bamboohardwoods®
Flooring | Furniture | Cabinets | Garden | Plywoods | Poles | Materials

Main Office & Warehouse
4100 4th Avenue South
Seattle, WA 98134

Tel: 206.264.2414
Fax: 206.264.9365
Toll Free: 800.783.0557
info@bamboohardwoods.com
www.bamboohardwoods.com

TROUBLESHOOTING / APPLYING VENEER

Obtained from http://www.ronbryze.com/

When "sheets" of veneers first came onto the market it was pointed out that they could be applied with a contact cement because the paper backer that held the leafs of veneer together also acted as a vapor barrier that kept the finishing materials from softening the glue line. At this point in time nitrocellulose lacquer was considered to be the industry standard when it came to finishes. When used properly, the system worked pretty well and everyone in the kingdom was happy.

Over the years two important changes have taken place that offer new challenges to this system. The veneers are thinner, and the finishes are better.

Today's catalyzed; high solids finishes pose a different challenge to this contact adhesive system. These finishes shrink pretty aggressively as they crosslink and dry, kind of like a liquid shrink wrap. The finish "pulls" at the veneer from every direction, but it is across the grain that the wood is the weakest. If the glue can not resist this pulling force then the early wood cells in the veneer will compress and the veneer is going to creep across the grain.

To understand what happens next, you have to look at the situation from the veneers perspective. Think of veneer as little thin boards. In this thin veneer state the wood is very reactionary. Veneer will take on, and give off moisture fairly quickly, and in the world of wood, moisture means movement. Of course we all expect wood to expand and contract across the grain, but now thickness is also a major issue. If you think of it from the veneers perspective, the very act of flooding a coat of stain or finish onto the veneers surface will wet that little thin "board" maybe half way through its thickness. With one side of the wood wet, and the other side dry, a board is going to try and "cup". Now, as the boards are trying to curl up where ever they can, they are also quickly shrinking as the solvents evaporate and the finish begins tightening like a vise, compressing everything across the grain. You can almost imagine the veneer groaning like an old wooden ship as it wrestles with itself to try and reach equilibrium.

The point is that when you combine all of these factors, you will see that there are tremendous forces raging here, and this is what your glue has to deal with. You can potentially find yourself in a situation where the veneer wrinkles and cracks and blisters along the grain because the flexible glue line cannot resist the forces of the drying and shrinking process. The larger the veneers cross grain area, the greater the potential for movement and failure.

It should be noted that these same problems can also be encountered when using other non-rigid adhesives, like white glue (aliphatic resin) to adhere veneers. The forces are that strong.

To insure success, veneer should always be adhered with a glue that dries to a hard, rigid glue line. There are numerous urea resin and two component glues that work very well for this process. Of course their major drawback is that you need to apply pressure with a veneer press or a vacuum bag until they dry and harden.

Turn the page for application tips…

Main Office & Warehouse
4100 4th Avenue South
Seattle, WA 98134

Tel: 206.264.2414
Fax: 206.264.9365
Toll Free: 800.783.0557
info@bamboohardwoods.com
www.bamboohardwoods.com

If you must apply veneer sheets with contact cement, consider this:

- Store veneer in a cool dry place. Use the same considerations as when storing any other piece of wood.
- Let veneer completely acclimate before applying. Lay the sheets out. Remember that when you have sheets of veneer stacked on each other, their vapor barriers" will also trap moisture between the sheets.
- Let your substrate acclimate.
- The veneer, substrate, glue, and finish should all be at a temperature of at least 68 .
- Avoid exposing the finished piece to large temperature swings. Remember too, that direct sunlight and proximity to heat sources can also cause problems over time.
- Use backer sheets for balanced construction.
- Avoid seaming the sheets whenever possible. Seams tend to open up.
- Apply your finish in multiple light coats.
- Use a finish with a weaker catalyst. Use MagnaMax instead of Krystal, or Magnalac instead of MagnaMax.
- Allow ample dry time between each finishing step.
- Follow all veneer manufacturers' application instructions.
- Always make a sample