

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.

PRODUCTS AND TOOLS NEEDED

Equipment	Tools	Supplies	Materials
Pressure washer (outdoor jobs) Floor polisher machine	Scrub broom Water hose with nozzle Nylo grit brush	Rubber gloves	Detergent
Wet/dry vacuum Pump-up sprayer	Rubber squeegee	Boots	Muriatic acid
Grinder/shotblaster (indoor jobs)	Dustless hand grinder Onfloor® multisurface floor machine	Goggles	Ammonia

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 or a 3000 psi (or higher) pressure washer with a 15 degree or spinner tip on the end of the gun (for large open areas such as warehouse floors etc.) to clean the surface 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. Vacuum any remaining residue.



Protect surrounding areas.



Scrub with detergent.



Rinse with water.



Squeegee or broom.

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.



Vacuum dry.



Grind/shotblast to remove paint/sealer



Grind edges and vacuum any residue.



Add the acid to the water.



Pour acid solution on dampened floor.



Scrub acid solution.



Neutralize, then thoroughly rinse concrete.

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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www.concretesolutions.com



Rhino Linings Corporation

9747 Businesspark Avenue, San Diego, CA 92131
 858-450-0441 • Fax 858-450-6881
 1-800-422-2603
 www.rhino linings.com

Concrete Solutions by Rhino Linings

7455 Carroll Road, San Diego, CA 92121
 1-800-232-8311 • Fax 858-566-4346
 www.concretesolutions.com