



TECHNICAL OPINION

Ref: TSD648.4

Date of issue: 04/12/13

Second re-issue 22/05/18

Third re-issue 12/09/2018

EXAMINATION OF A MAGNESIUM OXIDE BUILDING BOARD

Samples of Magnesium Oxychloride cement based floor sheeting were examined to determine potential recommendations for application of waterproofing and tiling.

Sample description

Samples of mid grey coloured INEX>FLOOR board 16mm thick with integral layers of fibre-glass mesh and tongue and groove edges. The composition of the board was Magnesium Oxide, Magnesium Chloride and wood fibre grains as the major components.

Basis of opinion

Ardex has had previous experience with flooring materials containing Magnesium Oxychloride as the matrix cement. The general properties of these materials are well documented. A moisture stability and deflection trial was performed to Ardex test method TMRD45. The results are shown on page two.

INEX>FLOOR
ANY BUILDING • ANY SURFACE • ANYWHERE



Recommendation

Ardex makes the following recommendations and preclusions.

The recommended main primer for all applications using Ardex waterproofing membranes and tile adhesives is Ardex WPM300 ± Ardex Primer Sand. The alternate primer for direct tiling applications is Ardex EG15 or EG800F resin + Ardex Primer Sand.

Dry internal floors—Primer recommendations as above with Deckweb embedded over the sealant filled or T&G joints.

Adhesives include: Ardex or Aba Abaflex, Ardex X56, Ardex X52, Ardex X77 or X78 ± Ardex E90, Ardex X18 ± Ardex E90, Ardex S28N ± Ardex E90, Ardex STS8W ± Ardex E90, Ardex Quickbond ± Ardex Abalastic, Ardex X7 ± Ardex E90, Aba Powerstik Plus, Aba Choicestik + Ardex E90, Aba Rubberstik, Aba Glue Plus, Dunlop Universal, Dunlop Wall & Floor Flexible, Dunlop Floor Tile Adhesive.

Wet internal floors— Floating screed to create falls to waste (1:60 to 1:80). It is recommended that the sheet surface is sealed with Ardex WPM300 (2m² litre) before a 0.2mm thick slipsheet and 40mm self supporting screed is installed.

The screed is then waterproofed with a) Ardex WPM265 primer followed by Ardex WPM001, WPM155R or WPM002, b) Dunlop Multipurpose Primer followed by Dunlop Express Wet Area Waterproofing or Dunlop Undertile Waterproofing, c) Ardex Mutlprime followed by Aba Waterproofer Rapid or Aba Waterproofer.

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External decking- Staggered or brick pattern sheet layout requires a floating screed system the same as that for internal wet areas. Floating screed to create falls to waste (1:100). It is recommended that the sheet surface is sealed with Ardex WPM300 (2m² litre) before a 0.2mm thick slipsheet and 40mm self supporting screed is installed.

The screed is then waterproofed with a) Ardex WPM265 primer followed by Ardex WPM001, WPM155R or WPM002, b) Dunlop Multipurpose Primer followed by Dunlop Express Wet Area Waterproofing or Dunlop Undertile Waterproofing, c) Ardex Mutlprime followed by Aba Waterproofer Rapid or Aba Waterproofer.

Adhesives include: Ardex or Aba Abaflex, Ardex X77 or X78 ± Ardex E90, Ardex X18 ± Ardex E90, Ardex STS8W ± Ardex E90, Ardex Quickbond ± Ardex Abalastic, Ardex X7 ± Ardex E90, Aba Powerstik Plus, Aba Choicestik + Ardex E90, Dunlop Universal.

Notes

Tile finish expansion and movement jointing must comply with requirements of AS3958.1-2007.

Waterproofing details must comply with AS3740-2010/12 for internal and AS4654-2012 for external applications.

For tiled and wet areas, install INEX>FLOOR rough side up as per INEX>FLOOR Technical & Installation Sheet.

All Ardex Waterproofing systems must be applied to the rough side of INEX> FLOOR.

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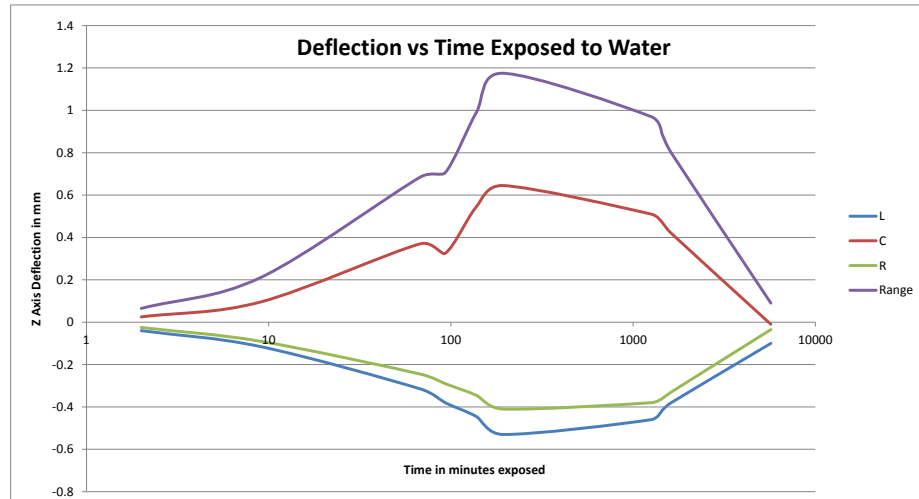
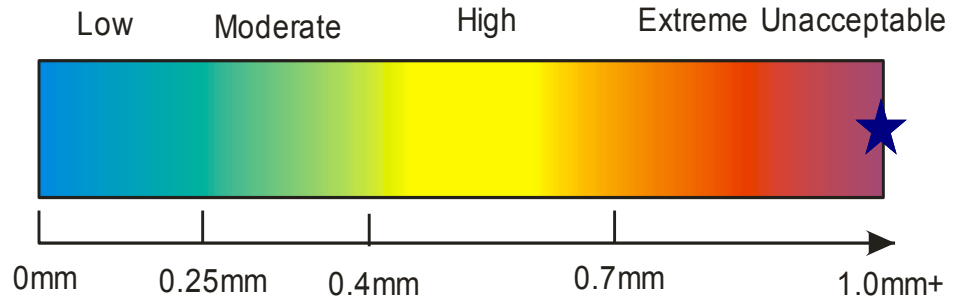


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Unrestrained movement



PERIOD OF VALIDITY IS 24 MONTHS FROM THE DATE OF ISSUE

Comments

The sample that was exposed to moisture displayed apparent efflorescent blooming on the surface.

Preclusions

Ardex accepts no liability for potential problems related to the properties of Magnesium Oxychloride based sheeting materials including, but not restricted to:

- 1) Sheet deformation and warping due to moisture related movements in any of X, Y or Z sheet axes with consequential leaking and moisture damage, or problems with the tiling systems.
- 2) Opening of sheet joints related to moisture ingress.
- 3) Corrosion of any metal fastener or structure in contact with the base material where moisture may or may not be present.
- 4) Corrosion of any metal fastener or structure in contact with efflorescence or leachates from the base material where moisture may or may not be present.
- 5) Chemical damage to the tile adhesives where the priming has not been completed correctly and the adhesive may have suffered chloride attack or ion exchange.

Revision status: This document has been re-issued on the basis of a request from INEX (UBIQ) concerning the usage of Dunlop waterproofing membranes.

Changes from second re-issue: Addition of Dunlop Express Wet Area Waterproofing, Dunlop Undertile Waterproofing, ABA Waterproofer Rapid and ABA Waterproofer, Dunlop Wall & Floor Flexible Tile adhesive, Dunlop Floor Tile adhesive.

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- 7) Where Ardex Technical Bulletins and datasheets are specified, they can be sourced from the website www.ardexaustralia.com.au

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