POLY-TUFF SYSTEMS INTERNATIONAL
HIGHWAY DIVISION

E-TUFF® MORTAR

Medium Viscosity Epoxy Mortar and Grout

1.01 DESCRIPTION

E-Tuff® Mortar a two-component, 100% solids, moisture-insensitive, medium viscosity, high strength, multipurpose liquid epoxy adhesive. With aggregate or other mineral fillers, it can be used as a mortar or grout to resurface or patch damaged concrete slabs and walls. 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

- Bond Freshly Mixed Concrete to Hardened Concrete
- Can Be Used as an Anchoring Adhesive
- Fill Voids and Cracks in Concrete And Masonry
- Use as a Binder in an Epoxy Mortar

1.03 FEATURES

- 100% Solids
- Easy Dispensing
- Excellent Adhesion
- Fast Setting, High Strength, High Modulus
- Friendly 1:1 Mix Ratio
- Moisture Tolerant
- No Volatile Organic Compounds (VOC's)
- Non-Sag Gel Consistency

1.04 TECHNICAL DATA

ASTM C881 and AASHTO M235, Types I, II, IV & V Grade 2, Classes B & C specifications

1.05 PACKAGING

20 oz., 600 ml side-by-side cartridge
1 gallon (3.8 liters) units
2 gallon (7.6 liters) units
10 gallon (37.9 liters) units

1.06 COLOR

Concrete Gray

1.07 COVERAGE

As a Mortar: 1 gallon with 50 lbs (22.78 kgs) sand <0.43 cuft (0.012 cum)
As a Bonder: 50-100 sqft/gallon or 2-1 gallon/100 sqft (0.8-0.41 liters/sqm)

1.08 PREPARATION

Concrete shall have reached its design strength and be dimensionally stable. All surface contamination must be removed by mechanical means, creating a surface profile of exposed sound aggregate. Metal surfaces should be sandblasted to white metal finish and wiped clean with solvent.

1.09 MIXING

3 parts of oven-dried silica sand to 1 part of mixed epoxy by volume. Mix only until all aggregate is wetted out. Always test a small amount of **E-Tuff Mortar** to verify that the product has been thoroughly mixed and will harden properly before proceeding. Do not thin with any solvent.

1.10 APPLICATION

Precondition **E-Tuff Mortar** to 65–95°F (18–35°C) for easy-dispersing.

To bond to old concrete: Use a brush, roller or squeegee to apply about 15 to 30 mils (0.38 to 0.76 mm) thick bond line. Place fresh concrete when epoxy is still tacky.

To gravity feed cracks: Blow vee-notched crack with oil-free compressed air. Seal underside if cracks reflect through. Pour mixed epoxy into cracks. Repeat until completely filled.

To patch and grout: Prime substrate with neat mixed epoxy. Place epoxy mortar using trowels before primer become tack-free

1.11 CLEANUP

Clean sprayer, tools, and equipment with Xylene or lacquer thinner while the product is still wet.

1.12 STORAGE AND SHELF LIFE

Store in a horizontal position to prevent moisture accumulation on the drum head. 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 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

- FOR WELL VENTILATED OR EXTERIOR USE ONLY!
- The minimum substrate temperature is 40°F (5°C).

1.14 CAUTION

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize the exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymer, sanding, etc.) may cause high vapor concentrations. Do not weld on, burn or torch the **E-Tuff Mortar** or any epoxy material. Hazardous vapor is released when an epoxy is burned. Avoid skin or eye contact. Wash skin with soap and water if contact occurs. If eye contact occurs flush with water for 15

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minutes and obtain medical attention.

READ SDS PRIOR TO USING PRODUCT. FOR PROFESSIONAL USE ONLY.KEEP OUT OF REACH OF CHILDREN.MADE IN THE USA.

PHYSICALS	
Compressive Properties (ASTM D695)	
7 day cure	
Compressive Strength	10400 psi (71.70 MPa)
Compressive Modulus	406400 psi 2802 MPa)
Tensile Properties (ASTM D638)	
7 day cure	
Tensile Strength	7500 psi (51.7 MPa)
Tensile Elongation	3%
Bond Strength (ASTM C882)	
2-day cure 7-day cure	2300 psi (15.86 MPa) 3360 psi (23.16 MPa)
Flexural Strength (ASTM D790)	6000 psi (41.44 MPa)
Shear Strength (ASTM D732)	5500 psi (37.9 MPa)
Gel Time	45 minutes
Viscosity	3300 cps
Tack Free Time (73°F or 23°C)	3-4 hours
Water Absorption (ASTM D570)	0.11% (24 hr)
Shrinkage on Cure (ASTM D2566)	0.20%
Heat Deflection Temperature (ASTM D648)	122°F (50°C)
Thermal Compatibility (ASTM C884)	pass

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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