



TECHNICAL BULLETIN – TB015

APPLICATION OF ARDEX LEVELLING COMPOUNDS OVER INTERNAL TIMBER SURFACES

03 October 2025

INTRODUCTION & SCOPE

One of the most common problems in renovating and remodelling existing buildings is leveling and smoothing wooden subfloors to receive hard floor coverings, floating floors, and carpets. Wooden floors are often rough and uneven, with deviations from zero to several centimetres over three metres. Installing a hardwood, fibre cement, or MDF underlay sheet over rough/uneven timber will often result in disintegration of the underlay and floor coverings when exposed to traffic stress.

The resilient flooring standard AS1884-2021 states that.

3.6.6 Particleboard Subfloors

Resilient flooring must not be adhered directly to particleboard subfloors. If resilient flooring is to be installed, an appropriate underlay or underlayment must be used.

SOLUTIONS

The following ARDEX underlayment applications can be used for vinyl, hard floor coverings, floating floors, tiles, and carpets to provide a smooth and level surface.

OPTION 1 – ARDEX K60 (ARDITEX NA) OR ARDEX K65 FLOOD COATING, DIRECTLY BONDED TO TIMBER. ARDEX K60 (ARDITEX NA) AND ARDEX K65 IS SUITABLE FOR STRIP T&G, PARTICLEBOARD, AND PLYWOOD.

Pre-leveling/smoothing/patching wooden flooring using ARDEX K60 (Arditex NA) or ARDEX K65 can provide a flat, durable surface. ARDEX K60 (Arditex NA) and ARDEX K65 can be feathered to meet existing floor heights. Floor coverings (**excluding** direct-stick timber) can be directly applied to the ARDEX K60 (Arditex NA), or underlay boards can be laid over a pre-levelled/smoothed/patched area. Floor coverings (**including** direct-stick timber) can be directly applied to the ARDEX K65, or underlay boards can be laid over a pre-levelled/smoothed/patched area.

OPTION 2 – ARDEX K60 (ARDITEX NA), ARDEX K65 OR ARDEX K15 / K12 USED AS A PATCH WITH FIBRE-CEMENT SHEET, HARDBOARD OR MDF UNDERLAY SHEETS

Depressions in the floor can be filled with ARDEX K60 (Arditex NA), ARDEX K65 or ARDEX K15 / K12 mixed with ARDEX E25 Improver and then over-sheeted with underlay to provide a rigid and flat surface.

This is the preferred method for installing ceramic tiles to minimize the risk of grout cracking.

Refer to the adhesive and floor covering manufacturer's advice for application over wood-based underlays.

OPTION 3 – ARDEX FEATHER FINISH AS A SKIM COAT

ARDEX Feather Finish can be used on closely fitted fibre-cement underlay, plywood and particleboard flooring to fill in grooves, gouges, level up joints etc., and allows for the fast installation of floor coverings.

Application of Feather Finish over T&G board flooring is not recommended.



SUBSTRATE PREPARATION

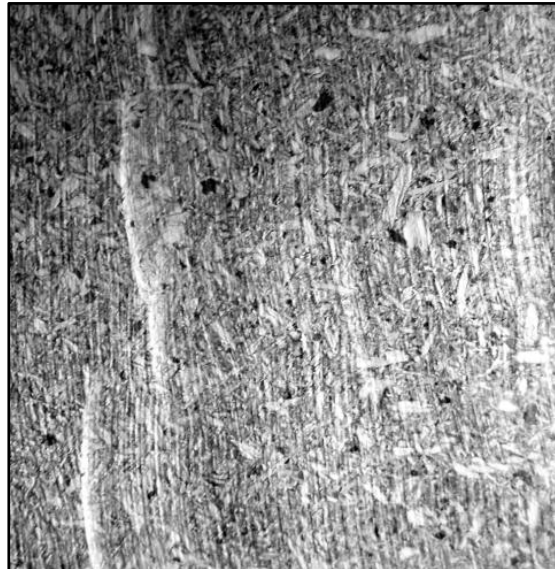
Note: Particleboard/plywood flooring is often coated with a protective resin layer. This layer may act as a bond breaker to applied finishes and must be removed by sanding.

1. The wooden subfloors must be clean and free of oil, grease, wax, etc. They should also be solid and fixed to provide a rigid base, with deflections less than 1/360th of the span distance of the floor joints. Any boards exhibiting movement should be re-nailed, and open joints should be filled with a suitable fast-setting mortar.

Examination of the subfloor by a professional contractor is recommended.

2. Sand the wooden subfloor using a coarse abrasive to remove all foreign matter and provide a mechanical surface for installing ARDEX K60 (Arditex NA), ARDEX K65, ARDEX K15 / K12, or ARDEX Feather Finish.

The attached photo shows particleboard flooring sanded with a 36-grit abrasive to produce a suitable textured profile clean of surface waxes and contaminants.



3. The subfloor should be vacuumed to remove dust or sanding debris.
4. Ensure there is adequate crossflow ventilation and that the minimum height clearance between the earth and the timber flooring, in accordance with Australian Standards, is maintained. Failure to have adequate ventilation can result in moisture build-up under the subfloor, which may result in excessive floor deformation, mould growth, or moisture permeation through the underlayment, which can result in blistering of sheet vinyl.

PRIMING FOR ARDEX K60 (ARDITEX NA) AND ARDEX K65

1. Consult the Technical Data Sheets (TDS) for ARDEX K60 (Arditex NA) and ARDEX K65 for priming instructions.

PRIMING FOR ARDEX K15 / K12

2. Prime the wood subfloor with ARDEX P9 primer in accordance with the datasheet. A thin grey coat is sufficient. Excess material will slow drying.
3. Drying time is a minimum of 20mins (@ 23°C) and a maximum of 24 hours.



INSTALLATION OF UNDERLAYMENT'S

OPTION 1 – ARDEX K60 (ARDITEX NA) FLOOD COAT.

Install ARDEX K60 (Arditex NA) per the technical data sheet, allowing the ARDEX K60 (Arditex NA) to dry completely before installing flooring. This is typically around 24hrs and can be extended at lower temperatures and high humidity

For thickness over 8mm, the minimum recommended temperature is 15-16°C.

Where underlay sheets are to be applied over ARDEX K60 (Arditex NA) follow option 3 below from step 2.

OPTION 2 – ARDEX K65 FLOOD COAT.

Install ARDEX K65 per the technical data sheet, allowing the ARDEX K65 to dry completely before installing flooring. This is typically around 48hrs for vinyl installation and can be extended at lower temperatures and high humidity

Where underlay sheets are to be applied over ARDEX K65 follow option 3 below from step 2.

OPTION 3 – ARDEX K60 (ARDITEX NA), ARDEX K65 OR ARDEX K15 / K12 AS A PATCH AND DEPRESSION FILLER WITH FIBRE-CEMENT UNDERLAY SHEETING.

ARDEX K60 (ARDITEX NA)

All depressions and undulations are to be filled with ARDEX K60 (Arditex NA) Latex Self-Smoothing Cement

1. Allow the ARDEX K60 (Arditex NA) to harden to walkability (2-4 hours). Then, install the fibre-cement underlay sheets as per the manufacturer's instructions.
2. *Install Hardwood and MDF*
Avoid joins of the underlayment sheets over any ARDEX K60 (Arditex NA) patched area.
3. The underlay sheet must be secured to the wooden floor, using nails or sufficient length to penetrate the ARDEX K60 (Arditex NA) and lock into the wooden subfloor (see attached diagram). These nails should penetrate through the timber sheeting.
4. Touch-up and fine finishing of fibre-cement underlay sheets can be achieved using ARDEX Feather Finish.

ARDEX K15 / K12

1. All depressions and undulations must be filled with ARDEX K15 or ARDEX K12 mixed with ARDEX E25 improver.

Note: ARDEX K15 and ARDEX 12 are to be mixed with ARDEX E25 as follows:

ARDEX K15	ARDEX K12
1.6 litres ARDEX E25	1.6 litres ARDEX E25
Plus 4.0 litres water	Plus 4.0 litres water
To 20 kg ARDEX K15	To 20 kg ARDEX K12

2. Allow the ARDEX K15 / K12 to harden to walkability (2-4 hours). Then, install the fibre-cement underlay as per the manufacturers' written instructions.
3. Avoid joins of the underlay sheet over any ARDEX K15 / K12 patched area.



4. The underlay sheet must be secured to the timber floor using long nails that penetrate the ARDEX K15 / K12 and lock into the timber subfloor (see the attached diagram). These nails should also penetrate through the timber sheeting.
5. Touch-up and fine finishing of the fibre-cement underlay can be achieved using ARDEX Feather Finish.

Special Note: For Masonite and M.D.F. underlayment installation, follow the procedure above, except the underlayment must **dry completely** before applying Masonite and M.D.F. sheeting.

OPTION 4 – ARDEX FEATHER FINISH AS A SKIM COATING

1. ARDEX Feather Finish can be installed from a true featheredge up to 3mm thick.
2. Use a steel trowel to apply the mixed ARDEX Feather Finish to the clean substrate. Fill all defects in the surface completely and apply sufficient pressure to the trowel to feather the product into the surface.
3. As soon as the ARDEX Feather Finish can be walked on without damaging the surface (in as little as 15 – 20 minutes), vinyl tile and sheet, and carpeting can be installed.

FLOORING ADHESIVES

ARDEX recommends the use of ARDEX AF 145 for.

- Sheet vinyl

Note: This adhesive has a fast grab and is also suitable for vertical applications.

ARDEX recommends the use of ARDEX AF 175 for.

- LVT

ARDEX recommends the use of ARDEX AF 180 MS for.

- Resilient floor coverings
- Linoleum
- Rubber and artificial grass
- Regupol 4515
- ARDEX DS70
- LVT (High Heat)

ARDEX recommends the use of ARDEX AF 271 for.

- Vinyl backed carpet tile
- Non-vinyl backed carpet tile
- Vinyl composite tile

For other carpet tile backing, consult ARDEX Technical Services.

NOTES

Always make a test installation first to assure success, as floor conditions vary from site to site. Refer to the flooring and adhesive manufacturers for their recommended installation procedures.

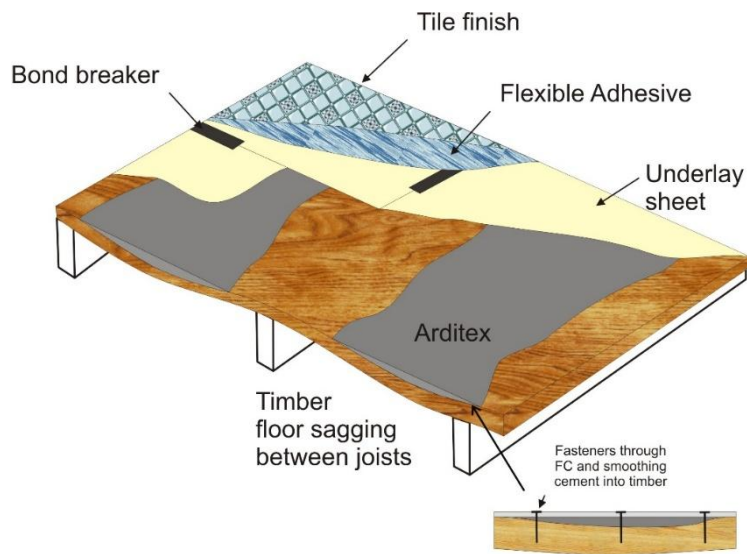
This bulletin does not apply to wet areas as defined in AS3740 or floors requiring waterproofing systems under the NZBC.



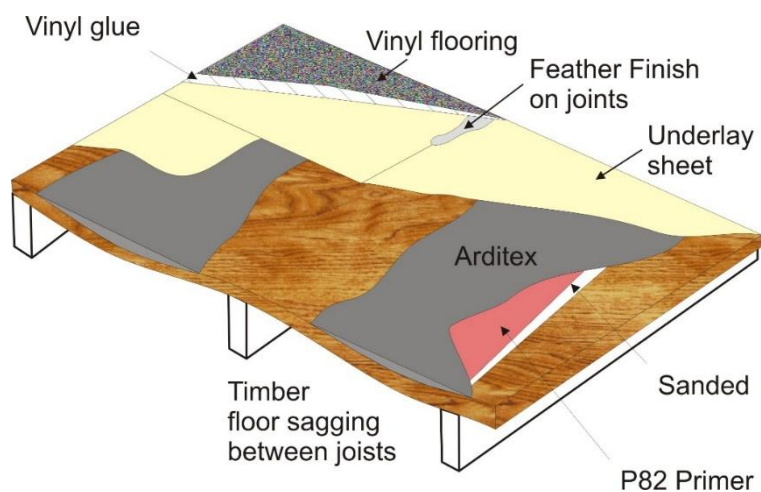
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Installing liquid smoothing cements on the top of fibre-cement underlay sheets is not recommended. One problem is that dips and depressions in the fibre-cement sheet can result in problems with sheet cracking or damage. These sheets work best on already relatively flat surfaces. Also, the underlay sheets are attached to the base timber boards but still retain a large degree of flexibility and can be deformed.

The higher strength smoothing cements can result in the edges of the sheets lifting, resulting in cracking of the topping at the fibre-cement joints, possible lipping and resultant show through. The only type of fibre-cement sheet that can have liquid smoothing cements directly applied is compressed fibre-cement sheeting.



A typical application of ARDEX K60 (Arditex NA), ARDEX K65 or ARDEX K15 / ARDEX K12 + ARDEX E25 used as a patch below fibre-cement underlay sheets and ceramic tiles.



A typical application of ARDEX K60 (Arditex NA) or ARDEX K65 used as a patch below fibre-cement underlay sheets for vinyl.



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GLOSSARY

Underlay – The description used in AS1884 to describe fibre-cement, hardboard, and MDF sheets used as sheets placed on subfloors under resilient flooring.

Underlayment is used in AS1884 to describe engineered liquid-applied smoothing cements placed on subfloors under resilient and textile floor coverings. ARDEX refers to these mostly as “levelling compounds”

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

NZ version

REVIEW REQUIRED

36 Months from date of issue

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