SRO941 Levelling External Floors

SCOPE

This recommendation is regarding the levelling of external concrete floors and may include the application of a waterproofing and/or a tile finish. This application may result in ponding of water on the tiled surface hence the applied system is to provide minimum fall of 1:100 (i.e. 30mm over 3m). The areas of application include footpaths, courtyards, domestic garages, open patios and entertaining areas.

PREPARATION

The new concrete shall have completed the 4 – 6 weeks curing /drying period to allow the development of micro-cracking and be structurally sound. Any cracking is to be repaired using the ARDEX systems described in **ARDEX Technical Bulletin TB206**. These include the **ARDEX RA series** of injection products as well as repair mortars (e.g. **ARDEX A 46, ARDEX BR 345 / ARDEX BR 120 FC**) for filling wide cracks and/or holes in the concrete. Note: Ensure the repair system selected is suitable for external applications where it may be exposed to occasional moisture.

All concrete (new & aged) 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.

Damaged and/or incomplete movement joints must be raked clean of old flexible sealant and reinstated prior to application of the levelling cement. These joints must not be filled with rigid materials such as these levelling cements.

PRIMING

As the prepared concrete may be subject to rising damp (e.g. slab on ground) or ponding of water, the preferred priming system is to apply 2 coats of **ARDEX WPM 300 Hydrepoxy** at 3 sqm per litre per coat and allowing at least 4 hours between coats. As the topcoat is applied, broadcast **ARDEX Primer Sand** to achieve an evenly distributed coverage over at least 90% of the wet surface. Allow to dry overnight and brush or vacuum to remove any loose sand prior to application of the ARDEX levelling cements. **ARDEX WPM 368** way also be used for as an alternate primer, applied in 2 coats. Sand broadcasting of the **ARDEX WPM 368** is not required.

LEVELLERS

The **ARDEX K 301**; **ARDEX LQ 92** and. **ARDEX A 46** can be used as levellers and patch mortars. In external applications, **ARDEX LQ 92 MUST** be protected with a waterproofing membrane and have a tile finish installed over the membrane using an appropriate tile adhesive applied over the leveller.

ARDEX K 301

- Normally used as a leveller to create exposed wear surface from 2 – 20mm.
- Can be mixed with an equal volume of 2-5mm aggregate for applications 10 -30mm. This mix can be set to minimal fall as the aggregate reduces the self-levelling effect.
- Can be left exposed.

ARDEX K 301 is walkable after 2–4 hours; however, allow 24 hours of drying time (at 23 °C and 50% RH) before applying a paving paint or resinous coating (such as epoxy or polyurethane), installing waterproofing or tiles, tiling directly over it, or covering it with outdoor carpet or synthetic grass.

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SRO941.003 – May 2025

ARDEX LQ 92

- Used to level uneven concrete surfaces before applying a waterproofing membrane and subsequently fixing tile finishes with adhesive.
- Can be applied from a near feather edge up to 10mm thickness.
- Can be mixed with equal volume of 2-5mm aggregate for thicknesses from 10 – 30mm.
- Can be mixed with sand 0.3 – 2.0mm to achieve suitable consistency for ramping prior to tiling.
- Can be mixed with **ARDEX Abalastic** additive where added water resistance is required.
- **ARDEX LQ 92** is not suitable for use as an exposed wear surface and must be waterproofed and tiled.

ARDEX LQ 92 is normally set hard in 4-6 hours however allow 24 hours drying time (at 23 °C and 50% RH) before a waterproofing membrane is applied over the **ARDEX LQ 92** with tile adhesive fixed to the membrane.

ARDEX A 46

- Normally used as a patch mortar to fill holes, cavities and gouges in external concrete surfaces such as resurfacing of concrete steps up to 30mm thick.
- Can be used to form external ramps from 2 to 30mm.
- Suitable for foot traffic and light, soft wheeled vehicle traffic only.
- Can be coated after 3 days drying with resinous (epoxy/polyurethane) coatings

The **ARDEX A 46** is not intended as a leveller for large area applications. These types of applications are better suited to the **ARDEX K 301** or the **ARDEX LQ 92** systems.

Please refer to the product TDS for further information.

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).

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