



TuffSet™ Admix

Mortar & Non-Polymerized Concrete Products Admixture

1.01 DESCRIPTION

TuffSet™ Admix is a specially designed latex admixture for use with non polymerized, thin-set mortars, cement grouts, cement mortar beds, and other cement mixes. It is a non-reemulsifiable, general-purpose admixture to produce polymer-modified concrete and mortar. TuffSet™ Admix improves adhesion, flexural strength, increases resistance to freeze/thaw durability, and does not produce a vapor barrier. 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

- Admixture (replacing water) used in cement based products to improve adhesion, achieve a denser surface, and improve overall performance
- As a bonding grout (prime coat) when mixed with sand and portland cement

1.03 FEATURES

- Bond New Concrete to New or Old Concrete
- Extremely Durable Bonds
- Increased Bond and Compressive Strength
- Interior and Exterior Installations
- Interior or Exterior Use
- Shock, Chemical and Frost Resistant
- Superior Flexibility
- Use on Concrete, Concrete Block, Cement Board, Hardie Board, Plywood, Brick, Plaster, Tile, Gypsum, or Stone
- Vertical or Horizontal
- Water-Resistant; Suitable for Submerged Applications

1.04 TECHNICAL DATA

Conforms to ANSI A-118.4

1.05 COLOR

Concrete Grey

1.06 PACKAGING

1 quart (0.94 liters): 6 per case

1 gallon (3.8 liters) jug: 4 per case

5 gallon (18.9 liters) pail

55 gallon (208 liters) drum: (special order)

1.07 COVERAGE

Used in place of water in cement mixes.

1.08 PREPARATION

Remove all dirt, oil, and loose or foreign material. All surfaces 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 bonder or mortar, the surface must be saturated surface dry (SSD), if possible for an hour. Remove all excess water before placement of the product.

1.09 MIXING

As admixture/mixing solution: With the mixer running, add materials in the following order: **TuffSet™ Admix** solution and then the cement based product. Replaced the amount of water recommended by the product. Do not dilute with water.

As a bonding grout: With the mixer running, add in the following order. **TuffSet™ Admix** solution, aggregate, cement. The ratio is 1 part cement, 2 parts sand, and a sufficient amount of undiluted **TuffSet™ Admix** to produce a creamy paint consistency. Maximum 4 gallon/sack of cement (15 liter/sack of cement).

1.10 APPLICATION

Admixture: Immediately trowel **TuffSet™ Admix** mortar or concrete mix into areas to be patched. Do not over-finish. As soon as the application is done, to prevent damage, cure with **TuffCure™ PM** or damp burlap and/or white pigmented polyethylene film. Curing should continue for 24 hours. Pre-testing is recommended when adding **TuffSet™ Admix** to a specific mix design to assure the results required.

Bonding Grout: Brush **TuffSet™ Admix** mortar or concrete mix into the area to be resurfaced with a stiff-bristled broom or scrub brush. Be sure the entire surface and all edges are coated. Apply topping immediately over scrub coat before the bonding slurry dries.

1.11 CLEAN UP

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

1.12 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 container is 12 months from the date of manufacture. An excessive temperature differential and/or high humidity can shorten the shelf life expectancy.

1.13 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.

1.14 PHYSICALS	
TuffGrout™ Enhancer when mixed with repair products:	
Water Absorption ANSI 118.6-4.4	<5%
Compressive Strength ANSI A118.4-6.1	4000-5000 psi (33.8-34.5 MPa)
TCNA Service Rating ASTM C627	Extra Heavy
TuffGrout™ Enhancer mixed as a concrete mortar	
Tensile Bond Strength: ASTM C 932-05 (modified) (pulling apart bonded cement briquette halves)	265 psi (1.87 MPa) Avg. 14 days
Flexural Bond Strength: ASTM C-78 (concrete beams laminated with bonding agent)	603 psi (4.157 MPa)
Shear Bond Strength: ASTM C-1059 (slant shear cylinder test)	740 psi (5.1 MPa) Avg. 14 days
Temperature Range: ASTM C-109 (specimens brought to 35°F [1.67°C] for 1 hr., then to 310°F [154°C] for 2 hrs).	No bond failure. Shear tests 400 psi (2.75 Mpa)
Freeze-Thaw Stability: 5 cycles freeze (-10°F [23.3°C] and thaw).	Freeze-thaw stable
Toxicity: Exposure to 30 cc volatized bonding agent for 1 hr.	Non-toxic, no ill effects after 7 days
Life Expectancy: Lab tested and field proven	Non-deteriorating bond; retains strength and flexibility

TEST	TEST METHOD	RESULT	ANSI A118.4 SPECIFICATION
Porcelain Tile Shear Bond 28-day cure	ANSI A118.4-5.2.4	450-500 psi (3.1-3.4 MPa)	> 200 psi (1.37 MPa)
Porcelain Tile Water Soak Shear Bond	ANSI A118.4-5.2.3	200-300 psi (1.3-2.07 MPa)	> 150 psi (1.03 MPa)
Compressive Strength	ANSI A118.4-6.0	2300-2500 psi (15.8-17.2 MPa)	> 2500 psi (17.2 MPa)

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.

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