



TuffPoxy™ 2

Traffic Marker Adhesive

1.01 DESCRIPTION

TuffPoxy™ 2 is an AASHTO M237 certified two-part epoxy, standard set adhesive system. It was specifically designed for the bonding of traffic markers, delineators, safety posts. 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

- Delineators
- Safety Posts
- Traffic Markers

1.03 FEATURES

- Excellent for Bonding Plastics, Steel, and Concrete to Concrete
- Fast Setting
- Convenient 1:1 Mix Ratio

1.04 TECHNICAL DATA

TuffPoxy™ 2 complies with AASHTO M 237-96 (2009) Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt, Arizona 706.5, WSDOT 9-26.2

1.05 PACKAGING

20 oz (600 ml) side-by-side cartridge

1-gallon kit: 1/2 gallon (1.89 liters) of Side A and 1/2 gallon (1.89 liters) of Side B

2-gallon kit: 1 gallon (3.78 liters) of Side A and 1 gallon (3.78 liters) of Side B

10-gallon kit: 5 gallons (18.9 liters) of Side A and 5 gallons (18.9 liters) of Side B

1.06 COLOR

Side A Resin: Tan

Side B Converter: Dark Gray Combined

Side A and Side B: Concrete Gray

1.07 COVERAGE

2 1/2" x 4 1/2" (6.35 cm x 11.43 cm) Rect. Marker – 100 per gallon (3.78 liters)

4" (10.16 cm) Round/Square – 50 per gallon (3.78 liters)

6" (15.24 cm) Round – 25 per gallon (3.78 liters)

8" (20.32 cm) Delineator or Pole Base – 15 per gallon (3.78 liters)

Bondline Thickness 45 mils (1143 microns)

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. Remove all excess water before placement of epoxy. It is recommended to roughen bonding surfaces with abrasive media appropriate for the materials being bonded (such as medium grit

emery paper, abrasive disks, grit blasting, wire brushes, etc.). Abrasion should always be followed by degreasing to remove contaminants and loose particles.

1.09 MIXING

Combine and mix TuffPoxy™ 2 just prior to anchoring the markers. Automatic dispensing equipment is recommended. Hand mixing should be limited to very small projects. When using TuffPoxy™ 2 epoxy, combine equal parts of Side A and Side B. Mix thoroughly. Properly mixed, the epoxy will be uniform gray, without visible streaks.

1.10 APPLICATION

Apply mixed material immediately. With a trowel or spatula, spread a thin film over the surface to be bonded. Press into place and maintain light pressure during cure for optimum bonding.

1.12 CLEANUP

Uncured epoxy may be cleaned off of tools with Methyl Ethyl Ketone (MEK), Toluene, or solvent blends. Caution: These solvents may damage plastics.

1.13 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.

1.14 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. Contact PSI Technical Services for complete application instructions and limitations.

1.15 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.

1.16 PHYSICALS	
Compressive Properties (ASTM D695)	
Pounds/Gallon (Kilograms/Liters)	
Side A	12.47 lbs/gal (1.50 kg/l)
Side B	11.45 lbs/gal (1.37 kg/l)
Side A and B	11.97 lbs/gal (1.43 kg/l)
Gel Time at 77°F (25°C) 100-gram mass	7 minutes
Viscosity	
7 day cure	
Side A Resin	5 rpm 10 rpm
Side B Converter	5 rpm 10 rpm
Difference in Viscosity Between the 2 Sides	< 15%
Stability: % increase in Viscosity After 14-day heat aging @ 120°F (49°C)	< 20%
Thixotropy @ 120°F (49°C) (sag on test panel)	< 2 mm
Bondline Thickness	45 mils (1143 microns)

1.17 APPROXIMATE SET TIMES	
TEMPERATURE	SET TIME HOURS
50°F (10°C)	7
60°F (15.5°C)	4
77°F (25°C)	2
95°F (27°C)	1
115°F (46°C)	0.5

1.18 ADHESIVE PROPERTIES		
Substrate	Cure Schedule	Tensile Strength
Aluminum Alloy 2024T3, acid etched	1 hour 77°F (25°C)	100 psi (0.689 MPa)
	2 hours 77°F (25°C)	370 psi (2.55 MPa)
	4 hours 77°F (25°C)	760 psi (5.24 MPa)
	24 hours 77°F (25°C)	2800 psi (19.3 MPa)
	1 day 77°F (25°C) followed by 2 hours at 212°F (100°C)	4000 psi (27.6 MPa)
	7 days at 77°F (25°C) followed by 7 days water soak	3300 psi (22.75 MPa)
Cold-rolled Steel, solvent-wiped	1 day at 77°F (25°C) followed by 2 hours at 212°F (100°C)	1600 psi (11.03 MPa)
Impact Strength, Ft-lb (N-m)		> 6.5 ft/lb > 9.0 N-m

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.

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