



SRO932 –Levelling Internal Dry Floors- Old Concrete

SCOPE

This recommendation is regarding the levelling of internal dry area floors prior to the installation of most types of floor finishes. It applies to aged concrete substrates but does not apply to internal wet areas. The concrete must be structurally sound (at least 20MPa compressive strength and at least 1.5MPa tensile strength). All remedial work to repair corroded reinforcement steel shall be completed prior to levelling.

Note: Some old concrete substrates may not be suitable for levelling cements.

PREPARATION

Aged concrete shall be mechanically prepared (by grinding, shot-blasting, scabbling or scarifying) to remove all contaminants such as weak surface materials, adhesive residues, waxy/oily residues, debris from other trades, paint over-spray and/or laitance to achieve a clean open pored surface comparable to Concrete Surface Profile 3 (CSP3) which has a fine textured surface. Vacuum to remove all dust prior to proceeding.

The moisture content of all concrete substrates shall be determined by the methods described in **AS1884-2012, Appendix E**. The relative humidity within (at 40% slab thickness) the concrete is determined (over 72 hours) and where the result is less than 75% RH, the levelling cement and/or sheet vinyl may be installed. Where the result is greater than 75% RH, the concrete is too damp for the installation of levelling cements and/or the sheet vinyl and a moisture barrier will be required.

Where there are signs of dampness in the prepared concrete substrate, an **ARDEX Moisture Barrier** is to be applied prior to proceeding.

- **[ARDEX WPM 368](#)** is a one part moisture barrier applied at not more than 3 sqm per litre per coat. One coat is sufficient for damp concrete not subject to rising damp or hydrostatic pressure. For substrates with rising damp or hydrostatic pressure, at least 2 coats of **[ARDEX WPM 368](#)** are required. Allow to dry for at least 24 hours – cool damp conditions may extend drying time
- **[ARDEX WPM 300 Hydrexpoxy](#)** is a two part water borne epoxy that is mixed and applied at not more than 3 sqm per litre per coat. Two coats are required with at least 4 hours drying between coats. As the top coat is applied, **ARDEX Primer sand** is broadcast over the wet surface to achieve an evenly distributed coverage over at least 90% of the area. Allow drying for 24 hours and then brush/vacuum to remove any loose sand.

These moisture barriers also act as the prime coats for the levelling cements so no further priming is required on these systems.



For aged, dry concrete, the surface is primed with [ARDEX P 51](#) water based primer used in accordance with the product data sheet. This primer must be allowed to fully dry prior to application of the levelling cement.

The following table is a guide to the levelling/smoothing cements for aged concrete floor substrates. The applications >10mm with bulk fill aggregate can be used to create ramps and falls as required.

ARDEX Levelling and/or Smoothing Cement	Internal Floor finish type	Application Thickness <10mm No aggregate	Application Thickness >10mm with aggregate	Recommended Aggregate for >10mm thick applications
K15 MICROTEC	Tiles- all types Linoleum, Vinyl, carpet	yes	Any thickness	Equal mix with 2-5mm washed & dry aggregate
K12N	Tiles- all types Linoleum, Vinyl, carpet	yes	Max. 50mm	Equal mix with 2-5mm washed & dry aggregate
K120 K220	Tiles- all types Linoleum, Vinyl, carpet	yes	Max. 50mm	Equal mix with 2-5mm washed & dry aggregate
Arditex NA	Tiles- all types Linoleum, Vinyl, carpet	yes	Max 30mm	Equal mix with 3mm aggregate
K005 Bulk Fill	ARDEX levellers as above at less than 10mm thick.	No	10 -120mm	Not required
LQ92	Tiles – all types	yes	Max 25mm	Equal mix with 2-5mm washed & dry aggregate
A45 & ARDEX A30	Tiles- all types Linoleum, Vinyl, carpet	Yes	Max. 30mm	Equal mix with 3mm washed & dry aggregate

Notes: Tiles- all types include ceramic, porcelain and natural stone tiles.

[ARDEX A 45](#) & [ARDEX A 30](#) Patching / Repair Mortars can be used for ramping & coving to create falls in small areas



Once the ARDEX levelling systems have set and dried, minor surface imperfections in the levelled surface can be smoothed using the [ARDEX Feather Finish](#) (maximum 3mm thick). The various floor finishes can now be applied. Tile finishes can be adhesive fixed using the ARDEX tile adhesives & grouts nominated in the Tiling Specifications. Carpet and resilient floor coverings can be installed using the following ARDEX Adhesives:

- For resilient floor coverings, use [ARDEX AF 178](#) sheet vinyl adhesive.
- For Linoleum, use [ARDEX AF 748](#).
- For carpet, use [ARDEX AF 266](#) or [ARDEX AF 241](#) adhesives.

All ARDEX levelling cements and adhesives shall be mixed and used in accordance with the product data sheets. ARDEX Technical Bulletin TB102 relates to the addition of aggregate to the levelling cements.

Disclaimer:

The recommendation selected is based upon questions answered on the ARDEX Australia website. This recommendation is designed as a general application for your described situation and should not be considered site specific documentation for general distribution. Always consult the latest relevant ARDEX Technical Bulletins and information on the product packaging and/or product data sheets (available on the ARDEX Website). Australian and other relevant standards should be followed during installation. If you have any further questions or would like further clarification please contact the ARDEX Technical Services Hotline on 1800 224 070 (9am to 5pm Monday to Friday).