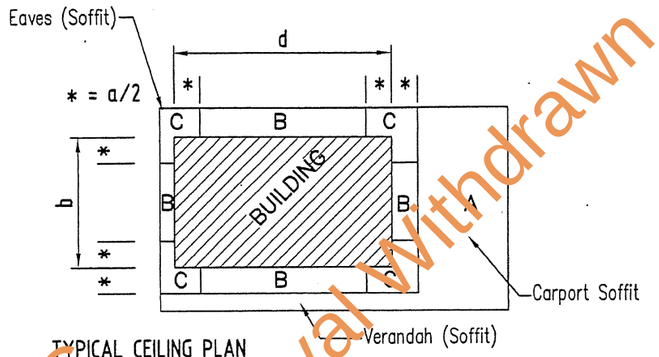
IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENT P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



TYPICAL CEILING PLAN

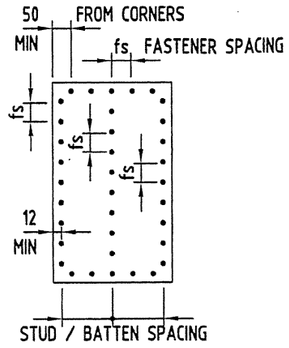
Dimension 'a' is minimum 0.2 x 'b', 0.2 x 'd' or height of soffit above ground

LOCAL PRESSURE AREAS

A - general areas away from building (x 1.0)

B - from $\frac{a}{2}$ from building corners (x 1.5)

C - up to $\frac{a}{2}$ from building corners (x 2.0)



TYPICAL 6mm 'DURALUX' FIXING DETAILS

CARPORT, VERANDAH AND EAVES (SOFFIT) LINING REQUIREMENTS

TERRAIN CATEGORY	LOCAL PRESSURE AREA	ULTIMATE LIMIT STATE PRESSURE (kPa)	STUD/BATTEN SPACING (mm)	FASTENER SPACING (mm)	TESTED CAPACITY PRESSURE (kPa)
1	A	-2.06, +2.22	450	200	-2.90
	B	-3.10, +3.34	300	150	-5.76
	C	-4.13	300	150	-5.76
2	A	-1.55, +1.67	450	200	-2.90
	B	-2.33, +2.51	450	200	-2.90
	C	-3.10	300	150	-5.76
2.5	A	-1.42, +1.53	450	200	-2.90
	B	-2.13, +2.29	450	200	-2.90
	C	-2.84	450	200	-2.90
3 & 4	A	-1.29, +1.39	450	200	-2.90
	B	-1.94, +2.08	450	200	-2.90
	C	-2.58	450	200	-2.90

CONSTRUCTION NOTES

1. 'Duralux' shall be fastened to a steel or timber subframe in accordance with the support and fastener spacings tabulated above.
2. Fasteners shall be fixed 12mm minimum from sheet edges and 50mm minimum from sheet corners.
3. All sheet edges and joints must be supported by steel or timber framing.
4. Fasteners to steel supports from 0.60mm B.M.T. to 1.6mm B.M.T. shall be 'Buildex' or similar M5x20 Countersunk Ribbed Head self-drilling screws.
5. Fix to Hardwood (F14) supports with 30 X 2.8 galv. flat head nails.
6. Duralux shall not be fixed directly to steel frames with a typical B.M.T. greater than 1.6mm, framing to be battened out prior to fixing.
7. Exposed 'Duralux' lining must be painted.
8. The negative ULS pressures are deemed to govern, due to the associated critical failure mechanism.

Product Name

6.0mm 'DURALUX' Fibre Cement lining

Product Description

EXTERNAL SOFFIT LINING (Flush Jointing)

Manufacturer's Name

BGC Fibre Cement (Australia) Pty Ltd

121 Bannister Road Canning Vale WA 6155, Australia
Postal Address: PO Box 1408, Canning Vale WA 6970

Design Criteria

1. REGION 'C' WIND LOADING TO AS / NZS 1170.2:2011 Structural Design Actions Part 2 - Wind Actions (incl. Amdt 1,2,3 & 4)
2. Limit State design pressures were determined in accordance with AS / NZS 1170.2:2011 Structural Design Actions Part 2 - Wind Actions (incl. Amdt 1,2,3 & 4) using shielding, topographic, combination, dynamic response, and structural importance multipliers equal to 1.0.
3. Strength: regional wind speed: V500 = 69.3m/s
4. Terrain/Height Multiplier (Mz cat):

TC	h=5m
1	1.05
2	0.91
2.5	0.87
3 & 4	0.83

5. Cpe = +0.7,-0.65
6. BGC 'DURALINER and DURALUX' are equivalent fibre cemented products with different edge profiles only."

Limitations

1. BGC External soffit lining to be painted to BGC specifications.
2. Ceiling space has been designed for zero internal pressure or -0.2 (pressure coefficient) for sealed structure.
3. Domestic housing up to 5 meters high (h≤ 5m)
4. 6mm 'Duralux' is an external soffit lining subject only to external pressure and suction loadings. Internal linings competent to resist internal design pressures must be installed. The racking strength of Duralux has not been tested and therefore should not be allowed for in the design of a structure.
5. The building aspect ratio (r) of the structure to be ≤ 1. If r>1 further checks of additional local pressures to be carried out by a fully qualified structural engineer. r is defined as the average roof height divided by the lesser of b and d.
6. Testing was conducted for negative (suction) pressures only. Comparison has only been made between these values and the negative ULS values which are deemed to govern.
7. A material capacity reduction factor of 0.8 was applied to the test capacity pressures nominated in the table to calculate the test pressures (Pt) used during the proof testing, which was carried out by Cyclone Structural Testing Station (James Cook University).

Accepted for Inclusion

DTCM ref: M1831

Chairman's Signature:

Chairman's Name: Peter Russell

Date of Approval: 28-9-17 Expiry Date: 28-9-22

Notes covering baisis of DTC (Relevant test reports etc)

The capacities and fixing requirements shown on this certification are based on the following documentation:
- JCU Cyclone Structural Testing Station Report No TS524 - Cyclic loading of Duraliner Soffit Lining (22/05/2000)

**Design Engineers Certification

Name: Adam James
Registration Number: 26968ES
Date: 18.09.2017
Signature:
*registered as a structural engineer in Australia

**Certifying Engineers Certification

Name: Rob O'Reilly
NT Registration Number: 213665ES
Date: 18.09.2017
Signiture:
*registered as a structural engineer in Northern Territory