



SRO927 – WALL TILING TO MEMBRANES EXTERNALLY

SCOPE

This recommendation is regarding the adhesive fixing of tile finishes to external walls that have been waterproofed with an ARDEX Liquid Applied waterproofing membrane.

PREPARATION

Ensure the wall construction is suitable for the intended tile finish in terms of load carrying capacity and components used in the construction. ARDEX technical bulletins **TB001** & **TB148** provide guidelines for load carrying capacity of some common construction systems while manufacturers of proprietary factory-made substrates will be able to provide technical advice regarding their products as substrates for external wall tile finishes. This particularly applies to sheet substrates requiring all joints between sheets to be treated as movement joints filled with flexible sealants which means these joints must also be maintained in the applied membrane and tile finish.

WATERPROOFING MEMBRANES

The [ARDEX WPM 155 Rapid](#) & [ARDEX WPM 002](#) acrylic /cement two part liquid applied membranes are compatible with ARDEX tile adhesives. These are the only membranes recommended for this external application and shall have been applied in accordance with the instructions of the product data sheet in accordance with the recommendations of AS4654. This includes upturns on perimeter walls to 150mm high. The applied membranes shall have fully dried and have achieved the recommended minimum dry film thickness nominated for each product. The WPM002 is the only membrane recommended for Easylap and Stonesheet.

PRIMING

Priming is not required on the applied ARDEX waterproofing membranes although care must be taken to ensure any movement joints in the substrate have been correctly treated and are visible as the joints must be maintained in the tile finish. The applied membrane shall be clean and dry with any visible damage repaired before tiling.

TILING

The tiles to be fixed to the waterproofed walls must be of suitable quality for the application as the tile finish will be exposed to pollution, all extremes of weather including wide variations in temperature. The back of the tiles to be fixed must be clean, dry and free of all contaminants such as mould release agents and waxy residues from packaging. Tiles that have reinforcing mesh bonded to the back are of concern as the mesh is often fixed to the tile using resin based systems that are not compatible with many tile adhesives and/or can react adversely in the highly alkaline conditions of cement based adhesives. In addition, the mesh on the back of mosaic tiles is often fixed with a water soluble adhesive that prevents the tile adhesive from achieving adequate contact to each tile and can result in early loss of bond.



Finally, the size of tiles is important as tile adhesives may experience long drying times when fixing large format tiles to an impervious membrane. As drying is mainly via the grout joints, large tiles mean the adhesive under the middle of the tile may take weeks to be fully dry.

	Suitable ARDEX adhesives
Porous Bodied Tiles Terracotta and Glazed Ceramic	X18 ; X77 ; X7+E90
Glazed Mosaic	X18 ; X77 ; Abaflex ; X7+E90 ; X10+E90 ; X18+E90
Dense Bodied Tiles Vitrified & porcelain Glass	X18 ; X77 ; Abaflex ; X7+E90 ; X10+E90 ; X18+E90
Natural Stone tiles (excluding Moisture Sensitive Stone)	X18 ; X77 ; Abaflex ; X7+E90 ; X10+E90 ; X18+E90 ; WA100
Natural Stone Tiles Moisture Sensitive Stone tiles	Refer to ARDEX Technical Bulletin TB010

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

The mixed adhesive shall be spread over the wall surfaces using a suitable notched trowel in accordance with the recommendations of AS3958. The lines of adhesive are to be parallel horizontally across the wall and additional adhesive shall be buttered over the back of tiles larger than 400 x 400mm. The tile is then firmly pressed into the adhesive with a back and forth sliding action across the lines of adhesive to collapse and merge the adhesive lines to achieve maximum contact between the tile and the substrate. ARDEX recommends a minimum adhesive contact of 90% between the tile and the substrate on all external walls.

GROUTING

Once the adhesive has set, the tiles may be grouted with one of the following ARDEX grouts.

- [ARDEX FG 8](#) sanded grout for joints from 1 to 8mm is a general purpose grout available in a large range of colours.



- [ARDEX FS-DD](#) un-sanded grout 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 grout 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 is 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.

Note: ARDEX cement based grouts may be mixed with [ARDEX Grout Booster](#) for increased performance such as resistance to water penetration, reduced potential for efflorescence, greater strength and flexibility.

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 4.5m 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](#) silicone or [ARDEX ST](#) neutral cure silicone for natural stone. Compressible backer rods may be required in deeper joints to maintain the recommended sealant thickness at half the joint width.

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).