



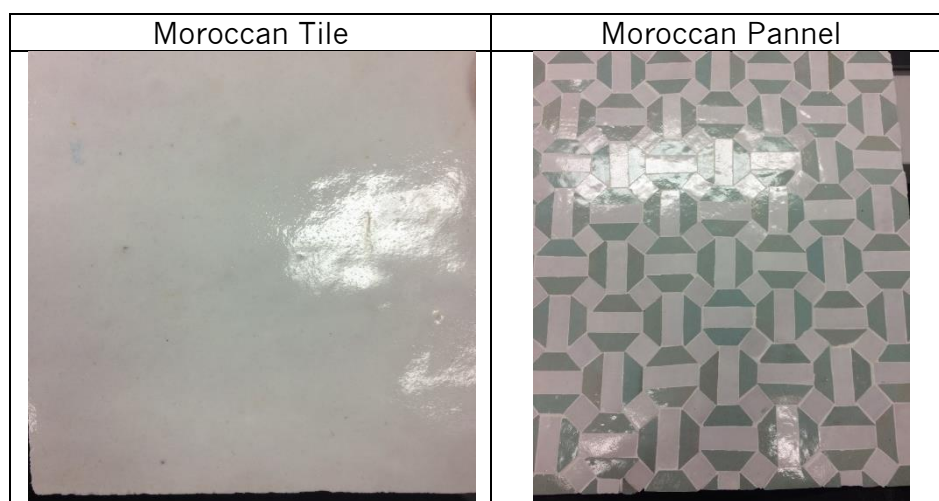
TECHNICAL SERVICES REPORT

TSD 1024-001

Date: 13/08/2020
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Tiles Evaluated: Moroccan Tiles and Moroccan Panel

BACKGROUND

An assortment of tiles were supplied for testing to the ARDEX Technical Services Department in Seven Hills for adhesive recommendations. The intended applications are for internal and external walls and floors.



The Moroccan Tiles were of an encaustic design with a noticeable amount of lightly bound 'release agent' on the rear of the tiles. The Moroccan Panel was a conglomerate of smaller encaustic tiles that were adhered together using an epoxy adhesive. Between the epoxy binding adhesive, lightly bound cement residues were present. In both cases, this surface contamination was successfully removed via brushing the rear surface with a stiff nylon brush which revealed the true tile body.

METHOD

Separate tests were performed due to the presence of different tile types.

Moroccan tiles:

A prepared concrete block (400mm x 400mm x 50mm thick) was primed with **ARDEX Multiprime** and allowed to dry for 30 minutes prior to adhesive application. The Encaustic tiles supplied possessed a loose and powdery rear surface which was brushed/wiped prior to adhesive bonding.

Note: The tiles were applied according to the test method described in ISO13007-2.



The adhesives tested consisted of:

ARDEX WA100

ARDEX S28


ARDEX X18

The tile adhesives were allowed to cure at standard laboratory conditions (23°C and 50% RH).

Tensile 'Pull Off' tests were conducted 14 days after application of the tiles. A control tile was tested with ARDEX X18 for comparison.

Moroccan Panel:

As a large portion of the tile rear consisted of an epoxy adhesive, used to bind the smaller Moroccan tiles together, the use of cement-based adhesives was not tested. Due to the weakly bonded cement powder on the tile back, the tiles required preparation by brushing, as mentioned above. Only once the encaustic main body was revealed, was the **ARDEX WA100** adhesive applied and tensile adhesion testing performed at 14 days.

	Top-half: Appearance of the Moroccan Panel after cleaning with nylon brush. Cement powder removed successfully to reveal the encaustic tile body.
	Lower-half: Appearance of the Moroccan Panel without cleaning. Clearly visible cement powder contamination present.

RESULTS

Moroccan tiles:

The tensile results were within expectation, with each of the tested adhesives displaying enough strength for wall and floor applications. As the front face of the tiles are glassy and pigmented, there was no potential cause for concern regarding staining from adhesive exposure.

Moroccan Panel:

Tensile adhesive results with **ARDEX WA100** were acceptable, with no failure observed at the interface between the tile and adhesive.

CONCLUSION

All adhesive combinations provided satisfactory 14 day tensile results for the Moroccan Tiles and the Moroccan Panel. Adequate adhesion for these tiles is based on the condition that prior to laying, all loose matter is first removed from rear face of the tiles.

Moroccan Tiles:

Suitable ARDEX adhesives for fixing the Moroccan Tiles are:-

1. **ARDEX WA100 Epoxy Adhesive***
2. **ARDEX S28 (Internal only)***
3. **ARDEX X18 with or without ARDEX E90***
4. **ARDEX X68 with or without ARDEX E90***



**Note: Successful adhesion to the tile requires removal of all loose particulate material on the tile rear face prior to tiling.*

Suitable ARDEX grouts for grouting the Moroccan Tiles are:-

1. **ARDEX EG15** Epoxy Grout
2. **ARDEX WA** Epoxy Grout
3. **ARDEX FG8** grout with or without **ARDEX Grout Booster**.
4. **ARDEX FSDD** grout with or without **ARDEX Grout Booster**
5. **ARDEX WJ50** grout with or without **ARDEX Grout Booster**

Moroccan Panel:

Based on the presence of the epoxy adhesive on the rear of the Moroccan Panel, we restrict the adhesive suitability to **ARDEX WA100** only**.

***Note: Successful adhesion to the tile requires removal of all loose particulate material on the tile rear face prior to tiling.*

Suitable ARDEX grouts for grouting the Moroccan Panel are:-

1. **ARDEX EG15** Epoxy Grout
2. **ARDEX WA** Epoxy Grout
3. **ARDEX FG8** grout with or without **ARDEX Grout Booster**.
4. **ARDEX FSDD** grout with or without **ARDEX Grout Booster**
5. **ARDEX WJ50** grout with or without **ARDEX Grout Booster**

See Technical Datasheets for individual products for further information. Relevant Australian Standards and Codes apply.

Chris Brady
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