

# Engineered For Tiles

ENGINEERED TO AUSTRALIAN STANDARD AS1720.1



TRILINE 2023

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IN DETAIL

## Engineered to Australian Standard AS1720.1 as required by QBCC for cavity units.

QBCC published advice in March 2019 advising the unsuitability of some cavity sliders to support wall tiles. With this challenge raised we wanted to ensure our cavity units were certified as compliant for your peace of mind.

Triline formulated an engineering test on our cavity slider unit to determine the capacity of the system to withstand loading from the application of wall tiles and associated wall board and adhesives. Testing was completed on 24th March 2020 and the Cavity Unit was found to satisfy the prototype test requirements of AS1720.1 where timber moisture levels are maintained below 15%. Testing and reporting of results to the requirements of AS1720.1 were carried out on a unit sized 2400H x 1200W to suit 90mm frame.

FOR USE WITH THE FOLLOWING WALLBOARD TYPES:



Gyprock Aquacheck



USG Boral Wetstop



James Hardie Villaboard

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# Points to Consider Before Applying Tiles

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- 1** See recommended chart for tile thickness & glue thickness loading to specific wallboard options. You must check that the tile loading does not exceed wallboard manufacturers recommendation for maximum loading weight of tiles and glue (weight will vary with glue thickness).

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- 2** Ensure the cavity slider wall frame is straight (they can get bent or bowed in transit). If the frame has bowed, straighten it before commencing tiling.

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- 3** For best results Triline recommends you clamp a straight edge to the cavity split jambs or on the tiled side to hold it straight while the tile glue dries. We also recommend packing in the throat of the cavity while the tile glue dries. If the cavity pocket is bowed when the glue dries it will stay bowed.

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- 4** If door has been fitted prior to tiling please remove door and store it according to the door manufacturer's recommendations. The door may absorb moisture from tile glue if it is left in place. This may cause the door to bow and scrape against inside of cavity. For best results refit door when tile glue has dried.

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## Triline Cavity Unit – Recommended Installation Combinations Table (GUIDE ONLY)

Sheet	Glue	Tile	Total Mass **(kg/m <sup>2</sup> )	Total Thickness (mm)	Eccentricity (Total Moment- kg/m <sup>2</sup> *m)	Result
USG Boral WETSTOP 10mm P/Board	3mm Glue	6mm Tile	21.97	19	0.250	APPROVED
USG Boral WETSTOP 10mm P/Board	3mm Glue	8mm Tile	25.33	21	0.301	APPROVED
USG Boral WETSTOP 10mm P/Board	3mm Glue	10mm Tile	28.68	23	0.375	APPROVED
USG Boral WETSTOP 10mm P/Board	3mm Glue	12mm Tile	32.04	25	0.456	NOT APPROVED
USG Boral WETSTOP 10mm P/Board	6mm Glue	6mm Tile	26.47	22	0.327	APPROVED
USG Boral WETSTOP 10mm P/Board	6mm Glue	8mm Tile	29.83	24	0.405	APPROVED
USG Boral WETSTOP 10mm P/Board	6mm Glue	10mm Tile	33.18	26	0.488	NOT APPROVED
USG Boral WETSTOP 10mm P/Board	6mm Glue	12mm Tile	36.54	28	0.579	NOT APPROVED
Gyprock AQUACHEK 10mm P/Board	3mm Glue	6mm Tile	22.47	19	0.237	APPROVED
Gyprock AQUACHEK 10mm P/Board	3mm Glue	8mm Tile	25.83	21	0.304	APPROVED
Gyprock AQUACHEK 10mm P/Board	3mm Glue	10mm Tile	29.18	23	0.378	APPROVED
Gyprock AQUACHEK 10mm P/Board	3mm Glue	12mm Tile	32.54	25	0.458	NOT APPROVED
Gyprock AQUACHEK 10mm P/Board	6mm Glue	6mm Tile	26.97	22	0.330	APPROVED
Gyprock AQUACHEK 10mm P/Board	6mm Glue	8mm Tile	30.33	24	0.407	APPROVED
Gyprock AQUACHEK 10mm P/Board	6mm Glue	10mm Tile	33.68	26	0.491	NOT APPROVED
Gyprock AQUACHEK 10mm P/Board	6mm Glue	12mm Tile	37.04	28	0.582	NOT APPROVED
James Hardie Villaboard 6mm	3mm Glue	6mm Tile	22.87	15	0.173	APPROVED
James Hardie Villaboard 6mm	3mm Glue	8mm Tile	26.23	17	0.226	APPROVED
James Hardie Villaboard 6mm	3mm Glue	10mm Tile	29.58	19	0.287	NOT APPROVED*
James Hardie Villaboard 6mm	3mm Glue	12mm Tile	32.94	21	0.354	NOT APPROVED*
James Hardie Villaboard 6mm	6mm Glue	6mm Tile	27.37	18	0.257	NOT APPROVED*
James Hardie Villaboard 6mm	6mm Glue	8mm Tile	30.73	20	0.321	NOT APPROVED*
James Hardie Villaboard 6mm	6mm Glue	10mm Tile	34.08	22	0.391	NOT APPROVED*
James Hardie Villaboard 6mm	6mm Glue	12mm Tile	37.44	24	0.468	NOT APPROVED
James Hardie Villaboard 9mm	3mm Glue	6mm Tile	26.97	18	0.241	APPROVED
James Hardie Villaboard 9mm	3mm Glue	8mm Tile	30.33	20	0.304	APPROVED
James Hardie Villaboard 9mm	3mm Glue	10mm Tile	33.68	22	0.375	APPROVED
James Hardie Villaboard 9mm	3mm Glue	12mm Tile	37.04	24	0.452	NOT APPROVED
Villaboard 9mm	3mm Glue	12mm Porcelain Tile	40.52	24	0.515	NOT APPROVED
James Hardie Villaboard 9mm	6mm Glue	6mm Tile	31.47	21	0.332	APPROVED
James Hardie Villaboard 9mm	6mm Glue	8mm Tile	34.83	23	0.405	APPROVED
James Hardie Villaboard 9mm	6mm Glue	10mm Tile	38.18	25	0.486	NOT APPROVED
James Hardie Villaboard 9mm	6mm Glue	12mm Tile	41.54	27	0.573	NOT APPROVED
Villaboard 9mm	6mm Glue	12mm Porcelain Tile	45.02	27	0.646	NOT APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	6mm Tile	24.84	22	0.301	APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	8mm Tile	28.20	24	0.378	APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	9.5mm Tile	30.71	25.5	0.440	APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	10mm Tile	31.55	26	0.462	NOT APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	12mm Tile	34.91	28	0.553	NOT APPROVED
Gyprock AQUACHEK13mm P/Board	3mm Glue	12mm Porcelain Tile	38.39	28	0.629	NOT APPROVED

Please Note:

- The purpose of this table is to demonstrate loading combinations that are equivalent or lower than the approved cavity frame design loads and eccentricities. This table does not exclude other combinations, however, calculations must be carried out to determine whether other combinations of materials with differing densities and distance from the cavity rails will exceed the approved design load and eccentricity that have been established from physical testing
- Installers must ensure that tile installations comply with AS 3958.1 – ‘Guide to installation of Ceramic Tiles’ and follow the wall sheet manufacturers installation instructions
- Installers must also ensure that the Maximum tile loads as specified by sheet manufacturers must not be exceeded
- The reference moment established from physical testing establishes the criteria for eccentricity of loading as 0.449 kg/m<sup>2</sup> • m or 44.88kg/m<sup>2</sup> applied at 10mm from the Cavity Unit
- Calculations are based on Glue density of 1500kg/m<sup>3</sup>; Tile density of 1680kg/m<sup>3</sup>; Porcelain tile density of 1970kg/m<sup>3</sup>

\* tile thickness exceeds maximum recommended for 6mm Villaboard at 600mm spacings. These combinations are approved when using the Triline Cavity Unit with 450mm rail spacings as a special order

\*\* Total weight includes the mass of the sheet

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# Compatible with the following Cavity Units with door size:

- Up to 2400H
- Up to 1200W
- Up to 90mm Stud Wall

Phoenix



Pro-Line 60



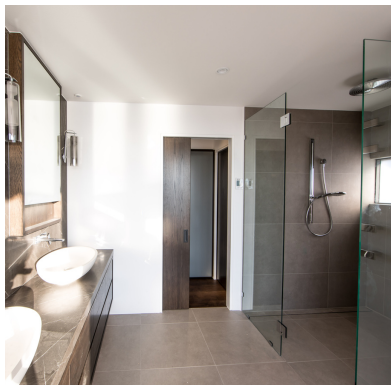
Hercules



Concept



Zero Clearance



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