

# TECHNICAL REPORT

## CBMA Floorplex substrate recommendation

Reference Number: TWR TS 548

Dated: 27 May 2022

Authors: Shavonne Esparon

### Background:

Technical were requested to determine and recommend the most suitable waterproofing and tiling system on the CMBA Floorplex board.

### Products used –

- RLA WPU
- RLA WPM
- Universal Primer
- Moisture Seal
- RLA Mastik
- Unigrip
- Addflextra

### Procedure:

Samples were prepared and applied following the ISO 13007.5 standard.

The size of the CMBA Floorplex board received was 1200 x 600 mm, this was cut down to 300 x 300 mm.

Universal Primer (neat) was brushed onto the CMBA board. Once cured (30 mins), RLA WPU was applied on top – two coats of 0.5mm thick each; estimated total thickness 0.9mm. After 24 hours, Unigrip was mixed (following the ISO 13007.2 standard) and trowelled (6mm notch) over the cured membrane. 50x50mm tiles were then embedded into the adhesive.

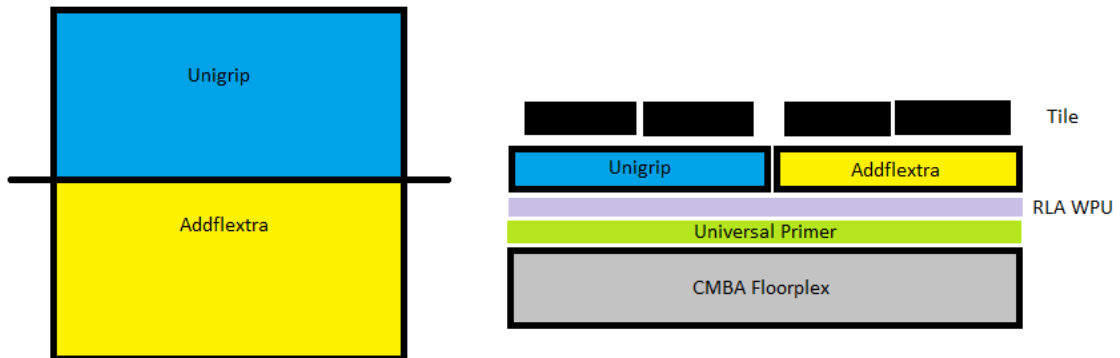
This method was repeated for the application of Moisture Seal, RLA WPM and the use of the RLA Mastik and Addflextra.

Samples were left to cure in standard laboratory air conditions for 28 days.

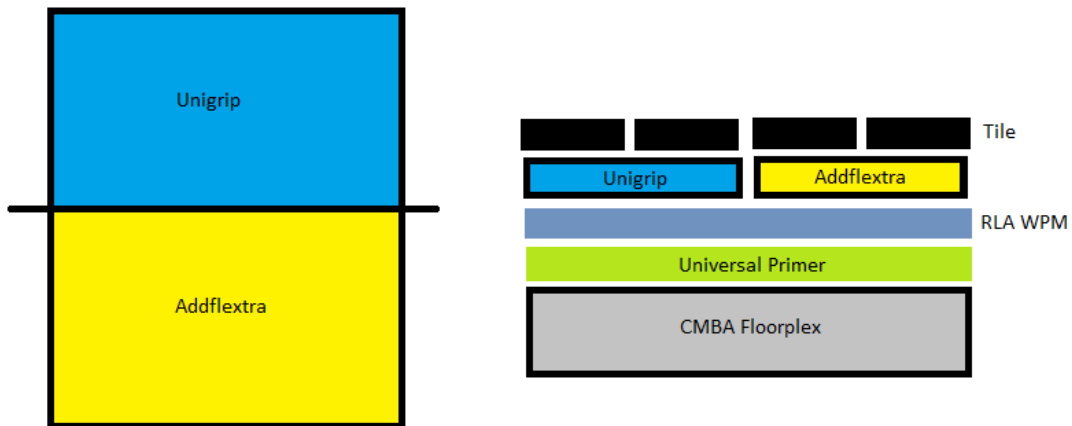
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Below demonstrates how each sample was set up.

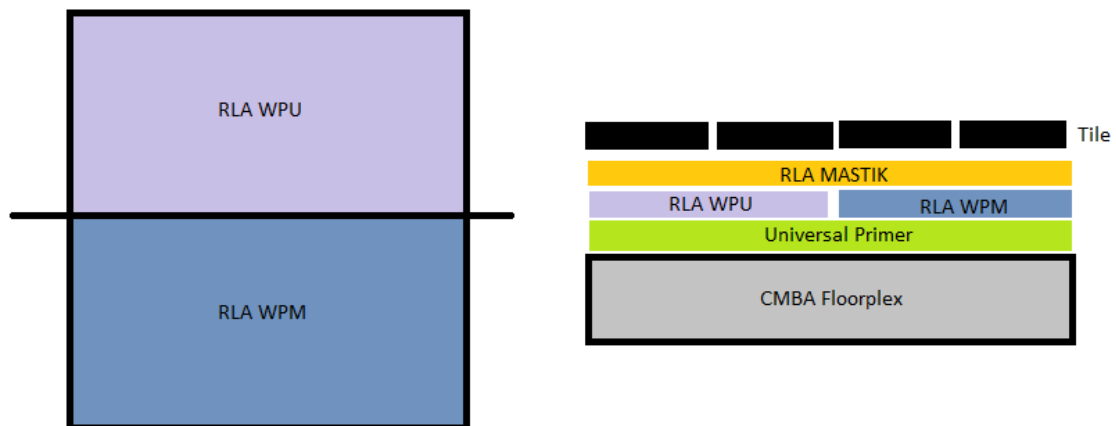
### Universal Primer system & RLA WPU: Unigrip & Addflextra



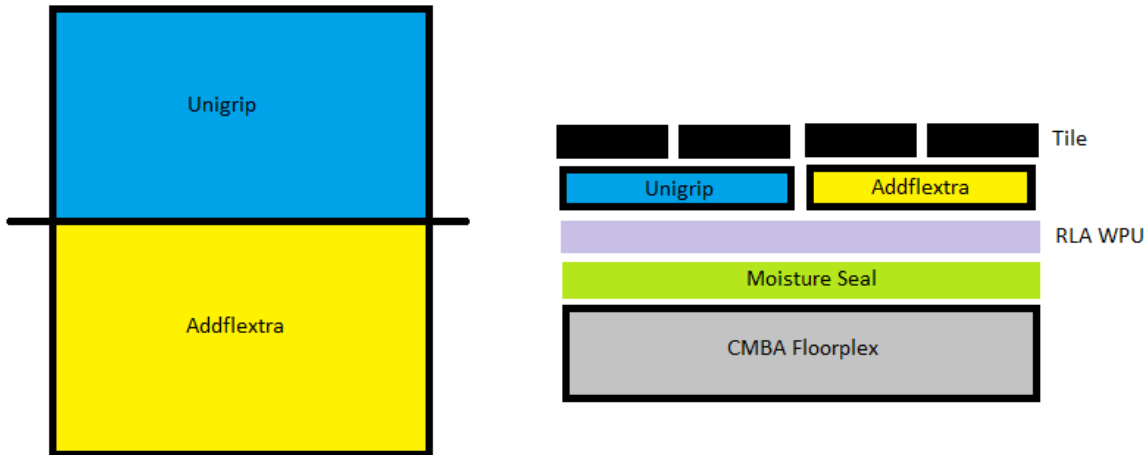
### Universal Primer system & RLA WPM: Unigrip & Addflextra



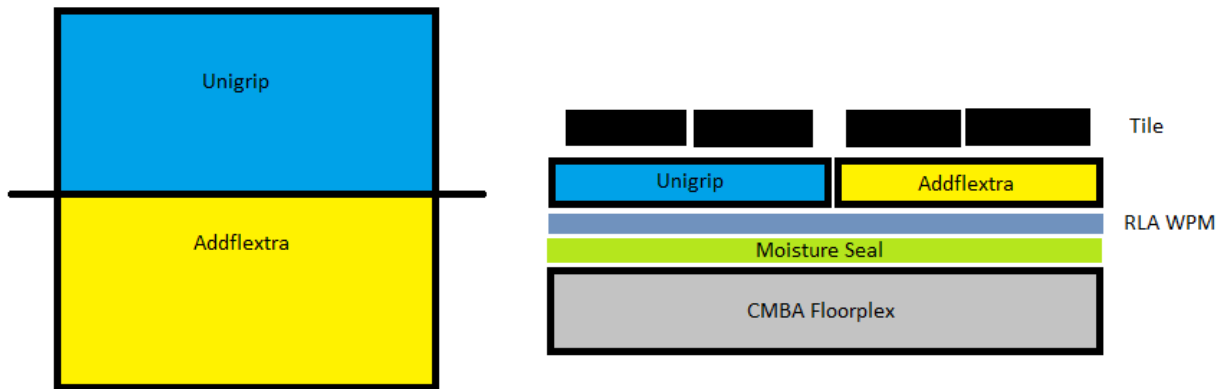
### Universal Primer system & RLA WPU/WPM: RLA Mastik



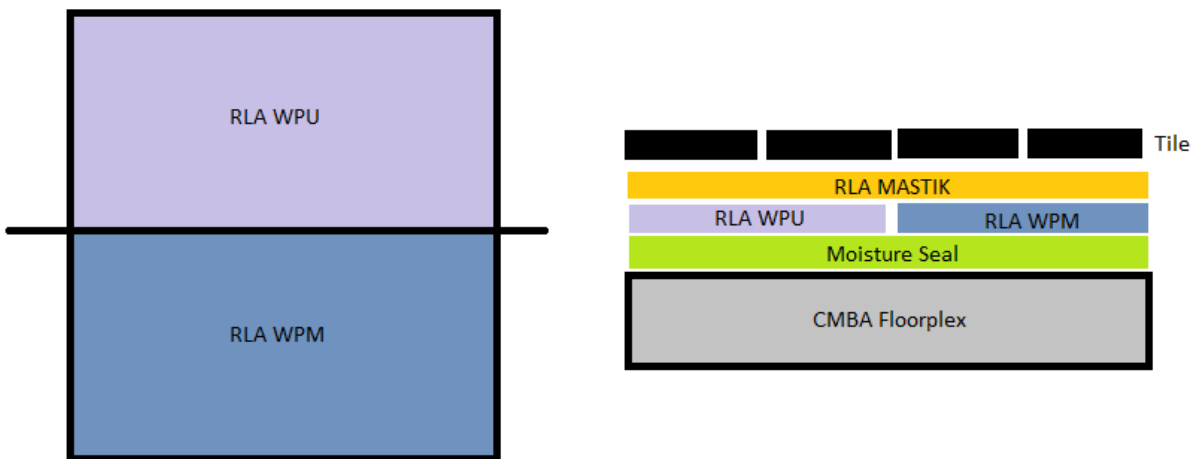
Moisture Seal system & RLA WPU: Unigrip & Addflextra



Moisture Seal system & RLA WPM: Unigrip & Addflextra



Moisture Seal system & RLA WPU/WPM: RLA Mastik

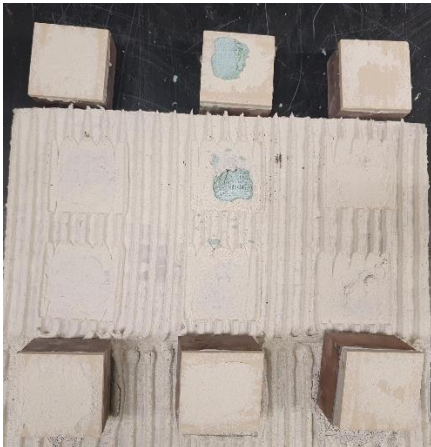


**Results:**

Universal Primer		
	RLA WPU	RLA WPM
<b>UNIGRIP</b>	1.03 MPa	0.83 MPa
<b>ADDFLEXTRA</b>	0.69 MPa	0.66 MPa
<b>RLA MASTIK</b>	0.94 MPa	0.33 MPa

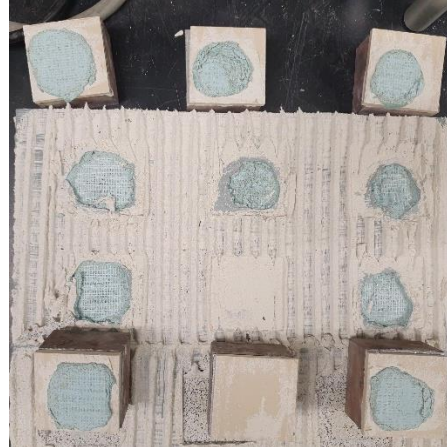
To PASS the ISO 13007.5 standard,  $\geq 0.5$ MPa must be achieved. The above were averages

**Universal Primer & RLA WPU**

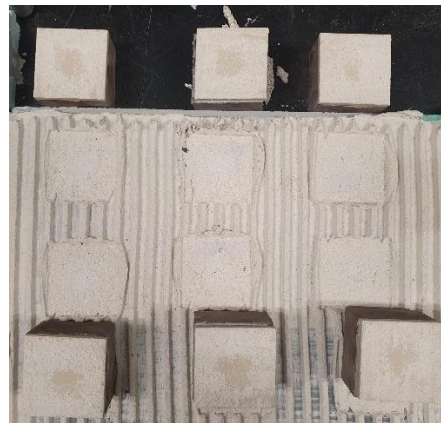


UNIGRIP

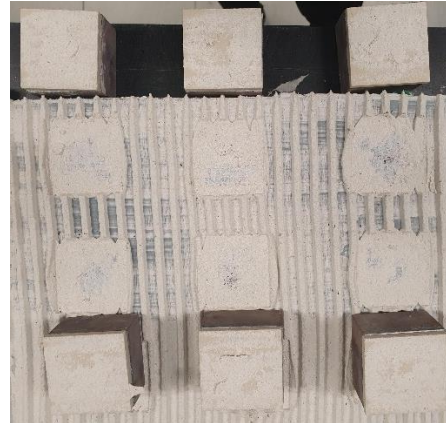
**Universal Primer & RLA WPM**



ADDFLEXTRA



RLA MASTIK

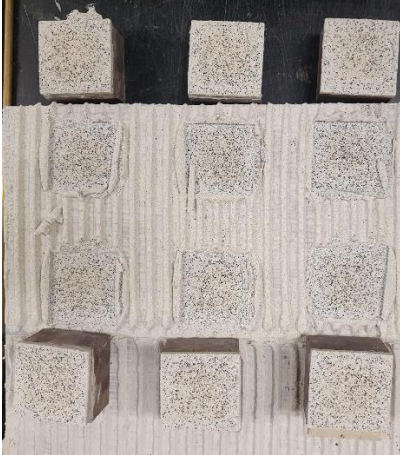




Moisture Seal		
	RLA WPU	RLA WPM
UNIGRIP	1.09 MPa	0.66 MPa
ADDFLEXTRA	0.73 MPa	0.62 MPa
RLA MASTIK	0.94 MPa	0.79 MPa

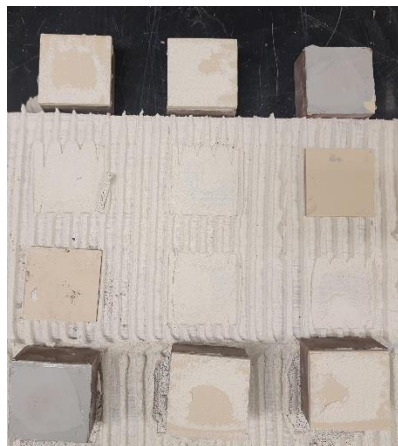
To PASS the ISO 13007.5 standard,  $\geq 0.5\text{MPa}$  must be achieved. The above were averages

### Moisture Seal & RLA WPU

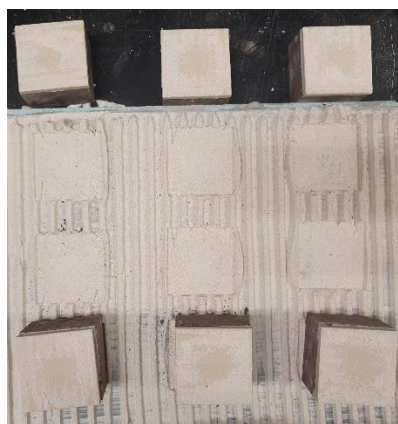


UNIGRIP

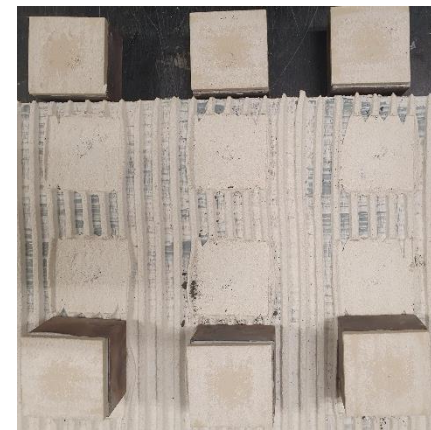
### Moisture Seal & RLA WPM



ADDFLEXTRA



RLA MASTIK



**Summary:**

	Universal Primer		Moisture Seal	
	RLA WPU	RLA WPM	RLA WPU	RLA WPM
<b>UNIGRIP</b>	1.03 MPa	0.83 MPa	1.09 MPa	0.66 MPa
<b>ADDFLEXTRA</b>	0.69 MPa	0.66 MPa	0.73 MPa	0.62 MPa
<b>RLA MASTIK</b>	0.94 MPa	0.33 MPa	0.94 MPa	0.79 MPa

To PASS the ISO 13007.5 standard,  $\geq 0.5$ MPa must be achieved.

All samples had passed the standard requirements expect for Universal Primer: RLA WPM and RLA Mastik.

The most suitable tile adhesive across all systems was Unigrip. Systems using RLA WPU with Unigrip being most ideal, achieving a tensile strength greater than 1 MPa in air condition.

Both Universal Primer and Moisture seal systems, membraned with RLA WPU obtained higher results compared to using RLA WPM.