

EPOXY METALLIC COATING SYSTEM

INTRODUCTION

Our metallic epoxy coating system is a two coat (with an optional 3rd coat) system over concrete floors. This coating system can transform old and new floors into not only beautiful ones, but also is highly chemical resistant and forms a seamless easy to clean floor.

Due to the characteristics of metallic epoxy floors each application will take on its own appearance created by various techniques. We always recommend testing your methodology before doing your entire floor. (we do have sample kits available)

The following instructions are based on best practices used for installing the metallic coating system. The basic steps are:

1. Floor Prep and Repair
2. Basecoat/Prime Coat
3. Metallic Coat
4. Optional Prime Coat

FLOOR PREP AND REPAIRS

Surface preparation for this system is a key component that should not be overlooked. Surface preparation is required to remove any contaminations and create a profile for the proper adhesion of the epoxy.

Many methods are available to prepare a concrete floor for coating. The preparation method is largely determined by current surface conditions, time allowed for the entire process and accessibility.

One of the key components is to ensure that the surface is free from sealers. A simple test for this is to pour muriatic acid on the floor. If it immediately starts to foam, the floor likely has no sealer. If it doesn't foam immediately there is a sealer on the floor that must be removed by a chemical and/or mechanical method. Sealer or no sealer, the floor still needs to be properly profiled to ensure a good bond.

FLOOR PREP AND REPAIRS CONTINUED

A few methods for properly preparing the concrete are:

1. Diamond Grinding
 - Using a lower grit (16, 30) metal bond diamond tool on a single headed or planetary grinder
 - ✚ If you are in the Kansas City area, we rent and sell concrete grinding machines
2. Use our Tornado Satellite pad (30 grit)
 - Also, use our Super Blue liquid floor prep
3. Use a low speed floor buffer and a black cleaning pad
 - Also, use our Super Blue liquid floor prep

Ideally the substrate should be cleaned to a matte finish and free of any surface contaminates.

Repairs in the concrete can be made by simply mixing up a small batch of HyperRez epoxy and blending it with a clean and dry sand, making a wet sand castle like material. This can be applied with a putty knife into cracks and holes. Leave this repair as flush as possible to the surface.

NOTE: MESSY REPAIRS WILL SHOW THROUGH YOUR METALLIC. REPAIRS CAN BE GROUND FLUSH WITH A DIAMOND CUP WHEEL AFTER THE EPOXY CURES (TYPICALLY 12 HOURS)

BASECOAT/PRIMER COAT

Priming the concrete floor is a critical step in the metallic system process. The prime coat does two things: provides maximum adhesion for the metallic coat, helps prevent out-gassing, hides floor imperfections so they don't shadow through the metallic coat.

Our HyperRez Epoxy is a universal product and can be used as a primer coat. Typically, a black pigmented primer coat is used to hide imperfections from shadowing through the metallic coat and to add depth to the finished floor.

NOTE: IF A LIGHTER COLORED METALLIC COATING IS DESIRED A LIGHTER COLORED PRIMER SUCH AS A GREY OR WHITE PIGMENT CAN BE USED FOR THE BASECOAT.

BASECOAT/PRIMER CONTINUED

MIXING

- HyperRez is to be mixed A:B, 2:1....meaning 2 parts "A" to one part "B". Mix only what you can use in a 20 to 30 minute time period. Note: Most installers mix 1.5 to 3 gallons at a time and have everything ready to mix another batch with minimal downtime.
- Add the proper amount of pigment to the mix (*typically 6 oz/ gallon*).
- Mix for **two minutes (minimum)** with a paddle mixer at low speed (*do not hand stir, mechanically blend only*)

APPLICATION

- Once the prime coat is mixed thoroughly immediately pour all of the material out of the bucket in a ribbon on the floor. Spread using a notched squeegee trying to cover 100% of the floor. Back roll with a lint free $\frac{3}{8}$ nap roller.
- Apply the primer coat at roughly 150 sq. ft. per gallon
- Allow the primer coat to become tack free before applying the metallic coat. If any outgassing occurred in the primer coat the outgassing 'rings' should be sanded flush.

TIP: MIST XYLENE ONTO THE FLOOR WHILE THE EPOXY IS STILL WET TO RELAX OUTGASSING BUBBLES IF THEY OCCUR. **REMEMBER, XYLENE IS FLAMABLE!**

METALLIC COAT

After the prime coat has sufficiently dried the metallic coat can be applied. The metallic coat must be applied within 24 hours after application of the prime coat. The prime coat should also be tack free.

If more than 24 hours has elapsed after prime coat has been installed the floor will need to be screened (deglossed) with a 80 to 120 grit sand screen, vacuumed, and wiped clean using denatured alcohol or xylene and microfiber.

METALLIC COAT CONTINUED

NOTE: MANY CONTRACTORS DO THIS STEP BETWEEN COATS REGARDLESS OF ELAPSED TIME BECAUSE IT GIVES A BETTER "BITE" FOR THE METALLIC EPOXY COAT, AND SANDS SMOOTH ANY OUTGASSING THAT MAY HAVE OCCURRED

MIXING

- HyperRez is to be mixed A:B, 2:1....meaning 2 parts "A" to one part "B". Mix only what you can use in a 20 to 30 minute time period. Note: Most mix 1.5 to 3 gallons at a time.
- Add the proper amount of metallic pigment to the mix (for our "house" brand metallics this would be one small unit per gallon of mixed material)
- Mix for **two minutes (minimum)** with a paddle mixer at low speed (**do not hand stir, mechanically blend only**)

APPLICATION

- Once the prime coat is mixed thoroughly immediately pour all the material out of the bucket in a ribbon on the floor. Spread using a notched squeegee. Application rates for the metallic coat should be around 100 sq. ft. per gallon. Back roll with a lint free $\frac{3}{8}$ nap roller. It is not necessary and somewhat not encouraged to back roll the metallic coat out in straight lines. Back rolling the metallic coat in random patterns helps give the metallic coat marbling and dimension.
 - Once the floor has been "laid out" and self-levels on the floor a variety of finishing techniques can be used. Here are a few ideas (always experiment prior to doing your floor) or if you like it, just leave it!
 - "Cloud Technique". After waiting approximately 10 minutes the epoxy will start to kick over and become more of a honey consistency. Solvents such as xylene, and denature alcohol can be dropped on the floor using a paint brush. Do this by dipping the paint brush into some of the solvent, then letting the solvent randomly drop onto the floor
 - "Marble technique" This technique can be done after the epoxy has been distributed or during the spreading of the metallic for a more subdued marble look.

METALLIC COAT CONTINUED

Various methods and techniques can be used/combined, or develop your own method!

After application, typically dry to light foot traffic within 24 hours. **(temperature and humidity effect set time)**

OPTIONAL TOPCOAT

Application of a clear topcoat (wear coat) over the metallic coat is an optional, but recommended application. This coat will add additional depth, durability, and improve maintenance of the metallic floor system. Your options for the topcoat are:

1. Our Water Based Urethane (H2O Hyperthane): This is a two-component water based urethane that comes in gloss, and low gloss. (must be applied within 24 hours after metallic coat) This product will give you the most chemical resistance.
2. HyperRez Epoxy: This is the same product you utilized for the base/prime coat and metallic coat. This product will give you the most depth.
3. EZ Glow: This is our floor finish product. The easiest to apply. Spray down, microfiber, buff to a sheen. This is the most economical topcoat at just pennies per square foot. It also makes any scratches that happen easy to buff out. It is the least chemical resistant and does not offer as much 'depth' as the other two options.