TECHNICAL BULLETIN – TB232

SYSTEMS FOR LIGHTWEIGHT FIBRE CEMENT FLOOR SHEETS

15th August 2024

INTRODUCTION & SCOPE

Testing was performed on the three types of low-density – lightweight, thick flooring sheets manufactured by James Hardie Australia. CSR-Cemintel and BGC-Innova, to confirm suitable waterproofing and tiling systems. This bulletin provides a reference summary for these systems and refers to the following products only.

a.   James Hardie Scyon™ Secura™
b.   CSR Cemintel - Constructafloor™
c.   BGC-Innova Durafloor™

In some cases, sheet design and installation rules must be considered before installing these systems.

APPLICATION

This document is for ARDEX internal reference purposes only as it contains information supplied to certain manufacturers as part of testing in commercial confidence.

Table 1. Scyon Secura system designs from Technical Bulletin TB215.004

Application	Creation of falls to waste	Priming direct to surface	Waterproof Membrane	Tile adhesive
Method 1) Water-resistant external deck which does not require waterproofing	*Created by deck design* and construction at 1:100 minimum	ARDEX WPM300 (2 coats – 2nd coat sand seeded)	N.A.	ARDEX X77 ± ARDEX E90 ARDEX X18 ± ARDEX E90 ARDEX Optima
Method 2) Waterproofed external deck – tiles directly bonded to liquid membrane	*Created by deck design* and construction at 1:100 minimum	ARDEX WPM300 (ARDEX WPM265)	ARDEX WPM001, ARDEX WPM002, ARDEX WPM155	ARDEX X77 ± ARDEX E90 ARDEX X18 ± ARDEX E90 ARDEX Optima
Method 3) Waterproofed external deck – tiles directly bonded to sheet membrane	*Created by deck design* and construction at 1:100 minimum	ARDEX WPM300	ARDEX WA98 adhesive for all Butynol ARDEX WPM750 or ARDEX WPM1000 (fleecy Butynol)	ARDEX X77 ± ARDEX E90 ARDEX X18 ± ARDEX E90
			ARDEX Butynol sheet membrane (black)	ARDEX Optima

| Method 4) Internal wet areas with screeds creating falls to waste | Sand-cement screed with ARDEX Abacrete

Falls at 1:60 to 1:80 for showers and 1:100 for floors | Less than 7 days screed drying – WPM300

More than 7 days screed drying – WPM265 | ARDEX WPM001, ARDEX WPM002, ARDEX WPM155 | ARDEX-Aba Abaflex

ARDEX X77 $\pm$ ARDEX E90

ARDEX X18 $\pm$ ARDEX E90 |
| --- | --- | --- | --- | --- |

Application	Creation of falls to waste	Waterproofing	Screed		Tile adhesive
Method 5) Waterproofed external deck – tiles bonded to a floating screed	*Created by deck design* and construction at 1:100 minimum	Priming

ARDEX WPM265

Waterproofing

ARDEX WPM002, ARDEX WPM155 | Heavy duty plastic sheeting | Sand-cement screed with ARDEX Abacrete*

ARDEX A38 or ARDEX A48 engineered screed | Priming

ARDEX Multiprime

Adhesives

ARDEX-Aba Abaflex

ARDEX X77 $\pm$ ARDEX E90

ARDEX X18 $\pm$ ARDEX E90 |

* Screeds can also be used to adjust falls as required where deck design has been incorrectly done, and falls are not present or are incorrect.

☞ Note: If the Scyon™ Secura™ sheets are damp during installation, such as when they are rained on in an external environment, the primer ARDEX WPM265 should be replaced by ARDEX WPM300 in Methods 2 and 5. ARDEX WPM300 can be applied over damp surfaces.

Table 2. BGC Durasheet system designs from Test Report TSD554-2012

(with revisions based on later products deemed to comply by ARDEX)

Internal installations in dry areas. All floor joints to be treated as movement joints where tiles applied directly to the surface.	DIRECT APPLICATION OF TILES 1) ARDEX WPM300 primer + sand seeding with any of, ARDEX X77 ± ARDEX E90, ARDEX X18 ± ARDEX E90 tile adhesives FLOOR SMOOTHING 1)ARDEX P82 Primer + ARDEX Arditex NA (sheet joints may develop cracks) 2) ARDEX WPM300 primer + sand seeding / ARDEX Arditex NA (sheet joints may develop cracks) *Cracking at joints can be minimised by installing a strip of renders fibreglass mesh (10mm mesh size) 200mm wide over each sheet joint.*

Internal installations in wet areas with correct falls to waste. All floor joints to be treated as movement joints where membranes and tiles applied directly to the surface.	DIRECT APPLICATION OF WATERPROOFING 1) ARDEX WPM265 primer + ARDEX WPM002 membrane 2) ARDEX WPM300 primer + ARDEX WPM002 membrane 3) ARDEX WA98 primer + ARDEX Butynol membrane or ARDEX WPM750 / WPM1000 APPLICATION OF TILES TO THE MEMBRANE 1) Standard ARDEX adhesives to provide adhesion to WPM002 and WPM750/1000 include: ARDEX X77 ± ARDEX E90, ARDEX X18 ± ARDEX E90, ARDEX Quickbond + ARDEX E90 and ARDEX Optima 2) ARDEX tile adhesives to provide adhesion to black ARDEX Butynol— ARDEX Optima
External installations with correct falls to drainage. All floor joints to be treated as movement joints where membranes and tiles applied directly to the surface.	DIRECT APPLICATION OF WATERPROOFING 1) ARDEX WPM265 primer + ARDEXWPM002 membrane 2) ARDEX WPM300 primer + ARDEX WPM002 membrane 3) ARDEX WA98 primer + ARDEX Butynol membrane or ARDEX WPM750 / WPM1000 APPLICATION OF TILES TO THE MEMBRANE 1) Standard ARDEX adhesives to provide adhesion to ARDEX WPM002 and ARDEX WPM750/1000 include: ARDEX X77 ± ARDEX E90, ARDEX X18 ± ARDEX E90, ARDEX Quickbond + ARDEX E90 and ARDEX Optima 2) ARDEX tile adhesives to provide adhesion to black ARDEX Butynol — ARDEX Optima LIGHT TRAFFIC WALKABLE MEMBRANE ARDEX WPM300 + ARDEX WPM909
Grouts	ARDEX grouts recommended for all applications are. ARDEX FG8, ARDEX FSDD, and ARDEX WJ50 all mixed with ARDEX Grout Booster

Table 3. CSR Cemintel Wet Area Constructafloor system designs from Test Report TSD580-2012

(with revisions based on later products deemed to comply by ARDEX)

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Internal installations in dry areas. Joints to comply with CSR Cementel recommendations and AS3958	DIRECT APPLICATION OF WATERPROOFING 1) ARDEX WPM300 primer + sand seeding. Tiles applied with ARDEX X18 ± ARDEX E90, ARDEX X77 ± ARDEX E90 FLOOR SMOOTHING 1) ARDEX P82 + ARDEX Arditex NA (sheet joints may develop cracks). 2) ARDEX WPM300 primer + sand seeding. ARDEX Arditex NA (sheet joints may develop cracks. *Cracking at joints can be minimized by installing a strip of rendered fiberglass mesh (10mm mesh size) 200mm wide over each sheet joint.*
Internal installations in wet areas with correct falls to waste. Joints to comply with CSR Cemintel Recommendations and AS3958	DIRECT APPLICATION OF WATERPROOFING 1) ARDEX WPM265 primer + ARDEX WPM002 membrane 2) ARDEX WPM300 primer + ARDEX WPM002 membrane 3) ARDEX WA98 primer + ARDEX Butynol membrane or ARDEX WPM750 / WPM1000 APPLICATION OF TILES TO THE MEMBRANE 1) Standard ARDEX adhesives to provide adhesion to ARDEX WPM002 and ARDEX WPM750/1000 include: ARDEX X77±E90, ARDEX X18±E90, ARDEX Quickbond + ARDEX E90 and ARDEX Optima 2) ARDEX tile adhesives to provide adhesion to black ARDEX Butynol — ARDEX Optima LIGHT TRAFFIC WALKABLE MEMBRANE ARDEX WPM300 + ARDEX WPM909
Grouts	ARDEX grouts recommended for all applications are. ARDEX FG8, ARDEX FSDD and ARDEX WJ50 all mixed with ARDEX Grout Booster

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