



TuffPoxy™ BAC

Anti Corrosion Bonding Agent

1.01 DESCRIPTION

TuffPoxy™ BAC is a unique, three component, extended-pot life, moisture-insensitive mixture combining the benefits of a 100% solids epoxy system, a corrosion inhibitor, and specially-graded aggregates with cement. TuffPoxy™ BAC may be used neat as a bonding agent or mixed with Side C to produce a thick protective coating on rebar that prevents corrosion. 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

- Bonding Plastic Concrete to Hardened Concrete
- Bonding Repairs to Concrete and Steel
- Corrosion Protection Coating for Reinforcing Steel in Concrete Restoration
- Reinforcing Steel in Areas of Thin Concrete Cover

1.03 FEATURES

- Bonding Bridge for Repair Mortars
- Can be Brushed on or applied using a Spray Gun
- Can be used on Exterior Surfaces
- Chemical Resistant Bonding
- Contains Corrosion Inhibitor
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- Excellent Adhesion to Concrete And Steel
- Exceptional One Day and Ultimate Compressive
- Extended Open Time for Repair Mortars
- Good Resistance to Water And Chloride Penetration
- High Shear Strength
- High Strength, Unaffected by Moisture When Cured
- Long Pot Life
- Minimal Shrinkage Upon Cure
- Non-Flammable, Solvent Free
- Pre-Measured Packaging of Components
- Very Low Viscosity for Deepest Penetration

1.04 TECHNICAL DATA

ASTM C-881, Types I, II, IV & V, Grade 2, Class C AASHTO M-235, Types I, II, IV & V, Grade 2, Class

1.05 COLOR

Concrete Gray

1.06 PACKAGING

3-gallon kit: 1 gallon (3.78 liters) can of Side A and 2 gallon (7.56 liters) can of Side B and 50 lbs (22.7 kgs) Side C in a multiple-plastic-lined bag

1.07 COVERAGE GUIDE

This product can be used as either a 2 or 3-component mix. For all uses, it consists of a package containing a 1 gallon (3.78 liters) Side A and 2 gallons (7.56 liters) Side B. Optionally, add 1 bag of Side C containing 50 lbs (22.7 kgs) of an aggregate blend. Each complete 3 gallon (11.34

liters) unit with Side C added will yield approximately 40 sqft/gallon (3.716 sqm/liter) or 2.5 gallons/100 gallon, one unit will cover 120 sqft (11.15 sqm). If applied neat, it will yield 80 sqft/gallon (7.43 sqm/gallon) or 1 1/4 gallons/100 sqft, one unit will cover 240 sqft/gallon (22.30 sqm).

1.08 PREPARATION

Concrete free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means. The substrate must be Saturated Surface Dry (SSD) with no standing water. Steel reinforcement rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed by blast cleaning or other means of mechanical abrasion and reinforcement should be fully exposed and have all corrosion removed.

1.09 MIXING

Remove all ingredients from pails. Stir each container well and empty contents into 5 gallon pail (18.9 liters). Mix the 3 gallons (11.34 liters) in the pail with low speed (400-600 rpm) drill until uniform. Pour one bag of Side C into the pail containing Side A and Side B of epoxy, and mix again for two minutes if using TuffPoxy™ BAC as an anti-corrosion coating. Keep material well stirred until used.

1.10 APPLICATION

Bonding Fresh Concrete to Hardened Concrete (NEAT): Apply TuffPoxy™ BAC to hardened concrete at 80 sqft/gallon (20 mils or 508 microns) with a stiff brush, broom, squeegee promptly after mixing. Apply fresh concrete immediately or up to 2 hours after application of TuffPoxy™ BAC when applied at 70°F (21.11°C). If TuffPoxy™ BAC loses its gloss due to suction into the substrate or if used in high temperatures, apply an additional coat, while first coat is still tacky.

For Corrosion Protection of Steel (MIXED): Apply by stiff bristled brush or spray at approximately sqft/gallon (20 mils or 508 microns). Be sure to coat the exposed steel completely. Allow the coating to dry 2-3 hours at 75°F (23.88°C), and then apply a second coat at the same coverage rate. Allow the system to dry again for 2-3 hours, before the repair mortar or concrete is placed. Corrosion Protection at 20 mils (508 microns) and 2 coats.

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 containers is 12 months from 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 (50°C) unless special provisions are followed. Avoid hazards by following all precautions found in the Safety Data Sheets (SDS), product labels, and technical literature.

1.14 CAUTION

Do not dilute. Wear protective gloves and goggles. Avoid prolonged skin contact.

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

1.15 PHYSICALS

(Physical Properties @ 72°F and 50% relative humidity)

Compressive Strength (ASTM C-109)

7 day	6000 psi (41.37 MPa)
14 days	8500 psi (58.60 MPa)
28 days	13000 psi (89.63 MPa)
Compressive Modulus (ASTM D695)	350,000psi (2413 MPa)

Tensile Strength (ASTM C-190)

28 days	9500 psi (65.50 MPa)
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Slant Shear Bond Strength (ASTM C-882)

7 days	2800 psi (19.31 MPa)
Gel Time	45 minutes
Initial Viscosity	neat 700 cps w/aggregate 5,000 cps
Tensile Elongation (ASTM D638)	5%
Water Absorption (ASTM D570)	0.20
Shrinkage (ASTM D-2566)	0.002
Hardness, Shore D (ASTM D2240)	78
Heat Deflection Temperature (ASTM D648)	112°F (44°C)
Flexural Strength (ASTM D790)	12900 psi (88.94 MPa)
Density (Mixed) (ASTM D1475)	122.3 lbs/cuft (16.35 lbs/gal)
Cure Schedule	7 days @ 72-77°F (22.22-25°C)

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 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.