



## TECHNICAL BULLETIN – TB219

# APPLICATION OF CERAMIC TILES DIRECTLY ONTO DINCEL CORE FILLED PLASTIC PANELWORK

24<sup>TH</sup> MAY 2025

### INTRODUCTION & SCOPE

The core-filled Dincel formwork system is based upon an exoskeleton of PVC plastic panels (1800-7950mm long) with a proprietary locking system to hold the individual panels together. The internal cavity of the wall contains steel bars and is filled with poured concrete.

This technical bulletin lists the approved ARDEX products for the direct tiling of internal walls ONLY constructed from the Dincel system.

### QUALIFICATIONS

This bulletin describes the adhesive systems that were found to bond to the PVC surface of the Dincel wall itself. It does not offer recommendations for detailing the individual panel joints in the wall nor for the rendering materials that may be applied to the surface to smooth it.

Where an acrylic-modified sand-cement render has been applied to the Dincel wall face (for example, to smooth the joints or provide a homogenous flat surface), most types of ceramic tile adhesive are likely to be suitable for bonding tiles to the rendered surface. The ultimate bond performance in these cases is purely related to the bond of the render to the wall face rather than the tile adhesive to the wall face.

The adhered tiles must be suitable for the recommended adhesive systems.

### STONE OR TILE'S ONTO DINCEL

The maximum allowable weight for tiling over a Dincel wall depends on factors such as the wall thickness, tile type, and installation method. In general, Dincel recommends that heavy cladding materials, like stone, be mechanically anchored. Lighter materials, such as tiles, may be adhered directly to the Dincel surface or fixed using mechanical methods.

ARDEX strongly recommends consulting both Dincel and a qualified structural engineer before commencing any installation. This ensures that the proposed system is appropriately designed and compatible with the wall structure, tile type, and intended use.

Collaboration with Dincel provides guidance on acceptable cladding practices for their panels, while a structural engineer can assess load-bearing capacity and overall structural integrity. This combined approach helps minimise the risk of system failure and ensures long-term performance and compliance with building standards.

### SUBSTRATE PREPARATION FOR ADHESIVE FIXING LIGHTER CLADDING DIRECTLY ONTO DINCEL

When installing lighter cladding like tiles, the Dincel panel surface must be clean and free from contaminants. To enhance adhesion and overall system performance, the smooth, slightly glossy surface should be abraded with 40–60 grit sandpaper to achieve a CSP1-equivalent profile.

### RECOMMENDED PRIMERS

ARDEX Primers –

- ARDEX P82 Ultraprime applied at 6-10m<sup>2</sup>/litre with a brush or a short nap/foam roller and allowed to dry for a minimum of 3 hours and maximum of 24 hours



- ARDEX WPM300 applied to the sanded surface and blinded with clean dry broadcast quartzose sand (0.3-0.5mm) and allowed to cure for >12 hours.
- ARDEX P9 or ABA Abaprime applied at 6m<sup>2</sup>/litre with a brush or a short nap/foam roller and allowed to dry for approximately 1- 3 hours, depending on the temperature.

### **RECOMMENDED TILE ADHESIVES**

Class C adhesives –

- ARDEX Optima
- ARDEX X32 + ARDEX E90 liquid
- ARDEX X68 + ARDEX E90 liquid
- ARDEX X77 + ARDEX E90 liquid
- ARDEX X18 + ARDEX E90 liquid
- ARDEX Quickbond + ARDEX Abalastic liquid.

NOTE: When tiles are installed over floor substrates such as concrete, screeds or CFC (i.e. not Dincel), any of the tile adhesives listed above can be used without the addition of the ARDEX E90 liquid.

### **RECOMMENDED GROUTS**

ARDEX C class cement-based grouts –

- ARDEX FG8 + ARDEX Grout Booster
- ARDEX FSDD + ARDEX Grout Booster
- ARDEX WJ50 + ARDEX Grout Booster

ARDEX Grout Booster must be used to provide extra flexibility and adhesion when tiles are installed over Dincel. When tiles are installed over floor substrates such as concrete, screeds or CFC (i.e. not Dincel), any of the grouts listed above can be used without the addition of ARDEX Grout Booster.

### **ADDITIONAL INFORMATION**

#### **ATTACHMENT OF PLASTERBOARD FACING SHEETS**

In certain internal wall situations, plasterboard sheets may need to be attached to the surface of the Dincel panels.

The sheets can be placed on the clean PVC surface of the Dincel panel with an ARDEX silane-urethane adhesive. In contrast, the sheet is correctly fixed with the recommended mechanical fasteners (screws) for the system specified by Dincel.

The appropriate ARDEX materials supplied in sealant tubes are:

- ARDEX CA 20P in either white or black
- DUNLOP Tile All PLUS (white)
- DUNLOP Roof, Gutter, and Pond Repair (grey)

Note: These materials are not intended to be used as the sole fixing system but to hold the sheets in place before final fastening.

**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-ISSUER**

Content review, change of company slogan, site address and removal of waterproofing section and it into a separate TB (TB276).

**DOCUMENT REVIEW REQUIRED**

36 months or whenever third-party suppliers change their recommendations.

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