



TuffSet™ TBM

Paver & Tile Thick Bed Mortar

1.01 DESCRIPTION

TuffSet™ TBM is specifically formulated to provide a single-step installation method for large format ceramic tile and stone. It fully supports heavy tiles and stone, reducing lippage problems and the need for leveling or pre-floating rough surfaces. TuffSet™ TBM was designed for use with TuffSet™ Admix to produce a latex portland cement mortar that has exceptional strength. TuffSet™ RTU Premixed is an approved substitute for TuffSet™ TBM mixed with TuffSet™ Admix. Please use the correct product grade that complies with VOC regulations as per federal, state, county and city regulations/codes at the place of installation of product.

1.02 USES

- Absorptive and Ceramic Tile
- Gauged or Ungauged Natural Stone
- Mortar Bed and Concrete Repairs
- Perfect For Large Stones
- Quarry Stones and Pavers
- Vitreous & Semi-Vitreous Tile

1.03 FEATURES

- Allows Grouting After 2 to 3 Hours
- Extremely Durable Bonds
- Minimal Shrinkage Upon Cure
- Pre-Measured Packaging of Components
- Rapid-Setting: Ideal for Quick Turnaround Projects
- Smooth and Creamy Consistency for Easy Application

1.04 TECHNICAL DATA

Conforms to requirements for latex Portland cement mortars found in ANSI A108.5, A118.4 and A118.11.

1.05 COLOR

Concrete

1.06 PACKAGING

60 lbs (27 kgs) multiple-plastic-lined bags

1.07 COVERAGE

5 gallons (18.9 liters) of TuffSet™ Admix mixes with approximately 7 bags of TuffSet™ TBM yielding approximately 45 sqft (4 sqm) @ 1" (25 mm) thick.

1.08 PREPARATION

Remove all dirt, oil, and loose or foreign material. Any metal in contact with grout must be free of rust, oil, grease, and other foreign matter which would limit bond. Concrete surface must be sound and roughened to ensure proper bonding. Prior to placing TuffSet™ TBM, the surface must be saturated surface dry (SSD), if possible for an hour. Remove all excess water before placement of mortar. All materials and surfaces in contact with the grout should be conditioned between 40°F (4°C) and 90°F (32°C) for proper performance. Provide heating or cooling, as necessary, to compensate for temperature extremes and changes in cure time. Expansion joints shall be provided

through the tile work from all construction or expansion joints in the substrate. Follow ANSI specification A108.01- 3.7 "Requirements for Movement Joints: Preparations by Other Trades" or TCNA detail EJ-171 "Movement Joints-Vertical & Horizontal". Do not cover expansion joints with mortar.

1.09 MIXING

Mortar Bed Mixing Mortar Bed-Dry Pack Consistency for floors: Mix one 60 lb bag (27 kg) of TuffSet™ TBM to 0.7 gal (2.7 liters) of TuffSet™ Admix. Five (5) gallons (19 liters) of TuffSet™ Admix mixes with approximately 7 bags of TuffSet™ TBM yielding approximately 45 sqft (4 sqm) @ 1" (25 mm) thick. Mix to a stiff, semi-dry consistency (refer to bag for mixing instructions and tips). Mix ratio may vary depending upon the weight of finish material.

1.10 APPLICATION

Before placing mortar, apply a slurry bond coat made from TuffSet™ TBM. While the slurry bond coat is wet, spread the mortar and compact well. While the mortar is wet and sticky, place the pavers or the tile and beat in well.

When installing irregularly backed natural stone, pavers or large tile, use a 1/2" x 1/2" x 1/2" (13 cm x 13 cm x 13 mm) square-notch or 3/4" x 9/16" x 3/8" (19 cm x 14 cm x 9.5 mm) U-notch trowel. For all other installations use a 1/4" x 3/8" x 1/4" (6 mm x 10 mm x 6 mm) square-notch trowel. Using the flat side of the trowel, apply a skim coat of mortar. Apply additional mortar with notch side of trowel held at a 45° angle to the surface, combing in one direction. Press tile firmly into place in a perpendicular motion across ridges, moving back and forth. Perpendicular pressing flattens ridges and closes valleys allowing maximum coverage. With some tile, back-buttering is advisable. Adjust tile promptly and beat in with a block and rubber mallet. Periodically pull up a tile and check the back to ensure complete coverage with the mortar. Do not spread more material than can be tiled in 15 minutes, or while material has wet tack (sticky to the touch). If the material has skinned over (not sticky), recomb with notch trowel, if too dry, remove and replace with fresh material.

INSTALLATION TO CONFORM TO ANSI A108.5.

1.11 CURING

A minimum cure is obtained in 24 hours, depending on ambient temperatures. Normal grouting should be done within 48 hours after the tile has been set.

1.12 CLEAN UP

Tools and Equipment: Clean with water or PSI's **EnviroClean™**.

1.13 STORAGE AND SHELF LIFE

The material should be stored between 40-95°F (4-35°C) in a cool, dry area away from direct sunlight. The shelf life of properly stored, unopened containers is 12 months from date of manufacture. An excessive temperature differential and/or high humidity can shorten the shelf life expectancy.

1.14 LIMITATIONS

DO NOT place at temperatures below 40°F (5°C) unless special provisions are followed. At low temperatures, water requirement should be field tested. When nearby equipment causes vibration of the grout, during the set, such equipment should be shut down for a period of 24 hours. DO NOT mix over 5 minutes. DO NOT over water; this can cause bleeding or separation. DO NOT retemper. DO NOT add cement, sand, or admixtures. Avoid hazards by following all precautions found in the Safety Data Sheets (SDS), product labels, and technical literature.

READ SDS PRIOR TO USING PRODUCT. KEEP OUT OF THE REACH OF CHILDREN.

1.15 PERFORMANCE AND WORKING PROPERTIES

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| Water Absorption ANSI A118.6-4.4 | <5% |
| Compressive Strength ANSI A118.4-6.1 | 4000-5000 psi (33.8-34.5 MPa) |
| TCNA Service Rating ASTM C627 | Extra Heavy |
| Mixed Mortar Pot Life | 1 Hour (70°F/21°C) |
| Time to Foot Traffic | 12 Hours |
| Time to Heavy Traffic | 72 Hours |
| Wet Density | 135 lbs/cuft (2166 kg/cum) |

All values approximate - will vary with temperature and humidity.

Please read all information in the General & Safety Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. PSI Products are for "Professional Use Only" and preferably applied by professionals who have prior experience with the PSI Products or have undergone training in application of PSI Products. Published technical data and instructions are subject to change without notice. Contact your local PSI representative or visit our website for current technical data, instructions, and project specific recommendations.

LIMITED WARRANTY

PSI warrants its products to be free of manufacturing defects and that they will meet PSI current published physical and chemical properties. Seller's sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by PSI of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. PSI shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. PSI shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. PSI reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and PSI makes no claim that these tests or any other tests, accurately represent all environments.