

## **Alternative Trim Materials - A Replacement For Wood Trim?**

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The building industry has recently seen an increase in the number of alternative siding and trim materials available for use in community associations. Our last article presented some thoughts about the new siding materials. This article will cover some aspects of the PVC or PVC/Wood composites being used today, what they are, who they are, and the pros and cons of use.

Any of you who have had to replace wood trim in the last couple of years will know the reason why these materials are gaining in popularity. Today's widely available exterior wood trim has a life expectancy measured as a fraction of that used on our parent's and grandparent's old houses. The typical wood trim materials available today are not what they were even twenty-five years ago. The timber and lumber industry has worked hard to provide us with the wood building products demanded by our growing society. This is after all, a renewable resource. The current species of trees from which these wood products are harvested have been specially cultivated for fast growth and high yield. Unfortunately, faster growth trees generally have a larger cell structure which results in softer, more moisture absorbent wood. This type of wood does not stand up well to the effects of heat and humidity when used as we have traditionally done in exterior trim applications.

Builders and contractors are also partially responsible for the sometimes rapid deterioration of exterior wood trim. Experts recognize that when using these softer woods, more effort needs to be put into insuring that these materials are properly prepared and installed. This includes adequate flashing and back-priming to prevent moisture penetration into the wood. Unfortunately, these necessary efforts are rarely made, and these more vulnerable wood products are not even installed with the same care with which we installed denser, more durable wood products a century ago. In today's construction environment, all wood trim needs to be thoroughly primed (including back primed), joints have to be properly joined, and end cuts need to be primed and caulked. Any wood left even partially exposed will soak up moisture. Moist wood expands, which breaks the paint bond and caulk joints and lets in even more moisture. It is a progressive, accelerating process invariably resulting in premature rot and replacement.

The construction manufacturing industry has responded to this need with some promising alternatives. So what are these new materials? Simply stated, these new materials fall into three or four major categories: 1. Trim composed of a foamed PVC core with a finished exterior layer; 2. Trim composed of solid PVC; 3. Those composites made up of either thermo-plastics or polyvinyl chloride (PVC) combined with wood pulp. The plastic or PVC component gives the material its strength and uniformity. The wood pulp acts as a filler and allows the material to be handled similar to wood in cutting, sanding and nailing. The fourth category is those materials made of fiber cement similar to the fiber cement siding. For the purpose of this article, we are going to concentrate on the plastic materials like those marketed under brand names such as Royal Wood, PermaTrim, Synboard, TrimTec, and CELTEC, and others.

The benefits of these types of materials are many, and so far, they seem to live up to their marketing claims. They handle much like wood during cutting and installation, they do not absorb water, they do not rot or warp, they are uniform in surface finishes, they have no knots, and they come in a variety of standard sizes and shapes. And many of these materials can be shaped in a shop or field situation to traditional wood trim and molding profiles. Clearly, as these materials receive greater acceptance and use, more shapes, sizes and applications will become available.

As with all new materials, there is a suspicion in some people about the product being “unproven”. Some wonder whether there is a looming downside or unintended consequence such as that which occurred years later with FRT plywood. Industry experience so far has been positive. However, there are those in the construction field that feel there are several legitimate questions that remain to be answered. The first of these questions is related to long-term ultraviolet exposure to unpainted finishes. Manufacturers claim that some of these materials will never need painting. Others claim that the effects of the sun will result in a slight discoloration over time, and that painting is an alternative once this occurs.

A further question involves expansion and contraction of the new trim material once it is installed. Unlike wood, these materials will not shrink and swell with changes in humidity and moisture. Since these materials do not absorb moisture, they can also be used in contact with the ground. However, there is a certain amount of linear thermal expansion due to the plastics content of the material. That means that these materials will expand and contract along the length as they warm and cool. In smaller length applications, this movement is minimal. However, in longer lengths, such as vertical corner boards or rake and fascia trim, this expansion can result in buckling and surface distortions. This movement also puts additional stress on caulk joints just as the moisture expansion of wood trim does.

On the positive side, trim board manufacturers are providing plenty of training and technical support to builders to insure that their products are used properly. (One does have to modify traditional installation and handling techniques slightly for the new materials.) Just like the siding manufacturers, they want to do everything they can to make sure that their materials don't suffer a bad rap due to faulty installation.

So what is the general evaluation so far? Most construction insiders are pleased with the performance of the new materials, and are excited about continued potential for more and better products. The life cycle costs of these materials already compare favorably. Even though the cost of the material is slightly higher than standard wood trim, the material lasts longer than wood. And it doesn't have to be prepped as extensively, so it requires less labor to install properly. Assuming that there are no unintended consequences lurking out there, the future of these materials is bright. The reduced maintenance and replacement frequency, and longer life expectancy should be a definite benefit to the community associations that choose to use these materials.

One last hurdle that may have to be overcome is community association covenants and restrictions. Some communities specify the materials that may be used on the building exteriors. Please check with your covenants prior to beginning replacement with alternative materials. You

do not want to be caught in a situation where the Association specifies one of these products only to find it has violated its own covenants. If you are seriously considering the use of one of the new alternative trim materials, it may be wise to put any covenant revisions in motion sooner rather than later.

Current experience has shown that these materials have a lot to offer. In most applications, careful reading of the manufacturers' printed materials will help you comply with best industry practices with only minor modifications to the traditional carpentry methods. And with the correct use of these new materials, associations and property owners should experience years of solid performance.

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