



**american coating technologies**  
www.amcoating.com

# Product Technical Data

## AM 901 Water Based Cement Urethane Mortar

### Product Description

AM 901 is a three component trowelable urethane mortar that has outstanding wear performance and can withstand higher heat exposures than typical unmodified urethanes. The product has good thermal shock capabilities and is a good choice for hot wash down areas.

#### Solids By Weight:

Approximately 97% solids (liquids mixed with aggregate)

#### Volatile Organic Content:

Negligible

#### Standard Colors:

Gray and red

#### Recommended Film Thickness:

1/4" to 3/8"

#### Coverage Per Kit:

The standard kit will yield 18 square feet @ 1/4"  
The standard kit will yield 12 square feet @ 3/8"

#### Packaging Information:

Urethane Cement: (3.75# part A in a gallon can not full + 4.4# part B in a 1/2 gallon can not full + 1 bags blended aggregate at 42#)

#### Mix Ratio:

3.75# part A + 4.4# part B + 42# aggregate blend

#### Shelf Life:

6 months for liquids in unopened containers/3 months for aggregate unopened

#### Finish Characteristics:

Slightly textured/rough finish

#### Compressive Strength:

8,600 psi

#### Tensile Strength:

1,000 psi

#### Adhesion:

400 psi @ elcometer (concrete failure, no delamination)

#### Flexural Strength:

3,400 psi

#### Hardness:

Shore D = 80-90 typical

#### Thermal Shock Resistance:

After a seven-day cure, samples were held at 50C for 15 hours and then immediately exposed to 1000C water. This cycle was repeated four times. The samples were then held at 50C for 15 hours and then immediately exposed to steam for 5 minutes. After the thermal cycle and steam exposure, the surfaces were examined for cracks or damage and the bond strength was tested. The bond test before and after the thermal and steam exposure was greater than 400 psi and there was no damage to the exposed surface observed.

#### Hot Oil Testing:

Hot cooking oil at 2200C was placed on a sample in a pool on the surface and allowed to cool to room temperature. No surface damage was apparent and adhesion of the sample was unaffected.

#### Impact Resistance:

160 in. lbs

#### Abrasion Resistance:

5mg loss

#### Viscosity:

When mixed with the part C aggregate, it forms a Trowelable paste.

### Recommended For

Resurfacing areas where a durable shock resistant surface is needed.

#### Dot Classifications:

Not Regulated

#### Heat Resistance:

Can withstand up to 300F degrees dry heat exposures

#### Cure Schedule: (70°F)

|                            |               |
|----------------------------|---------------|
| Pot life – (150 gram mass) | 15-20 minutes |
| Tack free (dry to touch)   | 6-8 hours     |
| Light foot traffic         | 12-14 hours   |
| Full cure (heavy traffic)  | 3-5 days      |

#### Application Temperature:

45-85 degrees F with relative humidity below 85%.)

#### Primer:

None normally required.

#### Topcoat:

Optional.

#### Chemical Resistance:

Spot testing per ASTM D1308 for Mustard, Ketchup, Lactic acid, vinegar, and lemon juice were performed and no physical damage to the exposed surface was observed. In 24 hour immersion testing, the following results were observed.

| Chemical Exposure    | Performance |
|----------------------|-------------|
| 10% acetic acid      | passed      |
| 30% nitric           | passed      |
| Sodium Hydroxide 50% | passed      |
| Sulfuric Acid 30%    | passed      |
| Xylene               | passed      |

## AM 901 Instructions:

**1) PRODUCT STORAGE:** Store product in an area as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degrees F. Low temperatures may cause product crystallization.

**2) SURFACE PREPARATION:** The most suitable surface preparation would be a fine brush blast (shot blast) to remove all laitance and provide a suitable profile. All dirt, foreign contaminants, oil and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete moisture content is controlled to acceptable levels, this can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is generally considered suitable for coatings. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding. After surface preparation and before application, repair all bug holes and grind down any projections. Repair all cracks or concrete Imperfections.

**3) PRODUCT MIXING:** This product is packaged with a gallon container of part A (not full) and a ½ gallon container of part B (not full) with an aggregate component consisting of one bag. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down. Add the part B component to an oversized mixing container first, followed by the part a component. After the two liquid parts are combined thoroughly and streak free, add in the provided aggregate and mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and uniform in color. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix. The material in the transfer pail is now ready to be applied on the prepared substrate. Remix occasionally to prevent settling of aggregate. Improper mixing may result in product failure.

**4) PRIMING:** No primer is necessary on a properly prepared substrate, however, if concrete outgassing occurs, discontinue application and apply a suitable primer.

**5) PRODUCT APPLICATION:** Have the floor as dry as possible without any puddles of water present. If there is excess water on the substrate, take up excess with a suitable vacuum until a near dry condition exists. Then, after the material is thoroughly mixed, pour the material onto the substrate. Either use a trowel to push out and level the material evenly or spread with a gauge rake followed by a hand trowel. Immediately after the product is applied, broadcast with aggregate to rejection. Remove excess aggregate after the material has cured. Surfaces not broadcasted could have an uneven texture. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. Do not apply to cracked or unsound concrete. Do not feather edge.

**6) RECOAT OR TOPCOATING:** Except for the aggregate broadcast, topcoats are not recommended. In some areas, a suitable high build novolac coating can be used, depending on specific requirements. If Top coated, the high heat resistance would be diminished.

**7) CLEANUP:** For cleaning any application, equipment, water can be used. The Epoxy component container is best cleaned with a suitable solvent.

**8) FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

**9) RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.

### Limitations:

Color stability or gloss may be affected by high humidity, low temperature, chemical exposure or lighting such as sodium vapor lights.

Proper mixing is important for product performance.

High heat exposure may discolor the surface.

Colors may vary from batch to batch. Therefore, use only product from the same batches for an entire job. \*This product is not UV color stable.

Always apply a suitable test area to evaluate the product performance and suitability prior to undertaking the entire project. Samples are available upon request.

Mixtures of chemicals and applications with exposures to chemicals at elevated temperatures should be thoroughly evaluated before applying.

Substrate temperature must be 5°F above dew point.

All new concrete must be cured for at least 30 days prior to application.

Physical properties are typical values and not specifications.

[See this side for application instructions.](#)

[See this side for limitations of our liability and warranty.](#)

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