



TuffMend™ DOT

Rapid Setting, Polymer Modified, Horizontal-Repair Mortar with Corrosion Inhibitor

1.01 DESCRIPTION

TuffMend™ DOT is a single component, polymer modified, fiber reinforced, rapid-setting-concrete mortar with corrosion inhibitor Portland-cement based, high quality, repair material. This unique formulation develops high early strength with zero shrinkage and excellent durability. 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

- Commercial or Any Concrete Floor
- Highways, Roads, and Bridges
- Parking Decks and Ramps
- Suitable for Formed Vertical Applications

1.03 FEATURES

- Excellent Freeze-Thaw Resistance
- Fiber-Reinforced for Added Flexural Strength
- High Compressive and Bond Strength
- Initial Set within 25 Minutes
- Non-Shrink and Non-Gypsum Based
- Traffic in less than 2 Hours

1.04 TECHNICAL DATA

TuffMend™ DOT is formulated to meet the requirements of ASTM C928 Packaged, Dry, Rapid-Hardening Cementitious Material for Concrete Repair and AASHTO T260.

1.05 COLOR

Concrete Gray

1.06 PACKAGING

Available in 60 lbs (27.22 kgs) multiwall-paper bags with moisture barrier and 2,000-pound (90,718 kgs) bulk bags.

1.07 COVERAGE GUIDE

Yield: 0.50 cuft (0.0142 cum) /60 lbs bag (27.22 kgs)

1.08 PREPARATION

Remove all dirt, oil, and loose or foreign material. Any metal in contact with TuffMend™ DOT 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 TuffMend™ DOT, the surface must be saturated surface dry (SSD), if possible for an hour. Remove all excess water before placement of TuffMend™ DOT. Bolts, base plates and equipment must be secure and rigid before placement of grout. All materials and surfaces in contact with the TuffMend™ DOT should be conditioned between 50-80°F (10-26.66°C) for proper performance. Provide heating or cooling, as necessary, to compensate

for temperature extremes and changes in cure time.

1.09 MIXING

Mix 2.8 quarts (2.65 liters) of clean potable water per 60 lbs (27.22 kgs) of TuffMend™ DOT using either the PSI's **Rapid Pail Mixer** "or" a 1/2+ hp heavy-duty drill with the PSI's **Mortar Paddle** utilizing the PSI's **Easy Stand**. Mix until completely blended and free of lumps. Do Not Over Mix. When using a power mixer to blend material use a slow speed high torque drill at no more than 500-650 rpm. ALWAYS add material to water when using a bucket or mortar mixer, but add water to the material if hand mixing smaller batches.

1.10 APPLICATION

Place continuously and quickly. Trowel or screed TuffMend™ DOT firmly into the prepared area, ensuring intimate contact with the bonding surface. Finish TuffMend™ DOT level with the surrounding concrete and allow to take an initial set. After the initial set, when TuffMend™ DOT is surface hard, finish by hand troweling. Excessive troweling is not required. DO NOT VIBRATE.

1.11 CURING

Finish the repair material to the desired texture to best match the surrounding concrete. Do not add additional water to the surface during finishing. Lightly spray TuffAid™ as a finishing aid on this and any other polymer modified mortars to assist in finishing. Immediately cover with clean, wet rags and keep moist until final set. After final set, remove rags and apply an ASTM-C-309 curing compound, such as TuffCure™ WB. In severe heat & drying conditions, always use TuffCure™ WB curing compound.

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 apply to frozen surfaces or if the temperature will fall below 45°F (7°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. Do not dilute. Wear protective gloves and goggles. Avoid prolonged skin contact.

READ SDS PRIOR TO USING THIS PRODUCT. Keep out of the reach of Children.

1:15 PHYSICALS	
Compressive Strength (ASTM C-109)	
6 Hours	4195 psi (28.92 MPa)
1 Day	5050 psi (34.82 MPa)
28 Days	7824 psi (53.94 MPa)
Splitting Tensile Strength (ASTM C-496)	
28 Days	1080 psi (7.44 MPa)
Coefficient of Thermal Expansion (TEX 428 A)	
28 Days	4.8x10 ⁻⁶
Absorption % (ASTM C-497, Suspending Boiling Method)	
28 Days	3.2%
Shear Bond Strength (ASTM C-882)	
3 Days	2340 psi (16.13 MPa)
Freeze Thaw Resistance (ASTM C-666 Proc A)	
300 cycles	98%
Set Time (ASTM C-191)	
Initial Set	25 min
Final Set	30 min

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.