SRO934 - Approved Base Screeds for ARDEX Levelling Cements
Internal & External

SCOPE

ARDEX Levelling compounds are designed to be used mostly as thin (<30mm thick) layer toppings to internal floors prior to the installation of floor coverings such as resilient floor finishes (e.g. vinyl or linoleum), carpet or tiles. For applications where the setdowns are greater than the thickness range for the nominated levelling cements, an approved base screed is recommended that is compatible with the levelling cements.

PREPARATION

The concrete to be levelled must be structurally sound and free of cracks. 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 45**, **ARDEX BR 345** / **ARDEX BR 120 FC**) for filling wide cracks and/or holes in the concrete.

Note: *For unbonded screeds, the surface must be relatively smooth with all holes/cracks filled and all protrusions ground flat.*

All new concrete shall have completed the minimum 4-6 weeks curing & drying periods to allow the development of any micro-cracks as any cracking will continue through any applied levelling cement. If the recommended drying time is not available, the concrete must have cured/dried for a minimum of 7 days and have achieved at least 20MPa compressive strength prior to the application of a moisture barrier.

All 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 **AS1884-2021, Appendix A**. The relative humidity within (at 40% slab thickness) the concrete is determined (over 72 hours) and where the result is less than 80% RH, the levelling cement and/or sheet vinyl may be installed. Where the result is greater than 80% RH, the concrete is too damp for the installation of levelling cements and/or the sheet vinyl and a moisture barrier will be required.

MOISTURE BARRIER

The following moisture barrier systems are suitable for bonded base screeds:

1. **ARDEX WPM 300 Hydrepoxy** – applied as a moisture barrier to new concrete that is at least 7 days old and at least 20MPa compressive strength. This is applied in 2 coats with “sand-seeding” of the wet top coat to ensure a dry film thickness of 0.3mm.

2. **ARDEX WPM 368** – One part moisture barrier that does not require "sand seeding". Applied over "green" concrete in 2 coats to ensure a dry film thickness of 0.3mm, prior to installation of levelling cements.

BASE SCREEDS

The approved base screeds to receive ARDEX Levelling cements are:

- **ARDEX K900 BF** product which can be applied as a bonded screed from 3 to 90mm thickness to internal floors. It may also be used to create falls and ramps.
- As a bonded screed, **ARDEX K900 BF** is applied to the prepared concrete that had been primed with **ARDEX P 51** water based primer or to the Moisture Barriers as noted above.
- When used in internal wet areas. The **ARDEX K900 BF** must be protected by the **ARDEX WPM 002** waterproofing membrane prior to application of floor coverings.
- **ARDEX A 38 Rapid Set**, or **ARDEX A 48** screeds, for both internal and external applications, as either a bonded topping or an unbonded topping.
- **ARDEX A 38 Rapid Set**, or **ARDEX A 48** screeds, as a bonded topping, is from a minimum thickness of 15mm to around 80mm. It is applied over the screed's bonding slurry that has been applied to the prepared concrete substrate (no other primer required) as per the product data sheet.
- **ARDEX A 38 Rapid Set**, or **ARDEX A 48** screeds, used as an unbonded topping, is placed over a double layer plastic slip sheet system. The minimum thickness shall be 45mm and the reinforcing mesh is not required.
- Application of these topping screeds to large floors shall be in bays/panels with area no greater than 40 m2, a length to width ratio not greater than 2, no one length greater than 8 m and no change in direction.
- Ensure these toppings are allowed to fully dry prior to application of the levelling compound.

Note: These base screeds are alternatives to ARDEX systems where the thickness of the levelling cement may be increased by the addition of selected aggregate and can be trowelled with falls as required.

Note: AS1884-2021 requires base screeds under resilient (vinyl or linoleum) & carpet floor finishes to comply with minimum surface tensile strengths. Traditional sand & cement screed are no-longer considered a viable substrate for these resilient toppings and are not recommended under levelling cements. Alternate engineered screed systems are required for these applications that comply with the tensile and compressive strengths as set out in the Australian Standards.

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).