



## **SRO906 – TILING ON HEATED FLOORS where the heating pipes/elements are in the Concrete Substrate.**

### **SCOPE**

This recommendation is for the installation of tiles to internal concrete floors that have heating pipes/ elements in the structural slab.

### **PREPARATION**

The concrete shall have completed the recommended (AS3958) 4-6 weeks curing and drying period prior to the commencement of the tile installation. The concrete shall be at ambient temperature with the heating system not operating.

The surface of the concrete shall be mechanically prepared (e.g. by grinding/shot-blasting/scabbling) to remove all contaminants such as concrete curing compounds laitance, waxy/oily residues, debris from other trades and laitance to achieve a fine textured surface with open pores. Vacuum to remove residual dust.

### **PRIMING**

Prime porous prepared surfaces with [ARDEX Multiprime](#) or [ARDEX P 9](#) water based primers and let dry.

### **TILING**

Tiles should be fixed in accordance with Australian Standard AS 3958. The type and size of the tiles determines the selection of the trowel. As a general guide, use at minimum a 10 x 10 x 10mm notched trowel. Achieve minimum 80% coverage in residential and 90% coverage in commercial areas. The tiles must be pressed firmly into the freshly combed mortar bed to ensure good contact with the mortar. Slide the tile at right angles to the notch pattern to ensure maximum coverage on the back of the tile. Tiles with ribbed or keyed back profiles should also be back-buttered to ensure complete coverage. Tiles greater than 400 x 400 mm should be back-buttered. Lift a tile from time to time to check appropriate coverage and that there are no voids beneath the tile. Any surplus adhesive must be removed from the surface of the tile and joints, before the adhesive sets. Do not spot fix.

Cement based tile adhesives with deformable properties are recommended for the installation of floor tiles over heated floors. The following are suitable;



	<b>Good</b>	<b>Better</b>	<b>Best</b>
<b>Porous bodied tiles</b> Terracotta & Glazed Ceramic	X7 ; X10 ; X17	X18 ; X52 ; Abaflex	X77 : X78
<b>Glazed Mosaic</b>	X10 ; X17	X18 ; X52 ; Abaflex	X77 : X78
<b>Dense bodied tiles</b> Vitrified/porcelain Glass	X10 ; X17	X18 ; X52 ; Abaflex	X77 : X78 ; Isoflex
<b>Natural Stone tile</b> Excluding moisture sensitive stone	X10 ; X17	X18 ; X52 ; Abaflex	X77 : X78
<b>Natural Stone Tiles</b> Moisture sensitive stone	WA100 ; Quickbond+Abalastic	Please Refer to Ardex Technical Bulletin TB010	

Note : As an optional add-on, you can use [ARDEX E 90](#) with X78, X77, S28, X18 and X10 as detailed in **TB231**. This will greatly improve their performance and longevity.

## GROUTING

Once the adhesive has dried for 72 hours, the tiles may be grouted using one of the flowing ARDEX grouts:-

- [ARDEX FG 8](#) sanded cement based grout mixed with [ARDEX Grout Booster](#) diluted with 20% water for joints from 1 to 8mm and is a general purpose grout available in a large range of colours
- [ARDEX FS-DD](#) un-sanded cement based grout mixed with [ARDEX Grout Booster](#) diluted with 20% water for joints 1 to 4mm. This is recommended for polished tiles with rectified edges as the grout has a smooth finish and is available in a range of colours.
- [ARDEX WJ 50](#) sanded cement based grout mixed with undiluted [ARDEX Grout Booster](#) for joints 5 to 50mm
- [ARDEX WA](#) Epoxy 2 part grout available in black, grey or white for installations where high standards of hygiene and/or chemical resistance are required.
- [ARDEX EG-15](#) Epoxy 3 part grout for installations where high standards of hygiene and/or chemical resistance are required. It is available in 8 colours and is suitable for grout widths ranging from 1.5 to 15mm.



### **MOVEMENT JOINTS**

Movement joints are to be included in the new tile finish in accordance with the recommendations of AS3958. These joints are installed (but not limited to) in the following locations:

- Over all existing movement joints in the substrate.
- At all internal corners/changes in direction in the plane of the substrate.
- Along all perimeters where the tiles butt against walls and/or built in furniture.
- Around all penetrations through the tile finish.
- At not more than 6m intervals in both directions of a grid pattern.

Movement joints should be at least 6mm wide and are filled with a flexible sealant such as the [ARDEX SE](#) or [ARDEX ST](#) silicone for natural stone. Compressible backer rods may be required in deeper joints to maintain the recommended sealant thickness at half the joint width.

### **COMMISSIONING OF HEATED FLOOR**

When commissioning the newly tiled floor it is important to observe the recommended drying times for the tile adhesive & grout. Heat the floor by increasing the temperature by approximately 2° C. per day until the desired temperature is reached. Do not exceed 45° C. maximum floor temperature.

*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).*