

🔍 PURPOSE AND SCOPE

The information and guidelines listed below are being provided by Ecocrete Coatings, Inc. to assist architects, facility owners, engineers, contractors, distributors, and specification writers on the proper surface preparations. Proper surface evaluation and preparation is one of the most important steps to achieve a positive outcome and ensure longevity of your resinous flooring.

🔍 SAFETY & PERSONAL PROTECTION EQUIPMENT

It is the surface preparation contractor and the flooring contractor's responsibility to ensure all personnel is protected properly for all jobsite hazards. Ecocrete Coatings, Inc. is committed to raising awareness of these hazards and wants to remind all, always keep safety first. OSHA has regulations that specify where, how, and when workers are to be protected. Please check and verify with local OSHA officials as necessary to ensure proper compliance.

🔍 NEW CONSTRUCTION

SLAB ON GRADE (SLAB ON THE GROUND)

- 10 mil minimum, puncture proof vapor barrier is required to prevent MVT (moisture vapor transmission).
- Proper control and expansion joint layout and installation will help reduce cracking that may reflect through to the finished polymer flooring.

ELEVATED SLABS

- Pan decks should always be vented.
- Properly jointing metal deck construction will help reduce cracking.

FINISHING AND CURING

- Wet curing is the preferred method as film forming curing compounds will need to be mechanically removed and may result in higher surface preparation costs and will also act as a bond breaker if not properly removed.
- A hard surface with minimal laitance is the objective and this is generally achieved by a light steel trowel finish.
- Concrete should be allowed a minimum 28 days to properly cure prior to the application of resinous flooring systems. However, Ecocrete understands that the standard 28-day cure duration may not always be conducive to accelerated construction schedules and has engineered and formulated moisture tolerant primers which can be installed on green (fresh) concrete on some projects. Contact your local Ecocrete Coatings, Inc. Representative for technical assistance and guidelines before committing to installing on a green slab.

🔍 EVALUATION & TESTING

TEST FOR MOISTURE

- ASTM-F-1869-11 standard test method for measuring moisture vapor emission rate of concrete subfloor using anhydrous calcium chloride. Generally, 3 tests are required for the first 1,000 ft² and 1 test x 1,000 ft² thereafter. If project is not in equal increments of 1,000 ft², round-up, adding an additional test will ensure proper testing. A reading of 3 lbs. per 1,000 ft² per 24/hrs. is generally the maximum MVE allowed for resinous flooring. Ecocrete Coatings has engineered and formulated moisture remediation systems that can reduce up to 24 lbs. per 1,000 ft² per 24/hrs. to below the maximum of 3 lbs. – making it possible for these troubled slabs to receive the resinous flooring as needed. Contact your local Ecocrete Coatings Representative for technical assistance and guidelines to ensure specifications are abided by properly.
- Perform relative humidity test using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75% relative humidity level measurement.
- If RH exceeds the maximum 75% level of measurement, a coat of Moisture Barrier Primer must be used prior to application of finish flooring.

PREVIOUS CONTAMINATION

- Various contaminants will have an adverse effect on the bond of resinous flooring.
- Sealers, laitance, curing agents or compounds must be completely removed. Test the floor to see if it has a sealer or curing compound by pouring out a small amount of muriatic acid on to the surface if it “bubbles or fizzes” the floor is not sealed. If the acid does not react by fizzing immediately there is a sealer or paint present and must be removed. Removal of these contaminants is best completed using mechanical means. Vacuum shot blasting, scarifying, sand blasting or diamond grinding are all acceptable means to remove these contaminants.
- Food fats, oils and grease should be cleaned first with a degreaser to remove the initial contamination. Further contaminants may be burned off using a propane fueled flame gun. If contamination is still present shot blast the contaminated area until it turns white and immediately prime with Ecocrete Coatings Moisture Barrier Primer. Refer to the specific systems technical data sheet (TDS) for further instructions.
- Glue, mastics, membranes, and existing coatings must be removed.
- Projects on existing facilities usually will require the removal of the existing flooring such as VCT, tile, sheet goods or existing coatings. Once the existing flooring is removed there may be a layer of glue, mastic or thin set. Thin layers usually can be removed by shot blasting the surface, however, thicker applications may require the use of a scarifier or planetary grinding

equipment outfitted with the proper removal tooling. Carbide scrape-a-way blades and PCD (polycrystalline diamonds) may be used for the removal of thick glue, mastics or existing coatings. There are many quality manufacturers of removal tooling and equipment, please check with your suppliers to get the best tooling for your specific project.

REMOVAL & REPAIR

REMOVE AND REPLACE ANY STRUCTURALLY UNSOUND CONCRETE

- The replacement of unsound concrete should always be done in compliance with the International Concrete Repair Institute bulletin (ICRI). All patching materials must be approved by Ecocrete Coatings prior to use.
- Always be sure to allow the patching and repair material to fully cure before proceeding with the installation of the finished flooring.
- Ecocrete Coatings approved contractors should always perform these repairs to ensure proper preparation and application takes place at this critical stage of the project.

SURFACE PREPARATION METHODS

PROPER CONCRETE SURFACE PROFILE (CSP)

- The ICRI describes the profiles in accordance of their guidelines in the table below.

COATING	COATING THICKNESS	CONCRETE SURFACE PROFILE
Sealers	3 mil	2-3
High Build	10-40 mil	3-4
Self-Leveling	50 mil – 1/8"	4-5
Polymer Overlay	1/8" – 1/4"	5-7

MECHANICAL SURFACE PREPARATION

- Shot blasting is usually the preferred method of surface preparation for most polymer floor installations. Shot blasting machines use a high speed wheel to throw small steel shot at the substrate to profile it to the specific CSP. The size of the shot, speed of machines travel and the angularity of the shot all may be adjusted to achieve various CSP's. Shot blasters are connected to dust collectors to offer virtually dust free means of surface preparation. Always ensure all personnel are wearing the proper PPE. *Note: Not all systems and/or coatings may be thick enough to cover the blast pattern. On-site mock-up is recommended.*
- Diamond grinding should be utilized to get all areas unreachable by the shot blast equipment such as edges and under equipment or when a thin film system is being applied and the visual blast pattern is not desired. There are many various grades of diamond and removal tooling which may be used to prepare the surface. Hand held diamond grinders equipped with dustless shroud attachments connected to a vacuum are commonly used to get to hard to reach areas.
- Scarifying is a way to remove existing structurally unsound concrete, existing toppings or existing polymer flooring and is also a preferred method.

RECOATING EXISTING COATINGS

EXISTING EPOXY OR URETHANE COATINGS

- Most coatings have a recoat window, a time in which the coating will accept an additional coat.
- Find out what you are recoating over, such as polyurethane, epoxy, polyurea, polyaspartic etc.
- Aggressively clean the existing coating with a neutral cleaner to clean/degrease and rinse thoroughly. Allow to dry completely.
- The surface must now be mechanically abraded by sanding aggressively with a floor sanding machine or shot blasted to completely remove the gloss.
- Completely vacuum the surface to ensure no dust is left on the surface.
- If you are prepping a smooth surface, "tack rag" the area with a clean, lint free rag and acetone. Allow for adequate ventilation and be sure there is no source of ignition as the solvent can flash and cause serious injury or death if care is not taken.
- Prior to the application of the new coating an application of Ecocrete Coatings Eco-Tactifier may be required to promote inter-coat adhesion. Contact your local Ecocrete Coatings Representative for technical assistance and guidelines.

CRACKS & JOINTS

Refer to the specific system's Technical Data Sheet.

ADDITIONAL NOTES

For specific project or jobsite surface prep requirements or for technical assistance to apply Ecocrete products over wood or metal substrates and for the use of waterproofing membranes and/or anti-fracture membranes please contact Ecocrete Coatings (480) 361-6887.

SURFACE PREP GUIDELINES

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