the manufacturer upon request.

Related Products

Polyblend®Plus Sanded Grout

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Coverage Chart

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

Chart for estimating purposes. Coverage may vary based on installation practices and jobsite conditions. For more trowel sizes, please use the material calculator at CustomBuildingProducts.com or contact CUSTOM Technical Services at (800)282-8786.

Trowel Size	Min Coverage	Max Coverage
1/4" x 1/4" (6 x 6 x 6 mm) Square-Notch	85 sq. ft. (8.8 M²)	95 sq. ft. (8.8 M²)
1/4" x 3/8" x 1/4" (6 x 9.5 x 6 mm) Square-Notch	60 sq. ft. (5.6 M²	67 sq. ft. (6.2 M²)

Mortar coverage between the substrate and tile underside is required to be ≥80% for dry areas and ≥95% for wet areas and exteriors with all tile edges properly supported with mortar and in a minimum of 3/32” (2.38 mm) and a maximum of ¼” (6mm) for mortars without an ANSI “H” rating. Note: Larger tiles, tiles with deep underside patterns and ungauged natural stone tiles may require larger notch sizes and may need to be flat back-troweled (formerly back buttered) or notched-back troweled to achieve proper coverage and mortar support. CUSTOM recommends testing to confirm adequate bonding mortar coverage.

When back troweling, consider the tile’s underside pattern and depth to estimate thickness and usage to add to your estimate. For achieving proper mortar coverage see the following video: Trowel & Error. (Also available in Spanish and Russian.) For information

For achieving proper mortar coverage see the following video: Trowel & Error. (Also available in Spanish and Russian.) For information regarding back troweling, refer to The National Tile Contractors Association / Reference Manual & Flat Back & Notched Back - Troweling (TileTVS3 22 08).