

# ARMOR-HARD PRIMER

Epoxy Primer for use with  
Armor-Hard Product Line

## TECHNICAL DATA

## AHP-1

### 1. Product Name **ARMOR-HARD PRIMER**

### 2. Manufacturer **METZGER/MCGUIRE**

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### 3. Product Description

**Armor-Hard PRIMER** is a 100% solids, low viscosity, two-part epoxy for use as a primer to enhance substrate adhesion with the Armor-Hard line of products including **Armor-Hard HDR**, **Armor-Hard** and **Armor-Hard Extreme**.

**Armor-Hard PRIMER's** unique chemistry permits rapid displacement of substrate moisture, allowing for use on damp surfaces.

### 4. Packaging

**Armor-Hard PRIMER** is conveniently packaged in pre-measured two (2) component kits, containing a resin (Part A) and hardener (Part B). Kit yield = 3 gallons.

### 5. Typical Characteristics at 72°F (22°C)

Color .....Light Amber  
Mixing Ratio, (by volume) .....2A/1B  
Working Time ..... 20 minutes  
Gel Time ..... 25 minutes  
Tack Free Time ..... 6 hours  
Coverage ..... 100-300 square feet per gallon  
(depending upon surface porosity and profile.)

### 6. Advantages

Ideal for use in new or old damaged concrete floors, **Armor-Hard PRIMER** used with **Armor-Hard** repair products provides outstanding protection against a wide range of severe mechanical abuses typically found in industrial environments. Adhesion to concrete is excellent.

- 100% Solids
- Excellent Impact Resistance
- USDA/FDA/CFIA Acceptable
- Excellent Wear Resistance
- Environmentally Friendly
- Fast Walk-On Time

### 7. Chemical Resistance (28 Day Immersion @ 72°F)

#### Excellent Resistance

Motor Oil	10 % Lactic Acid
Unleaded Gasoline	10 % Nitric Acid
Gasohol	30 % Citric Acid
Kerosene	50 % Gluconic Acid
Diesel Fuel	10 % Acetic Acid
Xylene	50 % Sulfuric Acid
Ethyl Alcohol	10 % Hydrochloric Acid
Methanol	75 % Phosphoric Acid
Ethylene Glycol	50 % Sodium Hydroxide
Cyclohexanol	Bleach

#### Very Good

1,1,1-Trichloroethane
Toluene
70 % Sulfuric Acid
36 % Hydrochloric Acid
30 % Nitric Acid

#### Not Recommended

Methyl Ethyl Ketone
50 % Acetic Acid
50 % Nitric Acid
Methylene Chloride



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## 8. Surface Preparation

**Armor-Hard PRIMER** is used to strengthen and seal a porous concrete substrate, therefore, adhesion is paramount. To achieve maximum adhesion, the substrate should be free of all loose and foreign materials and should be roughened to provide a coarse profile by either shot blasting or shaving/planning the concrete floor surface.

Before shot blasting, any contaminants on/in the concrete must be identified. Oils, grease, fats, waxes, or other contaminants must be removed prior to roughening the concrete. Contaminants can be removed with an application of warm (120-140°F) caustic detergent, a chemical cleaner/degreaser, steam cleaning or pressure washing. Degrease the floor and follow with a hot water rinse. Repeat this process until the water does not "bead up" on the concrete.

Shot blasting using self-propelled, self contained equipment is highly recommended. NEW CONCRETE MUST CURE A MINIMUM OF 28 DAYS PRIOR TO THE APPLICATION OF ANY EPOXY. CONCRETE MUST BE TESTED FOR MOISTURE AND VAPOR TRANSMISSIONS BEFORE COATING.

Relative humidity and dew point must be determined before application to avoid adhesion failures. The dew point is used to predict the substrate temperature at which airborne moisture begins to condense, in the form of water, on the substrate. Never apply a coating unless the concrete surface temperature is 5°F above the dew point. A dew point calculation chart is available by contacting Metzger/McGuire.

## 9. Application

**Primer Mixing:** **Armor-Hard PRIMER** is a two component system. Both components (liquids A and B) should be stored or conditioned at 70-90°F (21-32°C) prior to mixing. Pour the hardener (B side) into the resin (A side) and blend thoroughly using a mixing paddle and slow speed hand drill for 3 minutes. Mix at slow speeds (less than 850 rpm) to avoid air entrainment. Do not mix more material than can be used within the stated working time. Remember - you will have less working time at higher temperatures. Working time is approximately 20 minutes at 72°F (22°C)

DO NOT apply **Armor-Hard PRIMER** over standing water. Damp or dry concrete is acceptable.

**Primer Application:** **Armor-Hard PRIMER** can be applied by brush or short nap roller. Do not thin primer! Do not over-apply or allow to puddle. A thin, uniform coat is preferred. Do not apply to concrete colder than 50°F (10°C) as insufficient curing may result.

**Coverage:** 100-300 square feet per gallon depending upon surface porosity and profile.

## Coverage (Continued):

**Armor-Hard** products can be applied to the **Armor-Hard PRIMER** immediately or while primer is still tacky. If more than 24 hours have passed, and if primer is no longer tacky, it is necessary to mechanically abrade the surface and re-apply primer prior to installing **Armor-Hard** products.

Do not rapidly raise the air or substrate temperature; this can cause outgassing of the concrete and joint shrinkage. This also can lead to product cracking or failure.

## 10. Clean Up

**Armor-Hard PRIMER**, before it has hardened, can be removed from tools with solvent or warm soapy water.

## 11. Shelf Life and Storage

**Armor-Hard PRIMER** has a guaranteed shelf life of twelve (12) months if containers remain unopened. Store in dry, cool areas away from excessive heat, freeze/thaw and sunlight.

## 12. Safety Precautions

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. DO NOT WELD ON, BURN OR TORCH ON OR NEAR 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 minutes and obtain medical attention. Read and understand all cautions on can labels and safety data sheets before using this material.

## 13. Material Warranty

**WARRANTY:** Metzger/McGuire Co. solely and expressly warrants that its **Armor-Hard PRIMER** shall be free from defects in material and workmanship for 365 days from the date of purchase. Unless authorized in writing by an officer of Metzger/McGuire, no other representations or statements made by Metzger/McGuire or its representatives, in writing or orally, shall alter this warranty. Metzger/McGuire makes no warranties, implied or otherwise, as to the merchantability or fitness for ordinary or particular purposes of its products and excludes the same. If any Metzger/McGuire product fails to conform with this warrant, Metzger/McGuire will replace the product at no cost to the purchaser. Purchaser's sole remedy in any case shall be limited to the purchase price or replacement cost of product and specifically excludes labor and the cost of labor, lost wages and opportunity costs, and all other possible incidental, consequential or special damages resulting from any claim of breach of warranty, breach of contract, negligence or any legal theory. Any warranty claim must be made within one (1) year from the date of material purchase. Metzger/McGuire does not authorize anyone on its behalf to make any written or oral statements which in any way alter the installation procedures or written installation instructions published in its product literature or on its packaging labels. Any installation of Metzger/McGuire products which fails to conform with such installation information or instructions shall void this warranty. Purchaser shall be solely responsible for determining the suitability of Metzger/McGuire's products for the purchaser's intended purpose.

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