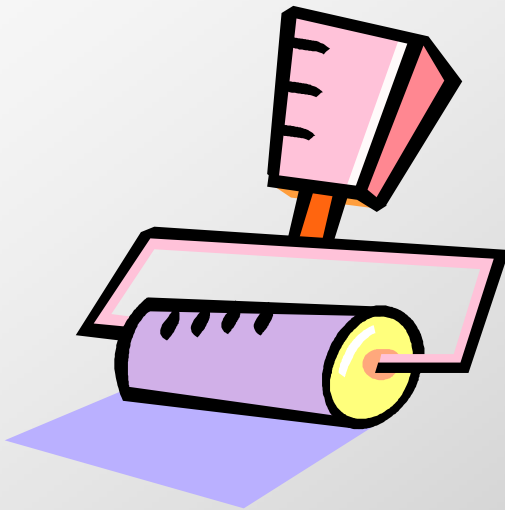




Guide to Buying Decorative Concrete Overlays

By Anne Balogh



With today's decorative overlays, it's easy to give almost any concrete surface, indoors or out, a complete face-lift—and at a much lower cost than removal and replacement. The real challenge is choosing from among the many resurfacing products available—and the diverse array of decorative finishes possible. [*Continue >*](#)



Although cement-based overlays have been around for decades, many of today's systems blend polymer resins with cement, sand, and other additives to improve performance, wear resistance, and aesthetic qualities. Polymer-modified overlays can be applied in layers as thin as a credit card or up to several inches thick without delamination or failure. They adhere well to existing concrete and resist damage from salt, chemicals, UV exposure, freeze-thaw conditions, and abrasion.



Photo Courtesy of
[Bomanite Corporation.](#)

While most types of polymer-modified overlays offer similar performance benefits, each system has its own unique characteristics. Overlay manufacturers use different types of polymer resins, often blending them to produce proprietary products with distinct physical attributes. Many of today's decorative overlays use acrylics or acrylic blends because these resins provide excellent bond strength and UV resistance.

Here's a primer of the various overlay types available and the decorative options with each. We also give you pointers on how to choose the best system for a particular application. With the many options available, you're sure to find at least one system that meets your requirements for durability, appearance, maintenance, and cost.



When to use a polymer overlay

Breaking out and replacing an existing concrete slab can be expensive, messy, disruptive, and time-consuming. With an overlay, you can give worn, lackluster concrete a decorative makeover or restore it to like-new condition in as little as a day and at a fraction of the cost (from about \$1 to \$3 per square foot, depending on the type of system installed).



Photo Courtesy of
[Concrete Solutions, Inc.](#)

Polymer-modified overlays are ideal for:

- Adding pattern, texture, and color to exterior concrete slabs, including patios, pool decks, driveways, and sidewalks. Using special techniques and tools, skilled installers can precisely replicate the look and feel of natural stone, brick, tile, or slate.
- Resurfacing interior floors, including those previously covered with linoleum tile or carpeting (after removal of all residual mastic). With the use of stains or dyes, it's possible to create colorful graphic designs, logos, or stenciled patterns. (Another highly versatile decorative topping for interior floors is [epoxy terrazzo](#).)
- Smoothing and leveling uneven or spalled concrete surfaces.
- Restoring surfaces quickly with minimal downtime. Polymer overlays cure fast and some systems can support foot traffic within a few hours.





Not all existing concrete is a suitable candidate for an overlay. The concrete must be structurally sound, without gapping cracks, severe delamination, or an unstable subbase. Proper [surface preparation](#) of the concrete is also imperative to ensure good bonding of the overlay. Any non-structural cracks wider than hairline should also be repaired. (Read [more](#) about repairing cracks in concrete.)

Types of Overlays

Stampable overlays

A stamped overlay offers all the aesthetic benefits of conventional [stamped concrete](#) but is less time- and labor-intensive to install. The overlay mix is usually applied by a gauge rake (a tool with an adjustable depth gauge for achieving a uniform topping thickness) and then imprinted with stamping mats or texturing skins. These semi-flexible stamping tools are available in dozens of patterns, allowing overlay installers to duplicate the beauty and texture of natural stone, brick, slate, wood planking, and other materials. Overlay thicknesses range from 1/4 to 3/4 inch, depending on the depth of the imprint.

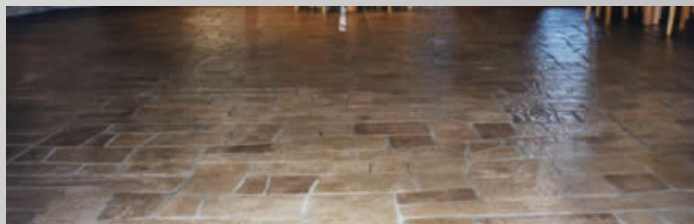


Photo Courtesy of [Concrete Solutions, Inc.](#)





Microtoppings and skim coats

These ultra-thin decorative toppings are applied by a trowel or squeegee in layers as thin as 20 mils, or a mere 0.02 inch. They can go on silky smooth and be taken down to a featheredge. Or you can apply several coats to create a textured broomed or troweled finish. Some systems come pretinted in a wide range of colors while others can be custom tinted by mixing in the desired amount of liquid coloring agent. Interesting color variations can be achieved by applying layers of different hues.

Spray-down systems

These versatile systems offer a wide array of finish options. Usually they are sprayed evenly onto concrete with an air-powered hopper gun, but they can also be applied as a splatter coat to create a textured, slip-resistant surface or "knocked down" with a trowel to create a smoother finish. A popular decorative technique is to use paper or [adhesive stencils](#) to produce designs ranging from decorative borders and medallions to tile patterns to embossed or inlaid motifs.

Self-leveling overlays

These flowable polymer-modified toppings have the ability to self level without troweling, making them ideal for smoothing and leveling worn or uneven concrete surfaces. Installers simply pour or pump the material onto the surface and then use a spreader to distribute it evenly. The overlay can be left seamless (except at control joints) or used as a canvas for sawcut or [engraved](#) designs.



Photo Courtesy of [Decorative Concrete Institute](#).





Or you can incorporate decorative inlays, such as strips of wood or metal, by adhering them to the base concrete and then pouring the overlay to the level of the inlay. Self leveling overlays can also be enhanced by staining or dying. In Some applications, they serve a purely utilitarian purpose as an underlayment for tile, carpet, or other floor coverings.

Adding Color to Overlays

The color options for overlays are limitless. You can buy mixes that are pretinted like paint or you can add the pigment of your choice during mixing to produce custom hues. Once the overlay is applied, experienced installers can achieve more elaborate color effects, such as antiquing or marbleizing, by accenting the base color with layers of topically applied color. Some of the options include:

- [Dry-shake color hardeners](#)
- Colored liquid or powdered release agents (typically used with stampable overlays)
- [Dyes](#)
- [Chemical](#) or [acrylic-based stains](#)
- Tinted sealers

For more pizzazz, you can even seed overlays with decorative aggregates, color chips, or recycled glass.



Photo Courtesy of [Decorative Concrete Institute](#).





Factors to consider when choosing a resurfacing system

Selecting the most appropriate resurfacing system often involves weighing performance attributes against aesthetic value. Here are some questions to ask to help you find a system that will strike the perfect balance for the job at hand.

What is the condition of the existing surface?

Does the concrete have a lot of cracks or gouges? Is the surface out of level? If so, choose a higher-build material, such as a self-leveling or stampable overlay that can be applied at a thickness of 1/4 inch or greater. Unless the surface imperfections are expertly patched or filled, they could telegraph through a thinner overlay, such as a microtopping or skim coat.



Photo Courtesy of [Decorative Concrete Institute](#).





Too much moisture in the concrete substrate can also be a problem for some overlay systems, especially products that restrict the ability of the concrete to “breathe” or release moisture vapor as needed. There are simple tests you can perform to check the moisture vapor emission rate of concrete. If it’s too high, be sure to use a permeable overlay system that will permit the moisture vapor to escape. (Read [more](#) about reducing bond failures caused by moisture vapor transmission.)

What conditions will the overlay be exposed to?

Be sure the topping or overlay system is tough enough to withstand all the conditions it will confront. Is the slab outdoors and subject to weather extremes and freezing and thawing? Is it a floor surface in a high-traffic area or subject to chemical, grease, and oil spills? Although most systems will stand up well to wear, chemical attack, and dirt penetration when properly installed and sealed, some are better suited than others for harsher exposure conditions. Often a higher-build material or a material containing aggregates will perform better in aggressive environments.

What is the installed cost?

The total cost of overlay installation will be higher if you are using stencils, stamping mats, or decorative engraving or sawcutting to pattern the surface. Using more than one coloring method (such as integral color combined with broadcast pigments and stains or dyes) will also boost the final cost.





How easy is the product to mix and apply?

Ease of use may also influence overlay selection, especially if you're the installer. Some products come preblended like a cake mix, and all you need to add is water. Others require mixing the polymer additive and any pigmentation desired with the cement and other dry ingredients. Some overlays can go right over properly prepared surfaces; others require application of a primer or bonding agent before overlay placement. Pourable, self-leveling systems tend to cover floors faster with less finish work than trowel- or spray-applied products.

How much maintenance is required?

A decorative overlay should always be coated with a compatible [sealer](#) to help protect it from water penetration, stains, dirt, and grease. Sealed surfaces will also be much easier to clean. Floors typically require only routine sweeping to remove any abrasive particles and occasional wet mopping with a mild detergent, depending on how much traffic they receive. Occasional [pressure washing](#) may be needed to clean exterior slabs. Some overlay manufacturers recommend resealing surfaces annually, depending on the amount of traffic and exposure to freeze-thaw conditions.

What look do you want to achieve?

Of course, the main reason to use an overlay system is to beautify existing concrete. Determine the color, pattern, and texture you want for your rejuvenated surface, and then find a product that can achieve the distinct look you desire. Consult with the overlay manufacturer and your installer for advice. Ask to see samples of various finishes and color selections as well as a portfolio of completed projects.





Sherpa info

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SUMMIT DATE

This document reached the summit (was created) on June 03, 2006 and is based on the best information available to the Sherpa at that time. To check for updates please click here <http://www.ConcreteSherpa.com/overlay>.

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	PC	MAC
Zoom in (Larger)	[Ctrl] [+]	[⌘] [+]
Zoom out	[Ctrl] [-]	[⌘] [-]
Full screen/normal screen view	[Ctrl] [L]	[⌘] [L]

ABOUT THE CONCRETE SHERPA

The Concrete Sherpa is a team of people that represent the experience, teaching and learning of our team members and other industry leaders *on a mission to make life better for the concrete contractor*. We are an idea center striving to deliver thought provoking ideas based on “Concrete Advice for Business and Life” to stimulate you to reach new heights. As a user, you should remember to consider all information you receive, here at the Concrete Sherpa or elsewhere, not as a *cast in concrete* recommendation, but rather as an idea for you to consider and ponder.

Sherpa info

THE JOURNEY LEADING TO THE CONCRETE SHERPA PROJECT

The Concrete Sherpa Project (A [Sherpa](#) is a “guide”) was born at The Concrete Network in mid 2004. Here is how it happened:

The biggest surprise, or gift, since starting The Concrete Network in 1999 has been the concrete contractor friends from around the country we’ve made and witnessing the passion they have for what they do. These people include Dave Pettigrew, up in the San Francisco Bay Area, or the Verlennich brothers in Minnesota, or Bob Harris in Georgia, the list goes on and on. It’s quite inspiring.

We were once asked, “How are you so excited every day about concrete?” Well the answer is simple, it is impossible to not be excited about concrete when you have the job we do—interacting with hundreds of concrete contractors from every state in the country.

The thing we’ve learned about concrete contractors is that most are passionate *craftsmen*—they are often less passionate and experienced in the “office stuff”. Human nature channels us to do what we are most comfortable with; learning how to use a new saw-cutting tool is comfortable; learning and implementing a new estimating strategy, or job management tool, is not so comfortable.



Sherpa info

THE JOURNEY CONTINUES...

So Sherpa was born to provide FREE and easy to use information on topics many contractors are not too comfortable with.

- Concrete Sherpa is here to provide help to contractors who are often 'Lone Rangers' and don't have anyone to get solid business advice from.
- Concrete Sherpa is here to provide help for contractors who have to work too hard and too many hours in their business, and one day realize they need to work *on their business, not in their business*.
- Have fun with Concrete Sherpa and go faster towards reaching success than you might have on your own.
- To skeptics who think something free can't be valuable, or there must be a trick- visit Concrete Sherpa and decide for yourself.

We hope you make great use of the Concrete Sherpa and it helps you to become an awesome success for yourself, your family, your church, and your community.

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