Tiling over Vinyl – Some Helpful Hints

“Can I tile over vinyl?”
This question is frequently asked by installers or Do-It-Yourselfers looking for guidance from the Tile Council of North America. As stated on our website www.tileusa.com, there is no simple ‘yes’ or ‘no’ answer. It can be done with proper preparation and investigation into the condition of the vinyl and its bond to the surface below. I will elaborate on the following points as stated on our website’s Frequently Asked Questions:

“The sheet vinyl must be clean and free of wax or other bond breakers.”
This is true of any surface to which you are trying to bond tile. Mortar and adhesive manufacturers generally require clean surfaces for bonding any type of thinset. In order to get good solid bonding, the adhesives must be able to intimately contact both bonding surfaces (in this case the back of the tile and the vinyl). In the case that either of the surfaces are dirty with grit, oil, wax, or other bond inhibiting films, a good bond cannot be achieved due to the fact that the adhesive isn’t able to contact the necessary surfaces, physically or chemically.

Because the vinyl often has a very smooth surface finish, scarification is required to enhance its bondability. Sanding or scarifying enhances the probability of strong physical bonding between the adhesive/tile/vinyl by providing more surface area on the vinyl. This improves the chances for mechanical “locking” and better physical contact.

Some of the no-wax floor finishes (e.g. urethane coated) are intentionally very smooth so the floors maintain their shine. In these cases, scarifying will help create a better bonding surface.

WARNING: If you are going to scarify or sand the floor prior to installing tile, it’s important to know if the vinyl contains asbestos. Flooring containing asbestos should definitely NOT be sanded! If you’re unsure, you can cut a small sample (only a small piece is generally needed ~1-inch-by-1/8-inch) and have it tested at a local asbestos testing laboratory (found in the Yellow Pages) for a nominal fee if time permits. The health risks of sanding a floor containing asbestos has to do with the harmful airborne particles which will be generated.

“The sheet vinyl must be single layer only and well attached. It should not be perimeter glued (it often is!) and it should not have a cushion or foam back.”
In some cases a cushioning layer is installed underneath the vinyl or the vinyl sheet itself is cushion backed. For tiling purposes, this will allow too...

Right: You can tile over some, but not all vinyl floors.
much movement in the system and may lead to a failure in the tile layer. Even if the tile and vinyl form a good bond together, if the vinyl isn’t secured to the substrate or allows too much bending, the tile could fail. In addition, in the case of future repairs where one tile had to be replaced, removing a tile from a vinyl substrate which is poorly bonded to the subfloor could lead to damage in adjacent grout and tile.

The vinyl must be bonded using a full spread adhered system and must not be perimeter tacked. This also provides stability in the vinyl as a substrate. A system which is only tacked at the perimeters will again allow too much movement.

“The subfloor below the sheet vinyl must deflect less than the industry standard L/360 deflection criteria.”

Because the tile requires deflection in the subfloor of less than L/360 then the underlayment, in this case the vinyl, must also meet the same criteria. In addition, this includes meeting 1/4-inch in 10-feet. Defects poking up through the vinyl may cause problems for the tile installation in the same way they do on other subsurfaces.

Should I actually AVOID tiling over vinyl?

Although it may seem intimidating or more risky than tiling over other surfaces, well-adhered vinyl with the proper surface treatment to enhance bonding, will work well and may even resist limited horizontal movement.

So what’s the ‘final on vinyl’?

1. In all cases, we recommend staying with your product manufacturer’s recommendations – you must check with the mortar manufacturer for their specific installation and product advice.

2. Because it’s relatively common, most of the manufactures do have products specifically designed to bond tile to vinyl.

About the Author

Sharon Jones, Director of Research and Installation Standards, is a ceramic engineer with the Tile Council of North America (TCNA). TCNA is a publisher of the American National Standards Institute’s (ANSI) Specifications for the Installation of Ceramic Tile and the TCNA Handbook for Ceramic Tile Installation, the industry’s guidelines for ceramic tile installation.

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