

Tile & Stone Installation Systems

Tiling over sheet vinyl

Can tile be installed over sheet vinyl?

Yes, but in single-family residences only. Ceramic tile or porcelain tile both can be installed over an existing single layer of non-cushioned sheet vinyl as long as the vinyl is fully adhered to the substrate and is not perimeter-glued or loose-laid.

Sheet vinyl is sometimes generically (and incorrectly) referred to as linoleum. However, sheet vinyl is a resilient type of flooring and is different than linoleum. Linoleum is not a dimensionally stable product due to its linseed oil base, which would be a bond-breaking barrier. Therefore, tile should not be installed over linoleum.

How should the surface of the sheet vinyl be prepared?

The surface, also called wear layer, should be lightly roughened to allow a better bond to the mortar. This can be accomplished by using a medium to coarse sandpaper to lightly sand the top surface. Be careful to only roughen up the top layer and not to expose or damage the underlying sheet vinyl itself.

Does the type of subfloor under the vinyl matter?

Yes, whether on-ground or on floors above, concrete is more structurally sound than wood. Depending on the spacing of supporting joists under it, wood experiences a little or a lot of movement (called "deflection"), which can cause slipping or separating of the vinyl.

What if the sheet vinyl is over concrete?

Inspect the sheet vinyl closely for any signs of flaws or blemishes, such as soft, raised areas in the floor or at the seams. When the sheet vinyl is installed over a concrete substrate, moisture vapor migration can accumulate under the vinyl, which can cause the sheet vinyl adhesive to break down and result in the separation of the sheet vinyl from the concrete substrate. Do not proceed if the vinyl is deteriorating. If the sheet vinyl is firmly bonded, proceed with installation, using the recommended mortar for the size and type of tile being installed.

What if the sheet vinyl is over a wood subfloor?

Again, inspect the sheet vinyl closely and do not proceed if the vinyl is not firmly bonded. There are three different options for this type of an installation:

- Cement backer board may be installed directly over the sheet vinyl by troweling mortar onto the vinyl and then using tile backer screws or nails to affix the backer board into the vinyl, as recommended by the backer board manufacturer for wood framing. Proceed with the installation, using the recommended mortar for the size and type of tile being installed.
- *Mapelath™* synthetic lath may be nailed or stapled through the sheet vinyl and into the wood subfloor below. Refer to *Mapelath's* Technical Data Sheet for information on surface preparation, application of lath, and one-step or two-step mortar application instructions. Use either *Ultracontact™* thin-set or *Ultracontact RS* rapid-set thin-set to install the tile.
- *Mapeguard® UM* may be directly bonded to the existing sheet vinyl with an approved MAPEI mortar. Refer to *Mapeguard UM's* Technical Data Sheet (TDS) for information on surface preparation, mortar selection, mixing and membrane application.

Why are the mortars different?

When bonding directly to the sheet vinyl, use a highly modified mortar or a system that can accommodate and compensate for any type of movement. The sheet vinyl could be pulled or stretched, which generates a great deal of stress on the entire system. If the tile assembly becomes unstable, this could result in cracked grout, cracked tile or de-bonding.

If the vinyl was installed on concrete, use a two-component thin-set system such as *Kerabond® T* with *Keralastic®* recommended

for the tile type and size. If vinyl was installed on a wood substrate, there are two installation options:

- One option is using either *Mapeguard UM* along with an approved MAPEI mortar meeting ANSI A118.4, ANSI A118.11 and ANSI A118.15 standard, or is classified as ISO 13007 C2E or better.



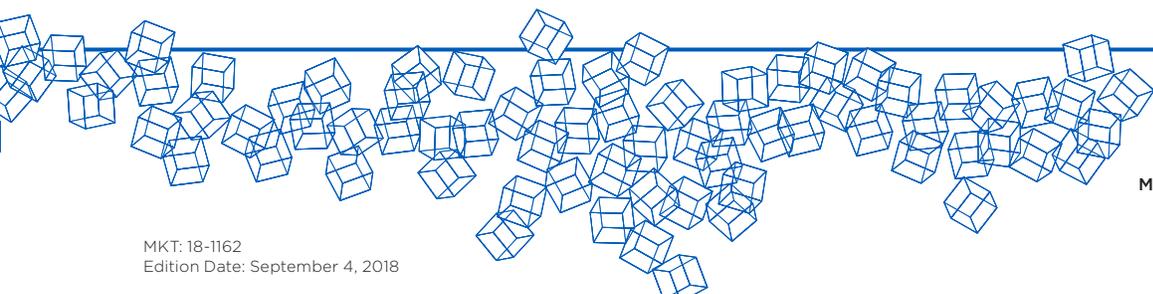
- The other option is using MAPEI's *Mapelath* synthetic lath along with *Ultracontact* or *Ultracontact RS* thin-set for best results, as outlined above.

Refer to the mortar's TDS for the required coverage on the back of the tiles. Usually, 80% coverage or better is required, depending on the size of the tile and on installation area conditions.

Which type of grout should be used?

Recommendations are usually based on the tile type and joint width specified. For example, *MAPEI Flexcolor™ CQ* is a ready-to-use specialty grout that is formulated to ensure color consistency, ease of cleanability and the most versatile grout for all types of tile. For specialty stone tile that is soft or can be easily stained, request a recommendation such as unsanded grout.

Jobsite conditions will vary and may present circumstances not covered in this document. For the most current product information, visit www.mapei.com or contact MAPEI's Technical Services Product Support Team.



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