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## **Concrete Surface Preparation**

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Proper concrete surface preparation is the most important part of the application of protective coatings or overlayments. Applicators should inspect and prepare concrete surfaces or failure can result in the flooring system.

All concrete surfaces must be sound. The surface strength of the concrete must be at least 200 psi for the successful application of Rez-Stone flooring products.

Depending on which Rez-Stone flooring system is used, removal of surface defects may be required. A smooth trowel surface on the substrate is required. Protrusions such as mortar splatter or trowel marks should be removed by grinding.

Any oil, grease, curing compounds, release agents, laitance or unbonded coatings must be removed prior to the application of Rez-Stone flooring systems.

The most preferred method of substrate preparation is vacuum of shot blasting. Clean and dry, shot blasting removes any surface contaminants while leaving a desirable profile ready for surface treatment. Scarification and sand blasting will also remove heavy surface contaminants, but usually an uneven profile will be present on the substrate. Once surfaces are mechanically prepared, they should be broom cleaned and vacuumed to remove any remaining dust or particles from the surface.

Shot blasting is the chosen method of preparation, however, acid etching can be employed on new concrete surfaces that have been wet cured. Acid will not remove most curing compounds.

Commercial muratic acid should be used for acid-etching concrete. The acid should be diluted three to one with water.

The acid solution should be sprinkled at 75 square feet per gallon onto the entire surface using a conventional sprinkling can.

The acid solution should be allowed to react for two to three minutes, then the acid solution should be scrubbed using a stiff bristle brush or broom. This will remove any laitance or loose concrete. The solution should be allowed to react for 10 to 15 minutes, or until the bubbling action has stopped. If there is no bubbling action to the acid solution, then waxes, curing compounds, or oils are present and a form of mechanical preparation is necessary. The floor surface should be rinsed thoroughly with clean water and dry mopped to remove any dirt or remaining water. If the floor surface is not rinsed properly, a salt residue is present on the concrete substrate. This salt residue, caused by the acid, acts as a bond breaker and will cause adhesion or delamination problems. After final rinsing, the floor surface should be allowed to dry overnight prior to the application of the Rez-Stone flooring system. A final test before proceeding with the application of Rez-Stone flooring systems is to install a test patch of the Rez-Stone flooring system and allow it to cure overnight. The test area should then be tested for adequate adhesion before proceeding.