

# HARD DECK FLOOR COATING APPLICATION INSTRUCTIONS 2010

The controlling principles surrounding successful floor coating revolve around having a proper substrate for the coating to adhere to. First, for any ground level concrete floor there can be no hydraulic pressure forcing water up through the slab. Proper construction drainage techniques and the installation of a vapor barrier under the slab before pouring it usually correct this. Secondly, surface preparation is all important. The purpose of proper surface preparation is to remove all contaminants which can interfere with adhesion and to produce surface roughness which enhances mechanical adhesion of the coating to the surface.

Finally, prior to the application of any coating, make certain the previous coating is fully cured. Coatings require exposure to the air for oxidation and cure. Top coating too early halts the curing process and improper film formation will result.

## NEW CONCRETE:

The concrete should be clean, dry and well cured before coating. New concrete should be cured for 30 days at or above 70F before coating. If a curing compound or sealer is used to cure the concrete it must be removed before coating by sandblasting or mechanical scarifying. To check for the presence of an existing sealer, apply a small amount of water on the concrete and see if the water "beads up" on the surface. If so, the concrete has been sealed and that sealer will need to be removed.

## OLD CONCRETE:

Any stubborn grease or oil stains must be cleaned thoroughly using a steam cleaner or high pressure washer, and a commercial degreasing cleaner or detergent. Scrub stains thoroughly. Vacuum up material with a wet vac. Refer to ASTM Standard D4258 "Standard Practice for Surface Cleaning Concrete for Coating".

Grind, or sand floors ( 20 grit sanding disk), or sand/shotblast to roughen surface and remove any foreign matter, old paint, etc. Remove all sanding dust with a broom and vacuum. Refer to ASTM Standard D4259 "Standard Practice for Abrading Concrete".

Clean floor thoroughly with "BICEP" cleaner using a buffer with a scrub brush attachment. Rinse floor thoroughly.

## NEW or OLD CONCRETE:

Pre-wet the floor and etch it with a dilute solution of the Acid Etch (2 parts water/1 part acid). The acid should be applied evenly to the floor. A plastic watering pail like that used for a flower garden works well. Warm water and working with broom or brush will accelerate action.

Allow the acid to foam for 20-30 minutes until it subsides. Note: If the acid solution is not foaming, then it is not working. Increase the concentration. Surface texture should be that of medium sandpaper.

Wash the floor with water and neutralize with an ammonia solution (2 cups ammonia per 5 gallons of water) to achieve a neutral pH.

Wash floor clean. Do not allow any acid to remain as salts will form on the surface. Rinse floor 2 or 3 times with clean water. A pressure washer helps to remove the fines released by the acid etch.

Allow floor to dry thoroughly which usually requires overnight or longer in low temperature/high humidity conditions. Air movement and heat help the drying process. One can test for dryness by taping a 18 inch square plastic sheet to the surface in an area not exposed to heat or sunlight and leave it for 16 hours. Remove & inspect for the presence of moisture. There should be none. Vacuum the floor to remove any dust.

Check the weather. Surface temperatures must be at least 5 degrees higher than dew point temperature to prevent condensation as solvents evaporate. Ambient temperatures should be 50°F or greater or else cure times will increase dramatically.

When ready to color coat, open all cans of color and catalyst. Inspect to see any shading or color difference when comparing one with another. If any is noted, mix all color together. This prevents color difference on the floor from different batches of material and is just good painting practice.

Mix the color as follows:

**1 part color**

**1 part EP color catalyst**

Mix each component thoroughly by using a handheld drill motor and a paddle bit used for mixing paints. Stirring by hand is not sufficient.

Mix the two parts in a 5 gal bucket. Add the color first and then add the catalyst to the color while mixing. Never add the color to the catalyst. Use a rubber spatula to remove the excess product from the walls of the cans.

Use thinner to get the remaining contents out of the empty color and catalyst cans. Only use up to ½ pint of thinner per mixed gallon. Over thinning reduces hiding properties. Pour into mix bucket and stir thoroughly.

Apply the color coat using a short nap (1/4 inch) 18 inch roller rated for solvent based paints. Try to avoid "back rolling" or dry rolling as this picks up paint and reduces hiding.

Allow color coat to dry thoroughly before top coating. **Never topcoat an uncured surface.** Use a fingernail or knife to scratch the surface. If it is "gummy" it is not fully cured.

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Minimum dry times for color coats:

Temperature	Regular Cure	Fast Cure
80°F	18 hrs.	12 hrs.
70°F	28 hrs.	18 hrs.
60°F	48 hrs.	24 hrs.
55°F	72 hrs.	24 hrs.
50°F or below	Do not coat	Do not coat

HARD DECK WILL "YELLOW" WHEN APPLIED OVER UNCURED COLOR COAT!!! ENSURE COLOR COAT HAS COMPLETELY CURED BEFORE TOPCOATING WITH HARD DECK.

Maximum dry time without abrading color coat:

Temperature	Regular Cure	Fast Cure
80°F	48 hrs.	24 hrs.
70°F	72 hrs.	36 hrs.
60°F	4 days	48 hrs.
55°F	5 days	48 hrs.
50°F or below	Do not coat	Do not coat

Apply a second color coat and allow it to dry thoroughly. Test the color coat for cure by scratching with a knife. If it is "gummy" the color is not cured. Do not top coat with HARD DECK until the color coat is dried or cured thoroughly. If a smoother surface is desired (ie. no visible roller stipple) sand color coat with a buffer and 150 grit screen under a buffing pad.

Mix the HARD DECK as follows:

**2 parts HARD DECK resin**  
**1 part catalyst CCM 5200**

When warm temperatures prevail, apply Hard Deck early in the morning. Do not apply to a warm concrete floor in the heat of the day.

Measure amounts accurately using a mixing cup or a calibrated plastic pitcher. Mix the components thoroughly by stirring.



Mix only amounts needed within this time frame. One person mixing, one cutting in, and two people applying works well.

Apply the mixture at the rate of 400-450 sq. ft./gal. Example: 1 gal. Hard Deck resin and 2 quarts CCM 5200 catalyst will cover 600 – 675 sq ft.

Apply thin coats of HARD DECK. Thick coats or puddling will cause discoloration. If a thicker film is desired, apply two thin coats; not one thick coat.

Apply HARD DECK using a 1/4" roller and make one pass with the roller. Don't roll back over areas. Use a random "W" pattern and watch for holidays or missed spots.

One coat of HARD DECK should be sufficient; however, if a second coat is desired allow the first coat to dry 24 hours prior to top coating. Don't rush it as a second coat over a "green" first coat can cause blistering. After Hard Deck is "tack free" use fans to circulate air to aid curing and reduce chance of discoloration; this is most important!!

**CAUTION: SOLVENTS IN HARD DECK ARE FLAMMABLE. WHEN APPLYING, TURN OFF ALL HEAT AND ALLOW NO FLAME IN THE AREA. HARD DECK INGREDIENTS ARE TOXIC; FOLLOW INSTRUCTIONS ON THE LABELS.**

After coating, it can be walked on the next day, but allow 3 days before any significant vehicle traffic. For the first month try to avoid any chemical spills. If they occur, wipe them up quickly. Also, if parking aircraft or vehicles on the surface the first month, ensure the tires are on cardboard as tires contain aggressive chemicals. For the first month do not use any rubber backed mats as this retards cure!

HARD DECK can be dry or wet mopped. No wax or surface treatment is necessary. If recoating is desired after several years use, clean and sand lightly then recoat with HARD DECK to restore the original luster.

If any surface is too slick (ie. around doorways where water might collect) use lightweight texturing sand mixed in the second coat of color at the rate of 1-2 ounces per mixed gallon. After that coat dries, HARD DECK can be applied to lock the grit in place.

*Thank you for choosing*  
**HARD DECK!**

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