



TECHNICAL BULLETIN – TB121

CREATING FALLS AND BEDS FOR TILING

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INTRODUCTION & SCOPE

A practice used in tiling installations involves using neat ceramic tile adhesives to build up a deep bed suitable for falls or simply filling gaps or irregularities in walls or floors. A similar situation involves the erroneous belief that the tile adhesive is suitable for building up or filling cement joints in brick or block work.

These practices are not sound for several reasons, and we will look at suitable solutions.

WHY ARE THESE PRACTICES NOT RECOMMENDED?

There are several reasons why these practices are not recommended and can lead to later problems, including -

- Laying thick beds of mastic or premixed adhesives will lead to drying problems, as these materials are cured by water evaporation. The maximum thickness should not exceed 3mm.
- Tile adhesives are not normally shrinkage compensated, and so overly thick beds can shrink during drying and crack.
- Flexible tile adhesives have lower shear strengths, so beds laid in excess of the recommended thicknesses can weaken the bed and possibly cause tile de-bonding.
- Tile adhesives are generally more expensive than rendering or filling, so using these materials may not be cost-effective.

WHAT CAN BE DONE TO BUILD UP LEVELS OR FLATTEN SURFACES BEFORE TILING

The following are recommended practices before laying tiles, where a fall needs to be created, or a level or flatness problem requires correction.

Using a Ceramic tile adhesive (Masonry only)

- ✓ On concrete floors with a small area to be tiled, ARDEX ABAFLEX can be built up to a maximum bed thickness of 10mm per layer. The greatest build-up can be 20mm, comprising two layers of 10mm with 24 hours of curing between applications.
- ✓ On concrete floors or masonry walls, ARDEX X7 can be mixed with up to 1/3 of its volume with washed sand up to 1mm thick. This can be used on floors to approximately 20mm thick and walls to 5mm.

Using screeding or levelling materials

Rigid floors

- ✓ On concrete floors in wet, dry, or external areas;
 - Bonded sand/cement (3:1 S:C) screed mixed with ARDEX ABACRETE in the gauge water.



- A bulk filling product such as ARDEX K900BF for 3-90mm thickness.
- ARDEX LQ92 up to 10mm thick, or ARDEX LQ92 mixed with an equal volume of 3-5mm aggregate to 25mm or approximately half a volume of 0.3mm sand for falls or ramps.
- ✓ On concrete floors in dry internal areas only, the same solutions apply as for the wet areas but also include.
 - ARDEX A45 REPAIR MORTAR
 - ARDEX self-soothing cements such as ARDEX K12 or ARDEX K15 can be used.

Flexible floors

- ✓ On flexible substrates such as timber or compressed fibre-cement sheet for dry internal applications;
 - Unbonded mesh reinforced self-supporting sand/cement (3:1 S:C) screed (~40mm thick) mixed with ARDEX ABACRETE in the gauge water on a plastic sheet.
 - ARDEX ARDITEX NA up to 10mm thick or up to 30mm thick when mixed with an equal volume of 3-8mm aggregate. This can be tiled (bond breakers over sheet joints on the ARDEX ARDITEX NA surface) or over-sheeted for a flat surface.
- ✓ On flexible external compressed fibre-cement decks (under membranes);
 - Unbonded mesh reinforced self-supporting sand/cement (3:1 S:C) screed (~40mm thick) mixed with ARDEX ABACRETE in the gauge water on a plastic sheet.
 - ARDEX ARDITEX NA up to 10mm thick or up to 30mm thick when mixed with an equal volume of 3-8mm aggregate. This can be tiled, but sheet joints must be carried through the ARDEX ARDITEX NA and an exposed joint installed (See Technical Bulletin TB110).
- ✓ On timber substrates in waterproofed wet internal applications (under membranes).
 - Unbonded mesh reinforced self-supporting sand/cement (3:1 S:C) screed (~40mm thick) mixed with ARDEX ABACRETE in the gauge water on a plastic sheet.
- ✓ Above membranes (for example, membranes not suitable for tiling)
 - Unbonded self-supporting sand/cement (3:1 S:C) screed mixed with ARDEX ABACRETE in the gauge water.

Rendering walls (Masonry)

- ✓ On brick, blockwork, or irregular masonry walls
 - Cement slurry coat mixed with ARDEX ABACRETE in gauge water, followed by sand/cement render mixed with ARDEX ABACRETE in gauge water.
 - Render with ARDEX A45 (indoors) or ARDEX A46 (outdoors) to a maximum of 30mm without filler.
 - ARDEX WR80 FR or ARDEX WR100 for patching and rendering walls from 2 to 10mm.
- ✓ Over suitable membranes (not including pools where special procedures apply)
 - Cement slurry coat mixed with ARDEX ABACRETE in gauge water, followed by sand/cement render mixed with ARDEX ABACRETE in gauge water.

Non-recommended applications



The following installation methods are not recommended -

- ✖ Application of renders on flexible walls such as blue board sheets, plasterboard, or timber.
- ✖ Direct application onto external timber decks.
- ✖ Building up adhesive beds with thicknesses above 3-3.5mm using PREMIXED RESAFLEX or the mastics ARDEX ABAMASTIC (D1), ARDEX D2 or ABAFIX (D11).
- ✖ Direct build-up on timber floors in wet areas with ARDEX leveling cement, such as ARDEX ARDITEX NA or ARDEX K65.

CONCLUSIONS

The solutions suggested in this bulletin provide procedures for building up beds before tiling. The specific instructions can be found on the relevant product datasheets or in Technical Bulletins, which can be obtained from ARDEX Technical Services upon request.

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 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

Change of slogan and address

DOCUMENT REVIEW REQUIRED

36 months or whenever third-party suppliers change their recommendations.

Australia: 1300 788 780

New Zealand: 643 384 3029

Web: www.ardexaustralia.com

email: technical.services@ardexaustralia.com

Address: 2 Buda Way, Kemps Creek NSW 2178