Utah State University
DigitalCommons@USU

All Archived Publications | Archived USU Extension Publications

1-1-1987

Selecting Plastic Laminates

Leona K. Hawks
Utah State University

Warning: The information in this series may be obsolete. It is presented here for historical purposes only. For the most up to date information please visit The Utah State University Cooperative Extension Office

Recommended Citation
Hawks, Leona K., "Selecting Plastic Laminates" (1987). *All Archived Publications.* Paper 519.
http://digitalcommons.usu.edu/extension_histall/519

This Report is brought to you for free and open access by the Archived USU Extension Publications at DigitalCommons@USU. It has been accepted for inclusion in All Archived Publications by an authorized administrator of DigitalCommons@USU. For more information, please contact becky.thoms@usu.edu.

Utah State University EXTENSION

Smart Shopping for Home Furnishings

Selecting Plastic Laminates

Dr. Leona Hawks
Home Furnishings & Housing Specialist

1987 HI 14

Shopping for plastic laminates? Plastic laminates were first used in the electrical engineering offices at Westinghouse and were designed as insulators for electric motors. Several men came tip with the idea of using plastic laminates as decorator items, left Westinghouse and formed the Formica company. Today, plastic laminates are decorator items produced by a few manufacturers.

Plastic laminates are used as interior paneling and are useful if the wall needs to be impervious to water, moisture, and soil as well as cleaned easily. To select a quality plastic laminate, you should be able to answer these questions.

- WHAT'S ON THE MARKET?
- WHICH FINISH IS APPROPRIATE FOR MY WALL?
- WHAT'S THE CONDITION OF THE UNDERSURFACE?
- HOW MUCH WILL I NEED?
- WHAT'S ON THE LABEL?
- WHAT'S ON THE WARRANTY?

WHAT'S ON THE MARKET?

Plastic laminates are made by taking five or six layers of what looks like brown craft paper in large rolls and running this material through vats of resins and driers (see Figure 14.1, Plastic Laminate Layers). The results are then cut into sheets and impregnated with resins. The pattern sheet is also run through resins the same way. Several layers of the resin-coated craft paper are fed into a mold. Then the resin-coated pattern sheet is put into the mold. Last, the melamine overlay is put on top of all the layers where heat and pressure actually make the resins flow. To make the different surface textures, the layers of paper, pattern, and melamine overlay are put into a mold with textured surface plates.

As far as quality is concerned, all plastic laminates are made the same. However, some show top wear. Those specified "for vertical use only" show top wear when installed horizontally. Solid colors do not wear any faster than patterned laminates. They just show the wear more.

Also on the market are the plastic laminates without the different colored base that shows at the seam. These plastic laminates have the same color base as the top surface (see Figure 14.2, Plastic Laminate Base Colors).

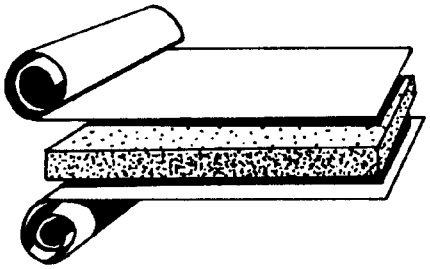

Figure 14.1. Plastic Laminate Layers

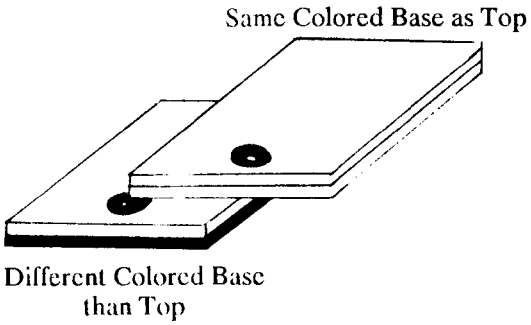

Figure 14.2. Plastic Laminate Base Colors

There is also a specialty plastic laminate used in food or chemical labs, which is stain and chemical resistant. This plastic laminate is very durable in areas of possible stain and chemical damage.

WHICH FINISH IS APPROPRIATE FOR MY WALL?

Plastic laminates come in several different finishes. Most of the laminate finishes are about the same hardness but some show scratches more, are harder to clean, and show top wear.

A high-gloss finish in a dark color shows scratches more than a dull finish in a light color. The high-gloss finish, however, is easy to clean since the dirt does not have places to collect.

Dull finishes such as mat or suede are dulled by a slight brush with wire bristles. This dulling technique hides possible scratches.

Some plastic laminates have highly textured surfaces. Generally these plastic laminates should not be put on horizontal surfaces since they are more likely to show top wear. Depending oil the amount of wear, the top surface dulls showing a slight discoloration. Later, brown spots appear where the surface has worn down to the brown paper. All textured finishes are difficult to clean since dirt collects in the low spots.

There are some textured designer plastic laminates that have an additional layer of lacquer finish on the top surface, which scratches very easily. Most of these designer laminates are recommended for vertical installation only. Look on the sample to see if it indicates for vertical use only.

WHAT'S THE CONDITION OF THE UNDERSURFACE?

Plastic laminates are usually placed over plywood or particle board, which has to be smooth without any high or low spots. High spots show up as ripples or bumps through the laminate surface. Low spots or voids crack when heavy items are placed on the surface or when that area is hit with an object.

Plastic laminates are easy to glue with contact cement. The reason contact cement is used is that it does not show ripples through the top surface. There are two types of contact cement used to glue plastic laminates. One is non-flammable (for use by anyone) and one is flammable (for use by professionals only). The non-flammable contact cement can be used

without any danger of fire. The flammable contact cement can be purchased only in large containers by professional installers. Flammable contact cement ignites easily and the do-it-yourselfer may not be aware of all the safety factors involved in using flammable contact cement.

When using contact cement, put adhesive on both the back side of the plastic laminate and the wood surface. Once you drop the plastic laminate into place, it cannot be slide around, so make sure it is in the correct position before putting it down.

HOW MUCH WILL I NEED?

When figuring how much plastic laminate you are going to need, do not make the mistake of measuring only the area you are going to cover. This is a mistake because the sheets come in different sizes, which have to be cut to fit. There is always some waste, since a good installer always takes care to place seams where they are not noticeable. When laminate sheets are cut, there are pieces left that cannot be used. Figure how much plastic laminate is needed by figuring the space to be covered and how these shapes fit onto the plastic laminate sheets. Laminates are sold by the square foot. You have to buy the whole sheet, so plan to have some waste when the sheets are cut.

WHAT'S ON THE LABEL?

On the back of a plastic laminate sample you will find the manufacturer's name, color, type of finish, and the order number for that particular plastic laminate (see Figure 14.3, Plastic Laminate Labeling). If the plastic laminate should be installed on only a vertical surface, the back of the sample will have the words "vertical grade only."

Figure 14.3. Plastic Laminate Labeling

WHAT'S ON THE WARRANTY?

Plastic laminates usually have a warranty. The warranty may not be easily found, so ask the retailer about the warranty. Generally, the warranty assures the purchaser that the materials are free of flaws, dents, or other defects.

The manufacturer expects the wholesaler to check for defects before the plastic laminate is sold or installed. Even if the manufacturer and installer check for defects, some occasionally slip by the wholesaler and installer. Some defects are not visible until the plastic laminate is installed. One such defect is when the plastic laminate is not impregnated with enough resins during manufacture. After this material is installed it delaminates from the undersurface. In this case, the manufacturer will replace the plastic laminate and pay for installation.

✔QUALITY CHECKLIST

After each question, answer with a yes* or no.

1. Did you check the sample to see if the plastic laminate is recommended for vertical surfaces only?
2. Is the plastic laminate a patterned design rather than a solid color?
3. Is the finish on the plastic laminate a dull finish rather than a high-gloss finish?

4. Is the area where you are going to install the laminate smooth without any bumps or voids?
5. Did you figure the amount of laminate you will need by the area to be covered, plus considering the size of the sheets?
6. Did you ask the sales clerk what the warranty on plastic laminate covers?

* If you answered all these questions with a yes, you can be assured of getting a high-quality plastic laminate.

Utah State University is an Equal Opportunity/Affirmative Action Institution
Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert L. Gilliland, Vice President and Director, Cooperative Extension Service, Utah State University. (EP/05-95/DF)