



# INSTALLATION INSTRUCTIONS

Early Set, Structural Epoxy for Repairing Concrete Floors

## ARMOR-HARD

### SURFACE/DEFECT PREPARATION

All surfaces must be clean, dry, structurally sound and free of grease, oil, coatings, sealers, paint, etc. Surface preparation may be accomplished by grinding, sawing, chipping, sandblasting, etc. Prevent featheredging by creating a vertical edge at outer point of defect to be repaired (1/2" minimum, 3/4" preferred). See Metzger/McGuire's *Guide to Basic Floor Repair* and related information on repair procedures for recommendations. New concrete should have minimum cure of 30 days.

### MIXING

(Read product container labels and MSDS prior to use.)

**Caution**—Due to 4:1 ratio, the entire contents of both epoxy parts should be used. If using less than full unit, "A" and "B" ratio must be measured precisely by volumetric comparison.

Ambient temperature should be at least 50°F (10°C). Combine parts "A" and "B" in a plastic pail and mix for 2-3 minutes using a Jiffy-type mixer and a variable speed drill. Keep drill speed below 800 rpm to avoid air entrapment. If using as a liquid, dispense promptly. Application of mixed liquid as a primer coat (brush-applied) will enhance mortar adhesion.

Mortar mixing is best achieved using a 1/2" heavy duty drill with a mortar mixing paddle or a rotating pail mixer. Thoroughly mix epoxy liquid, then gradually add sand aggregate chosen. Blend until all sand aggregate is "wetted" with the epoxy or until you reach the desired consistency for your placement or comfort level. Mix for an additional 2-3 minutes after optimum aggregate loading.

**Note:** Ideal aggregate loading may vary depending upon aggregate grit, composition, etc. Priming the repair area with liquid Armor-Hard prior to mortar placement is recommended.

If using liquid Armor-Hard as primer, ensure liquid does not cure prior to the placement of the mortar mixture. If a primed area does cure prior to mortar placement scarify or abraid the primed area prior to mortar placement to ensure enhanced adhesion.

### DISPENSING

Promptly install mortar into defect, spread evenly using clean steel trowel. Finish installing each unit before mixing the next. Trowel mortar to desired density and finish texture. If mortar starts to stiffen and creates trowel drag, wipe trowel with isopropyl alcohol or acetone. The final surface density and appearance will reflect trowel pressure and intensity. Working time for mortar is approximately 30-40 minutes at 70°F.

### CLEAN-UP

Spills of unmixed components can be cleaned up with solvent (Xylol, denatured alcohol, etc). Clean tools and spills before epoxy or mortar has set using solvent or warm soapy water.

## TECHNICAL INFORMATION

The following properties are for the installed mortar using aggregate blend provided in Metzger/McGuire's ARMOR-HARD KIT. Your actual results may vary depending upon aggregate choice and composition.

Working Time (as mortar).....	30-40 mins. @ 70° F
Initial Set.....	3-4 hrs. @ 70° F
Grindable Time.....	3-5 hrs. @ 70° F
Foot Traffic Ready.....	3-5 hrs. @ 70° F
Heavy Duty Traffic.....	4-8 hrs. @ 70° F
Color, Mixed, Of Liquid.....	Translucent/clear*
Mix Ratio, By Volume.....	4A:1B

\*Mortar color will be grayish-tan or gray depending upon aggregate color selected.

### COVERAGE

One (1) gallon of ARMOR-HARD liquid contains approx. 232 cubic inches of liquid. When combining with aggregate use a dry, bagged type of even consistency/gradation. Grit sizes of #20 to #40-44 are commonly available through tile/masonry suppliers, etc. Blending a smaller grit (#40) with a larger grit (#20) can improve trowelability. The surface density of your repair will depend upon aggregate type/size, method of troweling and aggregate-to-liquid loading.

As a rule, ARMOR-HARD will accept an aggregate loading of approx. 3-to-6 times its volume (begin with 3 gallons of sand aggregate to each gallon of ARMOR-HARD and work up to reasonable mixture for placement and troweling).

When calculating mortar yield, recognize that 1 gallon liquid plus 1 gallon aggregate does not produce 2 gallons of mortar since much of the epoxy liquid is absorbed by the aggregate. For example, 1 gallon of epoxy liquid plus 2 gallons aggregate will usually yield approximately 2 gallons of blended mortar.

If you are concerned about selecting the proper aggregate, or achieving the proper aggregate loading, consider the ARMOR-HARD KIT. This "kit" comes with just under 1/2 gal. of ARMOR-HARD epoxy liquid and a pre-measured amount of blended aggregate developed to yield a dense, easily troweled mortar.

### SHELF LIFE/STORAGE

ARMOR-HARD has a guaranteed shelf life of 12 months if containers remain unopened. Store in dry, cool areas away from excessive heat, freeze/thaw and sunlight.

### SAFETY

This product is for industrial use only. Use only in well ventilated areas. Practice all normal jobsite safety precautions (clear work area, etc). Thoroughly read and understand MSDS prior to using material.

### FOOD FACILITY CAUTION

USDA prohibits the use of chemicals in areas where existing food or food packaging can be contaminated. Contact Metzger/McGuire for assistance if food products are present.

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