

TECHNICAL BULLETIN – TB115

APPLICATION OF CERAMIC TILES OVER VINYL & CORK COVERED FLOORS

Date: April 14th 2020

INTRODUCTION & SCOPE

When remodelling a building, most commonly residential or office kitchen areas, the question will arise about applying suitable adhesives for laying ceramic tiles directly over vinyl or cork tiles.

Whilst this is technically feasible to do with several ARDEX adhesives, there are a number of considerations that need to be looked at before attempting this application. In this bulletin we will discuss the procedures that are necessary to achieve a long-lasting installation.

TYPES OF FLOORING

There are two basic types of vinyl flooring we can consider; vinyl tiles and sheet vinyl. This bulletin does not cover strip vinyls or vinyl 'timber' look alike flooring, 'Marmoleum' or linoleum, and foam backed vinyl (vinyl too thin), which are not suitable substrates.

The vinyls are manufactured from a plastic polymer, binders or reinforcing, pigments, and may have a backing material. They are normally coated with a wax polish or sealer in service to protect the surface and provide a shine.

Sheet vinyls are the main type installed in commercial applications, though vinyl tiles are also used in areas like supermarkets. Domestic installations are tiles or embossed vinyls.

Cork is technically a wood product and may contain a synthetic binder to hold the granulated cork material together. The same considerations apply in terms of sealers to those for vinyls.

CHARACTERISTICS OF VINYL AND CORK

From the perspective of tiling, the main things to consider are that vinyls provide a flexible 'soft substrate', and also that the surface sealer can act as a bond breaker. Cork is somewhat more rigid than vinyl, but has similar sealers, including polyurethanes, which are difficult to get adhesion to. Cork also absorbs moisture so has high movement characteristics.

The older vinyls manufactured prior to around 1980 may contain asbestos as a binder reinforcement, and this must be taken into account when sanding or removal is contemplated.

INSTALLATION PROCEDURE

The vinyl or cork must be securely bonded to the floor and the sub-floor must be stable. Loose laid vinyl is not an acceptable substrate. Where the cork or vinyl is loose or poorly bonded, it is recommended that the covering be removed back to the substrate.

COMMERCIAL

The installation of tiles over vinyl or cork in commercial or heavy traffic installations is not recommended. Tiles are very rigid and, where high traffic loads are encountered, the flexible nature of the vinyl or cork, combined with a flexible adhesive may allow the tiles to move or tilt, resulting in possible tile debonding or cracking, and grout cracking.

It is recommended that in these areas the old floor coverings are removed, including any adhesives, back to a clean substrate. As noted, old vinyls may contain asbestos and, in this case, removals must be carried out by properly accredited personnel, complying with relevant state & local government regulations.

Alternatively, the floor can be over-sheeted with fibre-cement underlay and tiling is done onto the sheet, or if height allows, apply a self-supporting screed topping.

DOMESTIC

The same warnings concerning asbestos apply in this case.

Option 1

Direct adhesion to the old vinyl coverings

- The floor initially needs to be washed down with a neutral cleaning agent to remove any oils, grease or dirt and flush thoroughly.
- Once clean, the surface is sanded to roughen it up to provide a mechanical key and is then vacuumed.
- Extra adhesion can be achieved with the use of ARDEX P9 or ARDEX P82 primers.

Option 2

Vinyl or Cork, over-sheeting with fibre-cement underlay vinyl or cork.

- The surface can be over sheeted with fibre-cement underlay affixed according to the sheet manufacturers' instructions.
- A bond breaker tape is applied to the sheet joints. This can be a 50mm wide PVC duct type tape.
- The fibre-cement sheets are primed with ARDEX MULTIPRIME prior to the application of the tile adhesive.

TILE ADHESIVES

The tile adhesive used must be flexible to accommodate the relative softness of the substrate.

- ⇒ For concrete subfloors –
 - ARDEX ABAFLEX
 - ARDEX X56
 - ARDEX ISOFLEX
 - ARDEX QUICKBOND + ABALASTIC
- ⇒ For timber subfloors –
 - ARDEX X56
 - ARDEX ISOFLEX
- ⇒ Where over-sheeted with fibre-cement
- ⇒ used for the installation are ARDEX ABAFLEX
 - ARDEX QUICKBOND + ABALASTIC

The tile grout needs to be flexible and suitable grouts would be ARDEX FG8 or ARDEX WJ50 cement-based grouts mixed with ARDEX GROUT BOOSTER flexible admix.

CONCLUSIONS

Whilst it is quite feasible to adhere ceramic tiles to these substrates, a long-lasting installation requires correct preparation of the surface prior to tiling.

As already mentioned, the application of ceramic tiles over vinyl or cork is not recommended in commercial areas due to the floor loads and traffic expected.

When specifying the application of ceramic tiles over vinyl, it must be kept in mind that vinyl and cork are relatively soft substrates and fixing of rigid floor coverings over soft surfaces is not ideal as it may cause tile and grout cracking.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations contact your nearest Ardex Australia or Ardex New Zealand Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

REASON FOR REVISION – ISSUER

PERIODIC UPDATE

Australia

Technical Services 1800 224 070. email: technicalservices@ardexaustralia.com

Customer Service and Sales 1300 788 780

Web: www.ardexaustralia.com

New Zealand

Technical/Sales Inquiries 0800 227 339

Web: www.ardex.co.nz

Web Corporate: www.ardex.com