

# TECHNICAL BULLETIN – TB030

## ARDEX K15, K12 & ARDITEX NA OVER INTERNAL COMPRESSED FIBRE-CEMENT DECKING

**Date: Tuesday, 31 July 2018**

### INTRODUCTION

Modern construction techniques require floor-coverings to be laid over many types of substrates. Compressed fibre-cement flooring laid on steel or timber framework presents an unusual challenge to the floor-covering contractor. The compressed fibre-cement flooring due to its construction can provide an irregular surface which is subject to vibration when loaded or walked on.

### SOLUTION

The ARDEX K15M / ARDEX K12N self levelling cements mixed with ARDEX E25 improver or ARDEX ARDITEX NA universal smoothing cement, combined with the ARDEX P82 bonding agent is suitable for "Dry Internal Areas Only" and provides a smooth flat surface that is resistant to vibrations.

ARDEX K15M/ARDEX K12N mixed with ARDEX E25 is suitable for high quality vinyls, carpets and floating timber floors, whilst ARDITEX NA can be used for these applications where surface hardness is less critical and semi self smoothing only is required, for example floating timber floors and carpets.

### QUALIFICATIONS

There is a degree of confusion in the industry as to what constitutes compressed fibre-cement sheet flooring. In the *senso stricto* usage, compressed fibre-cement sheet is manufactured by taking several thin 'green' fibre-cement sheets and pressing them together at ~130psi, to form a single sheet which is then autoclaved. The final sheet is harder, stronger and *approx.30%* denser than standard fibre-cement sheets, or the newer low density thick flooring sheets. This bulletin is only appropriate for >15mm thick compressed fibre-cement sheeting manufactured from Portland Cement and ground silica sand with an internal fibre-reinforcement which is typically fibrillated cellulose (*see also TB220 re fibre-cement sheet generally*)

Ardex requires *senso lato*\* that substrates shall have a tensile strength of 1.5MPa. In general the tensile strength of these compressed sheeting materials is sufficient to take smoothing cements.

*\*This relates specifically to screeds as in AS1884-2012, however it is a good rule of thumb for all substrates intended to take smoothing cements, and/or hard resin based (e.g. epoxy) coatings.*

At the time of issue of this bulletin, the types of internally installed sheet this system is suitable for are:

- James Hardie – Hardipanel Compressed Sheet flooring.
- BGC Compressed Fibre-Cement Sheeting
- CSR Cemintel Compressed Sheet

It **does not apply** to the following types of materials.

- a) Any of the fibre-cement sheet underlay sheets applied over any form of timber floor. These underlays are normally described as being for Vinyl and Cork Underlay or Ceramic Tile Underlay. When applied to this type of sheet there will be cracking at the sheet edges and the risk of sheet edge curling.
- b) The specialised 'low density' – light weight wet area or decking sheets that have seal coats applied and use sealant filled or non-filled butt joints. At the present time examples of these materials are;

- a. James Hardie Scyon™ Secura™
- b. CSR Cemintel - Constructafloor™
- c. BGC Durafloor™

*Note: These are covered by Technical Bulletin TB240.*

- c) Any forms of this flooring sheet based on Magnesia or Magnesium Oxychloride or Oxysulphate cements (c.f. 'Magnesite'). These have been appearing in the market in the last few years for floors and are not acceptable for smoothing cements.

### **PREPARATION**

1. Compressed fibre-cement butt joints must be supported by a batten/joist etc., and firmly fixed in accordance with the manufacturer's installation recommendations to allow no movement.
2. **Sheets are to be edge adhered with ARDEX RA88 epoxy adhesive and crack filler between panels, and open joints are not acceptable.**
  - a. *Note: the sheet manufacturer's may supplied materials of equivalent type.*
3. Compressed fibre-cement to be free from dust, dirt, grease, oil, paint etc. Mechanically prepare (progress, drum, or belt sand) to provide a roughened surface and to remove all adhering foreign matter. Vacuum the surface to remove all dust and dirt etc.
4. *Note: Avoid breathing dust and wear approved personal protective equipment. Refer to sheet manufacturers advice in this area. Do not sand old compressed asbestos cement sheeting.*
5. Prime with ARDEX P82 solvent free primer in accordance with manufacturer's written instructions.  
ARDEX P51 diluted 1:2 can or ARDEX P9 also be used, however *the low* surface porosity of the compressed fibre-cement sheet can delay drying of the primer.
6. Apply ARDEX K15/K12 mixed with admixture ARDEX E25, or ARDITEX NA to a minimum thickness of 3mm.
7. **Mix designs with ARDEX E25 as follows:-**
  - 20 kg ARDEX K15 - 1.6 litres ARDEX E25 plus 4.0 litres water**
  - 20kg ARDEX K12 – 1.25 litres ARDEX E25 plus 3.75 litres water**
8. Minimum installation and substrate temperature to be +15°C.
9. Allow 24 hours curing at 20°C and 48 hours at 15°C before subjecting the area to loads and applying floor coverings.

### **FLOORING ADHESIVES**

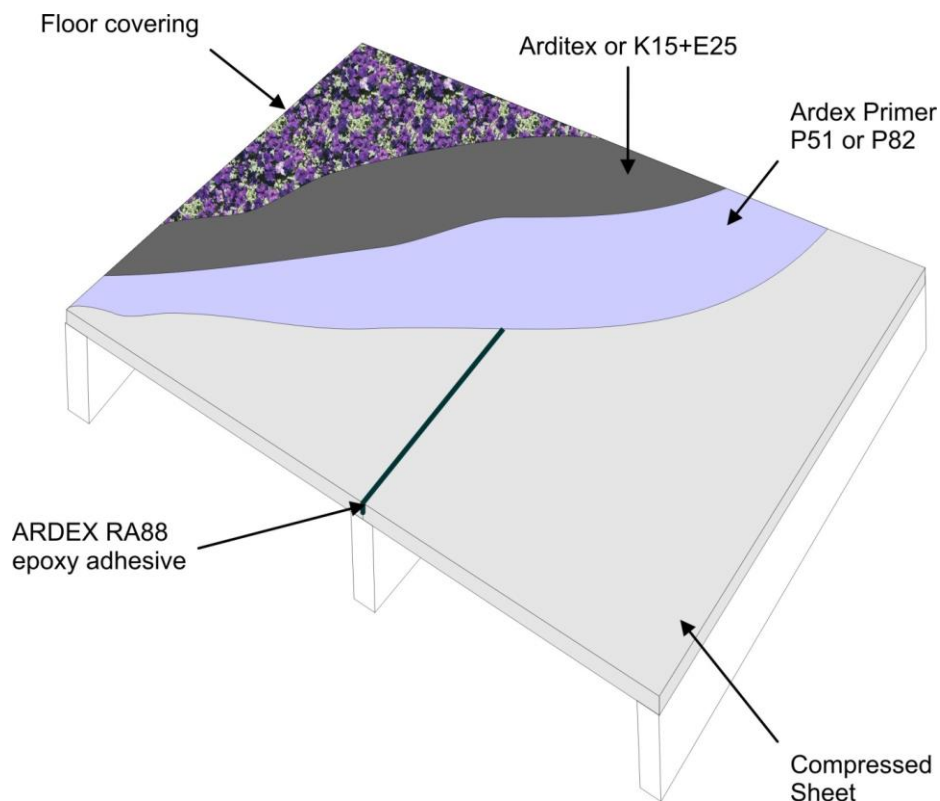
For resilient flooring the recommended adhesives are ARDEX AF178/AF172 for sheet vinyl, ARDEX AF142 for planks, ARDEX AF236 PSA for VCT or vinyl backed carpet tiles and ARDEX AF545 Epoxy for heavy duty or sheet rubber.

For textile floor coverings, the adhesives recommended are ARDEX AF236 PSA for carpet tiles, ARDEX AF239 and ARDEX AF266.

For linoleum flooring the recommended adhesive is ARDEX AF748.



Refer to the relevant product datasheets for more detail or contact Ardex Technical Services. Material Safety Datasheets are available on request. Where the floor covering is to be ceramic tiles other systems may apply.



**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**

Periodic review, removal of WPM501 and addition of RA88. Removal of AF143 and AF241. Addition of AF236.

**REVIEW PERIOD**

24 months from issue

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