

# TECHNICAL BULLETIN – TB091

## BONDING TILES OVER H.K. EPOXY MEMBRANES USING ARDEX CERAMIC TILE ADHESIVES

Date, Thursday, 17 November 2016

### INTRODUCTION & SCOPE

H.K. Epoxy Seal Pty Ltd manufacture and distribute flexible epoxy waterproofing membranes which are used in the waterproofing of internal wet areas.

Ardex Australia Pty Ltd have carried out adhesion testing using selected Ardex ceramic tile adhesives applied over the H.K. Epoxy Seal membranes to determine their suitability in accordance with International Standard ISO13007 (which supercedes AS4992).

Internal testing reference TSD666-2014, which was a set of trials related to internal applications. The approved products in this bulletin are in some cases vary from the testing certification.

### PRODUCTS EVALUATED

There were two types of epoxy membrane evaluated:

HK Epoxy Seal (flexible epoxy floor membrane)

HK Epoxy Coat (flexible epoxy wall membrane)

Both materials are cream coloured and somewhat rubbery membranes, which display a shiny and smooth surface finish.

A range of Ardex adhesives were trialled with and without Ardex P9 primer.

### ARDEX ADHESIVES EVALUATED

The following Ardex systems were examined for potential suitability with the two types of membrane supplied.

These cement based adhesives are deformable (rated S1 or S2), and with sufficiently high polymer content (and/or mixed with Ardex E90) to provide a more effective adhesive bond. Not all the tested products were found to produce results which Ardex considers to have an acceptable factor of safety and they are therefore not recommended nor have conditional recommendations due to less effective performance as a result of the fully immersed component of the testing. For these adhesives, the recommendations are based on areas that are commonly waterproofed according to the standard AS3470, but not subjected to constant wetting (i.e. bathroom floors vs shower enclosures).

We note also that Ardex epoxy adhesives bond to the surface of HK Epoxy membranes.

HK Product	Primer	Adhesive	Class of adhesive
Epoxy Coat (Walls)	P9	X77	C2S1
	No prime	X77	C2S1
	P9	X10	C1S1
	No prime	X10	C1S1
	P9	X52	C1S1
	No prime	X52	C1S1
	P9	X56	C1S2
	No prime	X56	C1S2
	P9	MPP	C1S2
	No prime	MPP	C1S2
	P9	Abaflex	C2S1

HK Product	Primer	Adhesive	Class of adhesive
Epoxy Seal (floors)	No prime	Abaflex	C2S1
	P9	X77	C2S1
	No prime	X77	C2S1
	P9	X77 + E90	C2S2
	No prime	X77 + E90	C2S2
	No prime	X18	C2S1
	P9	X52	C1S1
	No prime	X52	C1S1
	P9	X56	C1S2
	No prime	X56	C1S2
	P9	Abaflex	C2S1
No prime	Abaflex	C2S1	

### RECOMMENDATIONS

The following adhesive system recommendations are made; note that some of the nominated adhesives have adhesion properties equivalent or superior to those tested and therefore can be considered acceptable as well.

The Ardex epoxy adhesives, Ardex WA100 and Ardex WA (not suitable for stone tiles), are R1 adhesives. These can be used for all the nominated applications; no priming is required for them. Ardex S28N+E90 is C2S1 & and Optima C2S2.

### HK EPOXY COAT ON INTERNAL WALLS

Product Application	Ardex S28N + E90	Ardex MPP	Ardex X10 + E90	Ardex X18 + E90	Ardex X77	Ardex X77 + E90	Ardex Abaflex	Ardex X52	Ardex X56	Ardex Optima
Splashbacks on masonry, plasterboard and fibre-cement sheet.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wet area walls not subjected to constant wetting. Masonry, plasterboard and fibre-cement sheet.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wet area walls subjected to constant wetting (showers). Masonry, plasterboard and fibre-cement sheet.	✗	✗	✗	✓	✗	✓	✗	✓	✗	✓

The use of Ardex P9 primer is acceptable for these applications.



## HK EPOXY SEAL ON INTERNAL FLOORS

Product Application	Ardex S28N + E90	Ardex MPP	Ardex X10 + E90	Ardex X18 + E90	Ardex X77	Ardex X77 + E90	Ardex Abaflex	Ardex X52	Ardex X56	Ardex Optima
Wet area floors not subjected to constant wetting. Masonry, standard 15-18mm compressed fibre-cement sheeting.	✓*	✗	✓*	✓*	✓*	✓*	✓* Requires P9	✓*	✓*	✓
Wet area floors subjected to constant wetting (i.e. showers) Masonry, standard 15-18mm compressed fibre-cement sheeting.	✗	✗	✗	✓*	✗	✓*	✗	✗	✗	✓
Wet area floors not subjected to constant wetting Fibre-cement sheeted sheet timber	✓*	✗	✗	✓*	✗	✓*	✗	✗	✗	✓

\* The use of Ardex P9 primer is acceptable for these applications.

All products shall be installed in accordance with product datasheets and packaging, and tiling performed in accordance with AS3958-2007.

### **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**

S16 replaced by S28N. Deletion of Abapoxy. HK have advised no change in product formula.

### **DOCUMENT REVIEW REQUIRED**

24 months from issue, or if HK Epoxy advises of any changes to their products.

**NSW** 02 9851 9100, **QLD** 07 3817 6000, **VIC** 03 8339 3100, **SA/NT** 08 8406 2500, **WA** 08 9256 8600  
**Technical Services** 1800 224 070. **Customer Service and Sales** 1300 788 780

**New Zealand** (Christchurch) 64 3384 3029 **Technical Inquiries NZ** 0800 2 ARDEX

Web: <http://www.ardex.com> <http://www.ardexaustralia.com> email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)