



TECHNICAL BULLETIN – TB035

CREATING FALLS TO WASTE WITH ARDEX K15 AND ARDEX A45 VINYL INSTALLATION

14th October 2024

INTRODUCTION & SCOPE

Creating falls to floor wastes requires the cement topping to be typically installed from 20-30mm to a featheredge at the floor waste and must dry rapidly to allow sheet vinyl flooring to be fixed within 16-18 hours for ARDEX K15, and ARDEX A45.

Standard concrete screeds require a minimum thickness of 15-25mm. They dry at 1mm per day and often require additional smoothing before fixing resilient flooring.

ARDEX K15 and ARDEX A45 cements can be installed from featheredge to normal screed thickness with resilient flooring being laid as early as 1 - 1½ hours over ARDEX A45 and 24 hours over ARDEX K15.

SURFACE PREPARATION

1. Concrete floors must be structurally sound with all previous coatings removed. They must be clean and free of oil, grease, wax, latex compounds, curing compounds, efflorescence, laitance, dust, and all foreign matter, back to an open porous concrete matrix. Professional cleaning by mechanical means is advised. Suggested cleaning & preparation methods are described in the “International Concrete Repair Institute” Guideline No. 03732. It mentions shot blasting, scarifying, or diamond grinding to provide a surface profile between CSP3 and CSP7. Refer to Technical Bulletin TB041.003 for more details.
2. Vacuum the surface to remove all dust, dirt and debris caused by surface preparation etc.

PRIMING

1. The primer recommended for standard absorbent concrete is ARDEX P51
2. Mix ARDEX P51 1:2 with water and apply evenly over the surface with a soft push broom. Do not leave any bare spots and remove all puddles and excess primer. Allow the primer to dry to a clear, thin film (min 3 hours. max. 24 hours). The underlayment should not be applied until the primer is dry.

INSTALLATION OF LEVELLING CEMENT

1. Depending on the degree of required falls to floor wastes and the thickness of material needed, we can suggest 3 options as follows:

NOTE: It may be necessary to install pins in the concrete (adjusted by a string line) to act as a guide when installing floor-leveling cement. The gauge water/ E25 mix quantity can be adjusted slightly to adjust workability.

2. **OPTION 1: ARDEX K15 Self Levelling* Cement**

ARDEX K15 to be mixed with ARDEX E25 Resilient Emulsion as follows:

1.6 litres ARDEX E25 plus



4.0 litres of water per
20kg bag of ARDEX K15

ARDEX K15 is to be mixed with an equal volume of 2 – 5mm graded, washed, and dry aggregate and installed 3mm below the required final floor height. Allow the ARDEX K15 plus aggregate mix to dry, then prime with ARDEX P51 mixed 1:2 with water. Allow to dry.

Install the finish layer of 3mm of neat ARDEX K15 as per standard data sheet.

3. **OPTION 3: ARDEX A45**

ARDEX 45 is to be mixed with ARDEX E25 Resilient Emulsion as follows:

One volume ARDEX E25 plus
2½ volumes water

To be used as the mixing water

ARDEX A45 mortar can be bulked out (for thicknesses over 5mm, but not exceeding 30mm) with 1/3 volume of sharp sand (0-5mm grading) or up to an equal volume of 3mm single-sized aggregate/chippings. For localized thicknesses exceeding 20mm, e.g., filling deep holes and cracks, incorporate up to an equal volume of 10mm single-sized coarse aggregate (refer to BS 882 – table 4) in the ARDEX A45 mortar.

Smoothing and Refacing: Apply the mixed mortar with a trowel to the required thickness, considering the short working time. The material may be finished with a wet trowel after 15 – 20 minutes to provide a finish suitable for direct application of floor coverings. High aggregate content mixes may require a second “neat” ARDEX A45 application.

5. **OPTION 4: ARDEX K900 BULK FILL**

ARDEX K900 BF to be mixed with water only.

2 litres of water per
20kg bag of ARDEX K900 BF

The formed screed can be given a final coat with ARDEX K15 or ARDEX A45 to produce a smooth surface. Allow the ARDEX K900 BF to dry, then prime with ARDEX P51 mixed 1:2 with water. Allow the primer to dry fully prior to applying the levelling compound.

Install the finish layer of 2 – 3 mm of ARDEX K15 or skim coat of ARDEX A45.

6. **PLACEMENT WITH FALLS TO FLOOR WASTE**

ARDEX K15+aggregate, ARDEX A45+aggregate mix designs, or ARDEX K900 BF can be screeded or trowelled to the required fall or gradient.

Allow the mortar to harden to “FINGER TIGHT,” then shape the mortar to the required fall to provide a flat finish by shaving or grinding the surface with a trowel blade or similar tool.

The mortar may require an additional coat of neat material. Refer to **OPTIONS 1, 2 and 3** for re-coating details.

ARDEX K15 requires 24 hours at 20° C before applying vinyl coverings, while ARDEX A45 can receive coverings once the mortar is hard enough to receive foot traffic in 1 - 1½ hours.

Note that a membrane system may be required in wet-area applications. For specific instructions, refer to Technical Bulletins TB012 or TB038.



Always install test areas to determine the product's suitability for the intended purpose.

*Self-Levelling is a generic, internationally used term to describe the flowing properties of these types of cement – in that trowel marks will flatten out based on a minimum thickness of material applied.

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

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DOCUMENT REVIEW REQUIRED

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

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