



What is New with Vinyl Decking

In these hard economic times when selling a home has become challenging, many people are choosing to improve their outdoor entertainment spaces to (a) enjoy their current home more and (b) improve their chances for resale later. It has become more and more important to include new decks in these outdoor spaces. Vinyl, specifically Polyvinyl Chloride (PVC), is an increasingly popular decking material choice, perhaps because it just keeps getting better and better with more color and texture options as well as more durability. "We felt it was time for something different. The days of staining, painting and sealing are really a thing of the past," says Deron Manwaring, national sales and marketing manager for Royal Outdoor Products, about the company's current products. "Wood looks good for about six months, and then if you don't continue to take care of it, it's going to deteriorate every year. Vinyl decking looks great today, tomorrow and many years into the future. It leads the next generation of decking with its high performance and aesthetics."

New Coextrusion Manufacturing Process

Hollow vinyl deck boards are approaching extinction via the insurgence of cellular PVC. Cellular PVC is manufactured with the innovative coextrusion process that replaced the monoextrusion technology. "Hollow PVC is losing popularity because it typically has a hollow and squeaking sound when you walk across it. Consumers prefer a solid product," says John Polidan, President and CEO of Enduris.



Coextrusion has many benefits specifically related to vinyl decking materials, because it enables multiple layers of polymers with different material characteristics to be extruded and then smoothly bonded together. Cellular PVC has two basic, noticeable layers, the cap layer and the foam core layer.

The foam core is made of a lighter air-entrained PVC material. The goal is to develop the PVC into lightweight foam that has a great deal of consistency, allowing the sawn ends to be left exposed and enhancing its structural stiffness. The foam materials may be composed of either recycled or virgin PVC material. "There is no reason really why the inside foam material could not be made with recycled vinyl," Polidan explains. Furthermore, the core foam insulates the surface vinyl from becoming uncomfortably hot for the end user, another way that cellular vinyl is even safer for bare feet.

Perhaps the true "miracle" of coextruded vinyl decking materials is the cap stock. The cap stock is a very thin layer of virgin vinyl that is adhered to the foam during extrusion, making it the distinguishing material that expresses different valuable materialistic qualities from various manufacturers. "The cap stock can have special effects such as newer colors, special textures such as wood grain, and even weatherability against sun damage," says Polidan.

Cellular vinyl decking is also easier for the contractors because the deck boards are easily sawn and screwed together. "No special tools or fasteners are needed," says Manwaring. In fact, there is not much difference between constructing with cellular PVC compared to wood, except for the fact that PVC is much lighter. "Vinyl is not as heavy as wood, so more planks can fit onto a truck, cutting down on trips to the site," Manwaring adds.



New Safety Research and Technologies

At home, safety is of great concern. In damp weather, a deck can become a slippery and dangerously traversed surface. To combat accidents, some manufacturers have introduced slip resistant textures on the cap stock. Mold and mildew do not collect on a vinyl surface, which further helps to prevent a slippery exterior walking path. Vinyl does not splinter or crack, protecting bare feet.

Vinyl excels as a decking material in areas of the country susceptible to fire damage and/or salty-air regions. PVC burns only when a source of fire is applied directly to its surface. The State of California is susceptible to vast fires, and it is a place where many are resorting to vinyl decking for safety concerns. "Unfortunately, some homes have been burned down because the deck caught fire and the fire spread to the home."

New Longer-lasting Features

Plasticizers, heat-stabilizers, color pigments, lubricants, and other types of admixtures are added to vinyl to achieve various intended uses. The types and quantities of admixtures added to vinyl vary from manufacturer to manufacturer and are proprietary. Nonetheless, manufacturers are still experimenting with which admixtures will enable the best product for decking needs.

To improve its fade resistance, some manufacturers now add a new UV protectant material into the cap stock. Other admixtures make vinyl pliable

enough so that it does not crack or split under abuse. Heat stabilizers prevent the vinyl from expanding and contracting too much, which could disrupt the stability of the deck structure and surface. Even more useful, vinyl decking is resistant to stains. "It has superior stain resistance which repels oil, barbecue sauce and even ketchup," says Manwaring.

The innovative implementation of admixtures to create a long-lasting decking material is one of vinyl's strongest selling points. Long-lasting decks mean happy consumers who enjoy a low-maintenance material and who can perhaps resell their home for a higher price. Long-lasting decks also follow one of the golden rules of sustainability: if a material lasts a long time without replacement, it reduces the need for producing more and the consequential buildup in landfills.

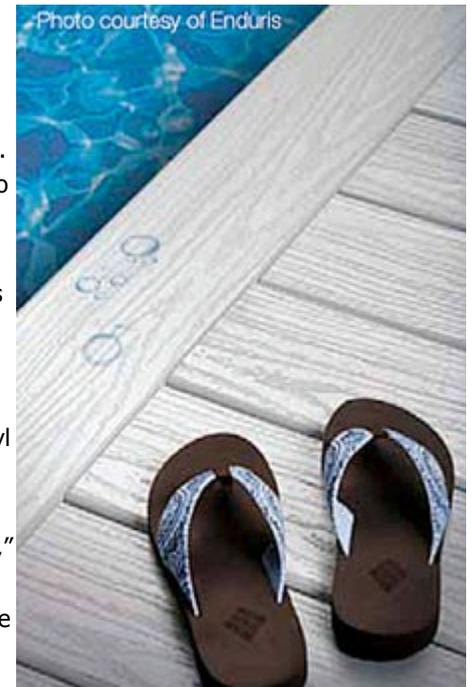
New Beautiful Finishes

Vinyl decking has many material advantages over wood, but many consumers still want the wood look. So, manufacturers are now producing innovative textures on the cap stock referred to as a new wood grain finish. "The wood grain has a nice, deep, rich, natural looking, embossed surface that provides slip resistance. It also minimizes shine," says Manwaring.

New colors are designed to match different types of exterior residential cladding materials. The various colors also now complement each other so they can be mixed and matched for depth of design.

For a long time, it was difficult to match railings with the vinyl decking materials. Now, manufacturers are providing matching railing systems made of the same vinyl material as the cap stock found on the cellular vinyl decking boards.

"Really all you need in terms of trim pieces is the fascia boards to go on the ends to cover up the joist system," says Manwaring. New trim boards are typically 1/2" x 11 1/2" x 12 feet long. Even though the sawn end of cellular PVC is more attractive than the hollow PVC decking boards, it is still advisable to build with the "picture framing approach" according to Polidan.



Cellular PVC decking boards are attached to the structural decking frame like any other type of decking material. "85-percent of the time, direct screws are used to attach the vinyl boards," says Manwaring. For this reason, manufacturers now provide stainless screws that are also color-matched to the new board colors. The other 15-percent of the time, deck boards are attached with hidden fasteners.

Hidden fasteners eliminate puncturing the upper surface of the decking boards to give the project a cleaner look. "These fasteners are typically attached from the side of the board or from the bottom up and are generally more expensive," says Polidan. "We are excited about a new hidden fastener (expected to hit the market by summer of 2009) that is driven into the side of the material with a special pneumatic tool," says Manwaring. The pneumatic tool will ease the laborious installation commonly associated with hidden fasteners.

New Curved Deck and Railing Components

One of the most exciting innovations in vinyl decking and railings is curved board and railing profiles. "We found our niche in the vinyl market as a specialty bending vinyl house that provides an extra service to the vinyl extruding manufacturers," says Anne Wittman, marketing director at Ventana USA. The majority of their work focuses on curved railing profiles, but they also provide curved deck boards that can be used as the end pieces for the "picture framing" deck design approach. "Curved S-shaped deck board pieces may also decorate the middle of a deck surface design," Wittman adds.

The only caveat is that cellular, not hollow vinyl are the only deck boards that can bend. "Essentially, cellular PVC responds well to bending," Wittman explains. Even though some manufacturers do the bending themselves inhouse, most prefer to work together with a specialty company. As such, extrusion manufacturers commonly provide the specialty bending company with the decking boards to bend. Yet the specialty company often provides the aluminum reinforcement for the vinyl handrail components.

Ventana stores stock railing materials for some of the larger manufacturers that more regularly use their services. These popular, common profiles are available for other manufacturers. Or, customized profiles can be accommodated. Their work is open for innovation and creative solutions. "We are flexible with how we work with our customers," says Wittman.

New Marketing Strategies

"We market our new cellular PVC decking boards for both new deck surfaces as well as for resurfacing decking structures whose surface boards need to be replaced," Polidan explains. This is an excellent new approach because vinyl, when used as a replacement material, will satisfy the consumer who witnessed another type of decking material degrade enough that it needed to be replaced. By contrast, vinyl tends to last a lifetime.

Another new and successful marketing strategy is to promote the new colors and wood grain textures that are much more pleasing to the majority of the consumers. Lastly, vinyl is becoming more widely recognized as a sustainable material, so the marketing approach can also more aggressively follow the green advertising path.



Cellular PVC is Here to Stay

Anne Wittman works with a spectrum of vinyl extrusion decking manufacturers. "The depth of color and wood grain that is added to the cellular vinyl is appealing to consumers because they want the wood look with the long-lasting and low maintenance aspect," says Wittman. The new colors work well for mixing and matching components so that an even greater depth of color scheme may be achieved. Furthermore, "The exterior cap stock holds up well; it doesn't crack, split, or fade," says Wittman.

"Vinyl is pleasing to both the installer and to the consumer because it not only looks like wood, it acts like wood during construction, yet is lighter than wood," adds Wittman.

Because of the growing popularity of vinyl, other companies are providing special decorative products such as curved deck boards and railings to complement the designer's innovative patterns. After all, "It is fair to say the market is indeed moving to cellular PVC and now there are so many more decorative options available," says Wittman.



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