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E-BOND 1249

RAPID SET EPOXY ADHESIVE FOR PLACEMENT OF TRAFFIC MARKERS

**FOR PROFESSIONAL USE ONLY; NOT FOR
SALE TO OR USE BY THE GENERAL PUBLIC**

DESCRIPTION

- E-BOND Rapid Set Epoxy Adhesives are 100% solids, SOLVENT-FREE, 2 COMPONENT EPOXY STRUCTURAL ADHESIVE.
- E-Bond 1249 Rapid Set Epoxy Marker Adhesive Non Sag grade for Raised and Recessed traffic markers.
- The product may be mixed by hand or used with automatic mixing and metering equipment for rapid placement of markers on highway surfaces.

ADVANTAGES:

- Easy mix ratio 1 to 1, A to B
- Fast setting, provides high early strength
- Non-abrasive formula permits application with automated equipment
- Provides excellent adhesion to most structural materials
- Low temperature cures as low as 40 °F (4.4 °C)**.
- Excellent bonds to hardened, portland cement and asphalt concrete
- Zero VOC - Fully Reactive, no low boiling constituents

E-BOND 1249 conforms to AASHTO M-237, Type I.

PHYSICAL PROPERTIES

TYPE:

E-Bond 1249 Non Sag Rapid Set Epoxy Marker Adhesive

COLOR:

Part A – Resin	White
Part B – Hardener	Black
Ad-mix	Grey

TESTS:

VISCOSITY / ASTM D-2393

Comp. A-resin	poises	2000-3000
Comp. B-hardener	poises	2000-3000
Ad-mix	poises	2000-3000

SHEAR RATIO

(each Component)	2.0 minimum
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POT LIFE ASTM-C-881

6-10 minutes

BOND STRENGTH TO CONCRETE

Minutes to reach 200 psi	40 minutes
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SLANT SHEAR STRENGTH

24 hrs. at 25°C	1000 psi minimum
Plus 24 hr. water soak at 25°C	800 psi minimum

TENSILE ADHESION & COHESION

To ceramic button bottom	700 psi minimum
To reflector marker bottom	500 psi minimum

CAUTION -

- Minimum application temperature 40° F (4.4° C) **
- Do not thin, solvents will prevent proper cure.
- Moisture passing through substrate by pressure during application curing of the epoxy will cause bond failure.

****TEMPERATURES:** Will cure at temperatures as low as 40°F (4.4° C), providing the temperatures will be 40° F and rising the next 72 hours. Epoxy materials should be stored at least 24 hours prior to use at 60° F (15.6° C) or higher. Epoxies stored below 60 ° will cause the epoxy to thicken substantially, making it difficult to properly blend the two materials and obtain a proper mating of resin and hardener. Lower substrate temperatures will prolong cure time. Not recommended at temperatures below 40°. A layer of frost will inhibit bond. It is recommended at lower substrate temperatures, to use a product temperature of at least 80° to 85° F (26.7-29.4° C). **PROTECT FROM INCLEMENT WEATHER AND FREEZING.** If product temperature falls below 50° (10° C), it is recommended that a product temperature of 70° F (21° C) be obtained prior to using.

CAUTION: AT TEMPERATURES ABOVE 80° F (26.7° C) WORKING TIME IS RAPIDLY REDUCED.

TEMPERATURE CONSIDERATIONS

Surface temperature and ambient temperature is quite often beyond the control of the applicator. The applicator should, however, consider the effects of temperature on the product.

A product that is stored in a temperature range of 80° to 90° F (26.7-32.2° C) will thin out slightly, making it easier to hand mix. A product mixed at a warmer temperature will have a slightly shorter pot life, perhaps in the neighborhood of 6 min. but faster setting time, thus permitting the area to be opened earlier to traffic.

Product temperatures below 70° F (21° C) thickens very rapidly to a heavy paste making it difficult to mix, provides longer working time, with resulting much longer setting time and delay in opening the areas to traffic

Automatic metering in mixing equipment is the ideal way of using the products. This equipment has the ability to warm the product up to 110 ° F (43.3° C), automatically meters the correct portion and provides thorough mixing.

When applying on road surfaces when it's anticipated that the surface will be in the 50's F (10's C), it is recommended that both components be stored at 77 ° to 80 ° (25°-26.7° C) for 24 hours prior to use.

GUIDE TO OPENING TO TRAFFIC BASED ON SURFACE AND EPOXY TEMPERATURE

The following guide is based on a temperature ratio of both road surface and epoxy adhesive. Should the road surface be at a lower temperature than that of the adhesive then adjustment for set time must be made

MARKER ADHESIVE GUIDE

<u>Temp. F (C)</u>	<u>Set Time (minutes)</u>
110 (43.3)	7 – 15 minutes
100 (37.8)	12 – 15 minutes
90 (32.2)	15 – 20 minutes
80 (26.7)	20 – 30 minutes
70 (21)	30 – 45 minutes
60 (15.6)	50 – 60 minutes
50 (10)	100+ minutes

SURFACE PREPARATION

All applications should be made on a clean dry surface that is free of dirt, dust, grease, oil or any foreign material that would prevent the proper bond of the adhesive to the surface. The surface should be structurally sound and secure. For best results it is recommended the surface be lightly sandblasted before application of the adhesive.

New Asphalt Surfaces - E-BOND 1249 bonds well to weathered asphalt surfaces. It is recommended on new asphalt surfaces, a light sandblasting be utilized to remove any oil contaminants from the aggregate. It is recommended that the user test the performance of the adhesive prior to large scale applications.

New Concrete Surfaces - All curing agents should be removed by sandblasting before application of adhesives.

MACHINE MIXING

Both components should be stored for a minimum of 24 hours prior to use at temperatures of 77°F (25° C), or higher. It is recommended that in-line heaters be used in automatic mixing and metering equipment to raise the temperature of the product prior to mixing and use.

Much more rapid cures can be obtained if both components are heated while in the machine at 110°F (43.3° C) to 120°F (48.9° C).

The applicator is particularly cautioned to check the mixing and metering heads prior to commencement of work each day. It is important that he accurately determine that he has obtained a proper mixing ratio of 1 part of Component A to 1 part of Component B by volume. After determining that the ratio is correct, he should also determine if there is a thorough and complete blend to a uniform gray.

HAND MIXING

Accurately measure out equal amounts of Component A and Component B. Only mix the amount of material that can be used within the working life of the product. At normal temperatures it is not recommended to mix over 3 or 4 oz. (89-118 ml) at a time.

Thoroughly blend both components until an even gray is obtained.

APPLICATION OF EPOXY

Place the marker with the adhesive on the road surface using sufficient pressure to ensure a visible bead of adhesive around the perimeter of the marker. Excessive epoxy in front of the reflector should be scraped aside. Excessive pressure on markers may result in insufficient adhesive remaining under the marker. **PROTECT THE AREA FROM TRAFFIC UNTIL THE ADHESIVE IS SET.**

NOTE: DO NOT STEP ON MARKERS AFTER PLACEMENT OF THE ADHESIVE. SIMPLE HAND PRESSURE IS ALL THAT IS NEEDED TO ENSURE ADEQUATE PERFORMANCE.

NOTE: Do not apply when the road surface or air temperature is below 50° F (10° C). Only apply when the road surface and air temperature is above 50° F (10° C) and is anticipated that it will remain above 50° F (10° C) for the following 24 hour after application. When applying at cooler temperature, precondition material to approximately 77°F (25° C) prior to application.

COVERAGE

1 gal. of E-Bond 1249 Epoxy adhesive in theory should be sufficient for 100 Raised traffic markers. In practice, depending on the porosity of the surface, and the rate of application, the coverage may be as low as 60 raised markers per gallon.

Coverage for 1249 for Recessed traffic markers, depending on the groove and depth of groove, can vary from 15-25 markers per gallon.

PACKAGING

CASE - 2 Gallon Unit (7.6l) (1 gal. A - 1 gal. B)
10 Gallon Unit (38l) (5 gal. A - 5 gal. B.)

APPROXIMATE WEIGHT

27 Ibs. (12.2 kg)
128 Ibs. (58 kg)

STORAGE: Store dry at 40-85° F (4.4 –29.4° C) before using.

CAUTION - For professional use only; not for sale to or use by the general public. E-Bond's epoxies contain alkaline amines. Strong sensitizer; MAY CAUSE SKIN SENSITIZATION or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. IN CASE OF CONTACT immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles, and barrier cream on all exposed skin

LIMITED WARRANTY NOTICE: E-BOND EPOXIES, INC warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. The purchaser must examine the product when received and promptly notify E-BOND EPOXIES, INC in writing of any nonconformity before the product is used and no later than 30 days after such non-conformity is first discovered. If E-BOND, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty.

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