



System recommendation

SRO944 – Installation of Vinyl Floor and wall Coverings Internal Wet Areas

This recommendation is regarding the application of vinyl coverings to internal wet areas such as Health Care Facilities. The substrates included are reinforced concrete floors, sheet wall linings and rendered masonry walls. **ARDEX** levelling systems provide a high strength, dry substrate much faster than traditional cementitious toppings and allow the installation of the impervious wall & floor coverings with minimal delay. However these specialty levelling cements must be covered and protected from water penetration by a suitable membrane applied directly under the vinyl finishes.

PREPARATION

All concrete substrates shall have completed the recommended curing/drying period of 4-6 weeks & cement render shall have dried for a minimum of 14 days. The surface shall be mechanically prepared (e.g. by grinding, shot-blasting, scabbling) to remove all contaminants such as curing compounds and laitance. Scarify steel trowel finished concrete to achieve an open pored surface finish similar to CSP3 (concrete surface profile 3) finish. Vacuum to remove all dust.

All wall sheeting must be dry and installed in accordance with the sheet manufacturers' instructions.

The moisture content of all concrete substrates shall be determined by the methods described in **AS1884-2012, Appendix A**. 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 vinyl may be installed. Where the result is greater than 75% RH, the concrete is too damp for the installation and a moisture barrier will be required.

MOISTURE BARRIER

In situations where rising damp is suspected or known, a moisture barrier is required. The following systems can be applied as the moisture barrier to prevent residual moisture rising in the concrete from damaging the applied levelling cement and impervious vinyl floor covering.

- **ARDEX WPM 300 Hydrepoxy** applied in two coats at not more than 3 m² per litre per coat and allowing at least 4 hours drying between coats. Immediately after the top coat is applied, ARDEX Primer Sand is broadcast over the entire wet surface. Allow to dry (~24 hours) before brushing/vacuuming to remove any loose sand and installing the levelling cement. Recommended for heavily saturated new concrete substrates.
- **ARDEX WPM 368** One part moisture barrier applied in two coats at 3 m² per litre per coat and allowing 2 - 4 hours between coats. Allow to dry for 24 hours



although longer drying times may be required if applied to saturated substrates. Sand seeding is not required. Once dry install the levelling compound.

The above moisture barriers also act as the prime coat for the **ARDEX** levelling compounds and must be dry prior to the installation of these levelling cements.

PRIMING – where no moisture barrier has been applied.

Where the moisture content of the concrete substrate has been determined as being dry (according to AS1884-2012 Appendix A), the prepared surface is primed with one of the following:

- **ARDEX P 51** water based primer (1 volume mixed with 2 volumes of water) is applied evenly over the prepared concrete surface. All puddles are to be brushed out and excess primer removed. Allow to dry (min.3 hours – max. 24 hours) to thin clear film.
- **ARDEX P 9** one part primer applied evenly over the prepared concrete surface. Allow to dry (~60 minutes at 23°C and 50% RH).

The above primers must be dry prior to the installation of the **ARDEX** levelling cements.

CREATING FALLS TO FLOOR WASTES

The following systems are suitable for creating falls to wastes.

	ARDEX Patch/Leveller	Aggregate (2-5 mm) or sand (0.3 – 0.5mm)	Thickness	Cure time (approx.)
1	A 45	a) Nil b) 1/3 volume added sand	a) 1 -30mm b) 5 -30mm	90 minutes
2	K 15	Equal Volume aggregate	Any thickness	16 – 18 hours
3	K 900 BF	Nil (but water may need to be backed off to create a ramp)	3-90 mm	48 hours
4	A 46	Nil	0 -30mm	90 minutes
5	K 301	a) Nil b) Equal volume aggregate	a) 2 -20mm b) 10 -30mm	48 hours



ARDEX levelling compounds with added aggregate and the **ARDEX K 900 BF** product; normally require a final smoothing coat of levelling cement with no added aggregate or sand, applied at 3-5mm thickness to achieve a smooth surface suitable for the vinyl floor coverings.

- *In wet areas, the bulk-filled base material may be smooth enough for the application of the waterproofing membrane without the smoothing coat.*

WATERPROOFING

ARDEX levelling cements must not be applied directly over waterproofing membranes. However they must be protected from water penetration by a suitable membrane such as the **ARDEX WPM 002** system that complies with the requirements of **AS4858** as a membrane for internal wet areas. The membrane application is to be in accordance with the recommendations of **AS3740** and as follows;

- Prime the dry **ARDEX** topping with **ARDEX WPM 265** (or **ARDEX P 9** or **ARDEX Multiprime**) and let dry.
- Mix the **ARDEX WPM 002** two part membrane in accordance with the instructions and apply in 2 coats to achieve the recommended minimum thicknesses for floors and walls. This membrane may be applied to full height (~1800mm above floor) in shower recesses.
- The membrane application shall include the **ARDEX ST** neutral cure silicone bond breakers to internal corners and **ARDEX Deckweb** fabric reinforcement where the membrane is applied over these bond breakers.
- Let the membrane fully dry for 24 hours prior to installation of the vinyl finishes.

VINYL INSTALLATION

Immediately prior to installation of the vinyl wall and floor finishes, the dry membrane surface shall be smoothed to remove imperfections left by the application rollers using the porous **ARDEX Feather Finish**. This porous layer assists in the setting of water based vinyl adhesives while protecting the membrane from the solvents in solvent based contact adhesives.

- Apply **ARDEX Feather Finish** in two coats as follows
- The first coat is applied with a notched trowel to achieve the recommended minimum thickness for floors and walls. Smooth the notches together to achieve a flat surface. This will dry in approx. 15 minutes.
- Apply a second coat to achieve a smooth finish at a minimum overall thickness of 1.5mm on floors and 1.0mm on walls. The **ARDEX Feather Finish** can be applied to an overall max. 3.0mm thickness down to a true feather edge and will dry in approx. 15 minutes.
- When the **ARDEX Feather Finish** is dry, the vinyl floor and wall finishes may be applied using;
 - For sheet vinyl coverings, use **NEXUS 880** High Performance Vinyl Sheet Adhesive.
 - For vinyl plank use **NEXUS 880** or **NEXUS 870** Vinyl Plank Adhesive.



All ARDEX products and NEXUS 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 and may provide more details than this document.

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).