

## Hard Facts About Resilient Flooring

by Lynn Comeskey

Although the pages that my clients tear out of decorating magazines show tile, carpeting, and even marble on kitchen and bath floors, their overwhelming choice is sheet vinyl. And despite the countless number of square yards laid by flooring mechanics each year, it's a product few general contractors know much about.

In fact, a lot of us still refer to resilient flooring as "linoleum," which was made of wood fiber and linseed oil with a burlap backing. But enough history.

### More Than Meets The Eye

Today, sheet vinyl floor covering is composed of four layers (see illustration). The bottom layer is the *backing* or *carrier*. It's the body of the floor covering on which everything else hangs, and is either felt or vinyl.

Some companies tout their vinyl backing as more durable than felt. But my flooring sub (with 30 years in the business) doesn't think it wears that much better, while its stiffness makes it harder to work with, particularly in cold weather.

The second layer or *interlayer* in most residential flooring is a high-density, cellular vinyl foam. This is a coating added to the carrier that expands when heated. The interlayer allows the surface of the flooring to bounce back when struck with a hard object, and it helps make the surface soft and slip-resistant.

It also creates depth and texture in the finished surface. Where the pattern calls for a depression or a line (such as the mortar joint in a brick pattern), a chemical inhibitor keeps that area of the foam layer from rising.

The third layer, which contains the design and color, is produced by one of two different methods: *rotogravure* or *inlaid*.

In the rotogravure process, huge presses actually print the pattern right on the material. Big cylinders, each adding a different color to the design, are used to do the printing. Where embossing is required, an inhibitor is mixed with the ink and printed along with the design.

The second technique — inlaying — uses vinyl chips embedded in clear vinyl to create the pattern. This is more expensive and most manufacturers use it only in their high-end lines. The advantage here is that the pattern and color are integral, so that a gouge or cut from a dropped kitchen knife is less likely to show.

The fourth and final layer is the transparent *wear layer*, which provides durability and an easily main-

tained surface. In a rotogravure product, it also protects the pattern and color. It can run anywhere from 5 to 26 mils thick, and has a lot to do with the ultimate quality of the flooring. The thinnest wear layers are typically high-gloss urethane. Clear and inlaid vinyl are thicker.

Many of the sheet goods today are described as "no wax." This is correct but misleading. The product still has to be cleaned, and to maintain a high shine an acrylic dressing has to be applied to the surface to renew it.

### Choosing A Vinyl

In my part of the country, sheet vinyl runs from \$9 to \$40 per square yard retail. You can see and feel the difference in quality between the low-end and the high-end of a manufacturer's line. But once you get out of the really cheap stuff, I recommend clients put more emphasis on finding a pattern and color they like than on durability. Few floors get replaced these days because they're worn out; they're more likely to be replaced when styles change enough to dictate remodeling or at least redecorating. This is typically a matter of 10 or 15 years, not 20 or 30 years.

For clients who want a floor with a subdued pattern or no pattern, commercial grade sheet goods should be considered. They come in a wide variety of colors, they are a more durable product, and often don't cost more than residential vinyl flooring.

This brings up the subject of seams. A good mechanic can make a seam nearly invisible and new, clear seam sealers give lasting protection, but it is still best to avoid them. A lot of commercial flooring and some residential goods come in 12-foot wide rolls (as well as the standard 6-foot), which will take care of most kitchens and baths.

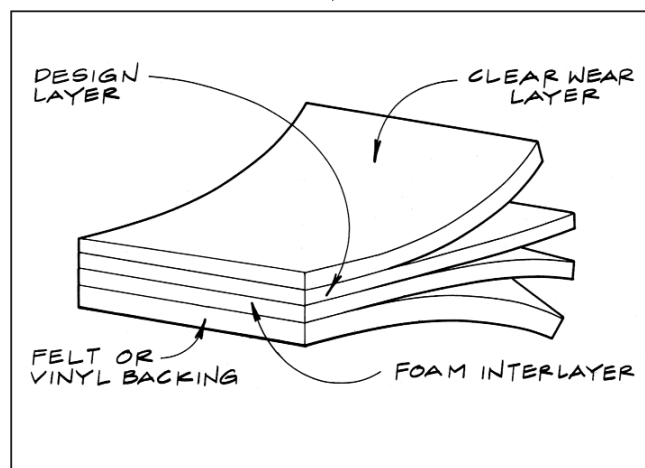
But if the job does require a seam, advise your client to stay away from solid colors, especially white. They require more cleaning and seams eventually start showing. I almost lost a customer over a white floor. If the client has to have a light floor that requires a seam, suggest one where the seam will fall on a pattern line that is darker.

### Installation

One of the major reasons that resilient floors fail isn't the product, but what is underneath it. Vinyl flooring companies don't have a lot of flexibility on the subject of underlayment when dealing with warranty questions, which has made flooring contractors wary as well. Check with

your subcontractor to see what underlayment he wants you to put down and how, and that it will satisfy the manufacturer.

We use particleboard in this area of the country, not plywood; but it



The four layers in typical residential vinyl flooring: The design layer can be printed, which is called "rotogravure." On more expensive flooring, this layer is made of color chips embedded in the vinyl, which is called "inlaid."

has to be "underlayment" grade for consistent density (See "Underlayments for Resilient Flooring," 10/90). Another option is Weyerhaeuser's *Structurwood*, which is an approved OSB, but it's somewhat more expensive.

Although we don't deal with big moisture swings in this climate and typically don't space plywood and other panel products the recommended 1/8 inch, it is important with underlayment. My flooring sub prefers staples to nails and looks for a schedule of 2 inches on center at the edges and 4-5 inches in the field. If you skimp on the fasteners, the mastic and flooring can literally pull the underlayment off the subfloor. I've seen it happen.

Sheet vinyl can be installed over a concrete slab that is on or below grade, but it's risky. One problem is that cracks in the slab can telegraph through the vinyl. But an even greater hazard is moisture traveling up through the slab, often carrying alkaline salts with it. This can result in deterioration of the adhesive and discoloration of the flooring.

If you know there is a moisture barrier beneath the slab (because you put it there and supervised the pour), there should be no problem if you wait at least 60 days for the concrete to cure. But if you are not positive, be careful.

Installing a quality vinyl in a kitchen typically costs about \$50 per

square yard in my area. Because of their small size, baths cost closer to \$80 per square yard installed. One extra — about \$4 per running foot — is to have the mechanic cove the material up the wall. This is a somewhat regional phenomenon these days. I recommend it in the laundry room, bath, and kitchen because it looks clean and simplifies maintenance.

If coving is done properly using "cove stick" (sort of a cant strip that eases the hard 90-degree intersection of floor and wall) and manufactured "bead" along the wall, it should last

as long as the rest of the job. The one exception is outside corners, where the coving isn't fully backed. If a client's kitchen has an outside

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corner where it's likely to take a lot of abuse from traffic or chair legs, I usually recommend against coving.

Although you can install vinyl flooring even before you set base cabinets or vanities, I always try to make it one of the last procedures. No matter how careful my men are, there are just too many opportunities to puncture or tear the floor. And the only way to effectively protect it is to cover it completely with plywood; paper won't protect it from grit or appliances. ■

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