

Bond Coat Instructions

Using local products for cost savings



Concrete Solutions® Polymer Concrete Bond Coat is applied less than 1/16" thick over an existing surface using a metal edge squeegee (available from Rhino Linings Corp and many Concrete Solutions distributors). It is used to resurface and smooth out concrete and other surfaces in need of repair. It can be used in one or more coats to provide a smooth finish, or to hide crack repairs and patching prior to applying a Concrete Solutions Polymer Concrete texture coat or 1/4" Stamping application. It is also used as a wet bond coat ahead of the 1/4" Stamping mix/Stamp-Top™ and large patching applications. The Bond Coat is made with the richest formula of Concrete Solutions Concrete Polymer and provides a tenacious bond to most substrates. Follow the mixing formulas below to make your own mix or use either of Concrete Solutions pre-mixed bag mixes: Resurfacer-RBM or Resurfacer (just-add-water).

MIXING FORMULAS

Bond Coat (by volume) Coverage rate = approximately 250 sqft per mix	
In a five gallon pail mix:	
1 Gallon	Concrete Solutions Concrete Polymer
1 Gallon	Water
2 Gallons	Cement (Portland Type I/II - regular or white)
2 Gallons	Silica Sand (#60 or 90)
Note: For most applications, two gallons of sand will be all that is needed. Up to four gallons of sand can be added, if necessary, when going over semi-rough surfaces. For larger jobs a mortar mixer can be used to make the above mix five times larger.	
Resurfacer Bag (just-add-water mix)	
In a five gallon pail mix:	
1.5 Gallons	Water
1 bag	45 lb bag of Resurfacer
For a drier and thicker mix, add up to 2 gallons (8.8 liters) of #30 or #60 silica sand per bag mix.	

SURFACE PREPARATION: Surface Preparation is often the most important part of a successful coating or resurfacing application. Surface must be clean, sound, and free from oil, dirt, waxes, or any other contaminant that may interfere with bonding. Popular methods of surface preparation include grinding, shotblasting, and/or scrubbing with detergent, acid etching, neutralizing, and pressure washing. The type of surface preparation needed will depend on the condition of the substrate to be repaired, resurfaced, textured, stamped, colorcoated and/or sealed. For commercial and industrial indoor jobs, grinding is required to prepare the surface. For residential indoor jobs, scrubbing with detergent, acid washing, neutralizing, rinsing and wet/dry vacuuming is recommended. For most outdoor jobs, the surface can be cleaned by detergent scrubbing, acid washing and pressure washing. The following is a step-by-step procedure.

- 1. Protect the walls** with tape and plastic before scrubbing or rinsing.
- 2. Scrub and rinse the floors.** First dampen the surface with water in 100 to 200 sq. ft. sections at a time using a water hose. Using the floor polisher machine, scrub the dampened surface with a strong detergent (such as Simple Green) diluted 2 to 1 or 5 to 1 with water. For oil spots use straight detergent with no dilution. While scrubbing, use a water hose and trigger gun nozzle to clean the surface behind the floor polisher. For large open areas such as a warehouse floors, etc., a 3000 psi (or higher) pressure washer with a 15 degree or spinner tip on the end of the gun can be used to clean behind the floor polisher. Rinse immediately behind the floor polisher, so the residue does not dry on the surface. Use a rubber squeegee and/or broom to keep the dirty water from running back into the rinsed clean areas. **Use a wet/dry vacuum** (one or more depending on the size of the job) to remove the dirty water and detergent from the surface. The persons scrubbing, rinsing, squeegeeing and vacuuming should all work closely together doing a section at a time. After rinsing the

surface clean, check the oil spots by rubbing them with a white rag. If the rag gets dirty, it will need to be scrubbed with a heavy duty detergent using a floor polisher machine and then rinsed clean prior to using a grinder.

3. If the surface is coated with a paint or sealer, it will be necessary to remove the coating using a paint stripper, sandblaster, shotblaster or surface grinder. If a shotblaster is used, a dustless grinder can be used to clean the edges where the shotblaster cannot reach.

4. Open the concrete pores. Acid washing is recommended to etch a concrete surface when grinding, shot-blasting or sandblasting is not possible or unavailable. Opening the concrete pores allows the coating material to get good adhesion or bite into the substrate. Always wear the appropriate safety protection. The proper procedure to acid wash a concrete surface is as follows:

- a. Mix a solution in a 5 gallon pail consisting of 4 parts water and 1 part muriatic, hydrochloric or phosphoric acid. ALWAYS ADD THE ACID TO THE WATER FOR SAFETY AND TO AVOID SPLATTERING.
- b. Dampen the surface with water (no puddles) before applying the acid solution.
- c. Pour or spray the acid solution onto the dampened concrete surface. When spraying, use an acid-resistant pump-up sprayer.
- d. Scrub the acid solution evenly over the surface using an acid-resistant broom. Allow the acid solution to sit on the surface and work for 3 – 5 minutes etching the concrete. Do not allow any areas on the concrete to dry during the etching process. If this occurs, spray more water or acid solution to keep the surface wet.
- e. Once the acid solution stops fizzing, spray a solution of 10 parts water and 1 part household ammonia onto the acid solution to increase the pH and neutralize it prior to rinsing.
- f. Thoroughly rinse any acid residue off the concrete surface using a pressure washer. Pre-wet any surfaces the acid solution will be rinsed over. If indoors, rinse with water a section at a time and remove the water and acid solution with a wet/dry vacuum.

CRACK & JOINT REPAIR

Structural moving cracks should be repaired/treated with Concrete Solutions Crack Repair System prior to applying any Concrete Solutions polymer concrete products. Please refer to Concrete Solutions Crack Repair Instructions for the complete and detailed procedure.

PATCHING, LEVELING, REPITCHING

Before applying the Concrete Solutions Bond Coat/Resurfacer, any holes or deteriorated areas of the surface deeper than 1/16", should be patched smooth using an Concrete Solutions Polymer Concrete Patching Mix. Feather the edges of any patches to zero and allow to dry. When dry, use a right angle grinder with a flat, 7" Carborundum grinding wheel attachment or sandpaper to grind the patches smooth, if needed. The Polymer Concrete Patching Mix can also be used to fill in low spots, level an uneven surface or re-pitch areas with improper drainage. See the Concrete Solutions Training Manual under Patching/Leveling for step-by-step pictures and detailed mixing and application instructions.

SPREADING THE BOND COAT / RESURFACER MIX



Fog the surface with water where you wish to begin spreading the bond coat/Resurfacer mix.



Spread the mix from side to side, in straight rows using a special metal edge squeegee.

1. Spray the surface to be coated with a light fog of water in 100 – 200 sqft sections at a time. Be careful not to spray too much water.
2. Pour a row of the Bond Coat/ Resurfacer material along the starting edge over the water dampened surface.
3. Spread the material as thin as possible (less than 1/16") next to the starting edge using a 24" metal edge squeegee (available from Rhino Linings Corporation and Concrete Solutions distributors). Squeegee the material from side to side in straight rows to cover the surface and achieve as smooth of a finish as possible. Press firmly on the squeegee and overlap each pass half way as you make the next pass and so on.

4. Continue to lightly spray water ahead of the Bond Coat/Resurfacer and continue squeegeeing until you reach the finish edge.

APPLYING A BOND COAT TO ACHIEVE A SMOOTH FINISH

To achieve a smooth finish with the Bond Coat/Resurfacer it may be necessary to apply two or more coats. For the first coat, use #60 or 90 silica sand in the mix. For the second coat, use #90 and/or #120 silica sand or apply Concrete Solutions Spray-Top® as the second coat to achieve the smoothest finish possible. Spray-Top creates a nice smooth finish for indoor jobs and acid staining applications (see the Spray-Top Technical Data Sheet in the Concrete Solutions Training Manual). Before applying a second Bond Coat or Spray-Top, grind or sand any ridges or squeegee marks in the first coat smooth.

HOW TO TREAT EXISTING EXPANSION OR CONTROL JOINTS

All expansion and control joints can be filled in during the Bond Coat application but must be cleaned out using a scraper or trowel before the material in the joints gets too hard. Wait until the surface is dry enough to walk on, and the thicker material in the joints is soft but not wet. When the material in the joints is soft, it can be removed without messing up the finished surface. See picture below.

APPLYING A TEXTURE COAT

If applying a Concrete Solutions Polymer Concrete Texture Coat for the final finish, such as a Fine Broom, Swirl or Trowel Knockdown Finish; only one Bond Coat should be needed, in most cases, to smooth out the surface and hide any repairs. For these applications allow the Bond Coat to dry before proceeding with the Texture Coat application. See the Polymer Concrete Texture Coat section of the Concrete Solutions Training Manual for more detailed instructions.

APPLYING A 1/4" STAMPING APPLICATION

For 1/4" stamping applications, it is necessary to go over the Bond Coat/Resurfacer with the 1/4" Stamping Mix (Stamp-Top™) while the Bond Coat/Resurfacer material is still very wet. See the 1/4" Stamping section of the Training Manual for step-by-step instructions.



Scrape out any material that got in the joints using a trowel or scraper before it dries.



Option: Apply a texture coat after the first bond coat dries.



Scrape or brush the vertical edges where the material drips over the sides.

CLEAN UP

Clean tools, mixing equipment and hands with water before the Bond Coat/Resurfacer material dries. Scrape the sides of the area being resurfaced using a scraper or margin trowel to remove any drips. If desired, the sides that will be seen can be painted with the Bond Coat mix using a paintbrush for a more finished look.

DRYING TIME

In warmer temperatures the Bond Coat mix is usually dry in 30 minutes to 1 hour. In cooler temperatures it may take 4 hours or more.

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

Chemical systems require the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

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