

Product description
2200 x 600 x 50 mm Reinforced Autoclaved Aerated Concrete (AAC) Panel
Product purpose or use
<ol style="list-style-type: none"> 1. Fire rated cladding for load-bearing external timber or steel framed walls 2. Fire barrier between timber or steel framing of separate occupancies in residential apartments. (The AAC will also contribute, together with insulating material, to providing acoustic attenuation.) 3. Flooring for timber or steel framed floor structures
Certificate holder
Loxo Cladding Systems Pty Ltd 1331 Stud Road Rowville, VIC 3178

Complies with the National Construction Code 2012:

- Volume One BP1.1, BP1.2 and Volume Two P2.1** in respect of structural performance, when designed and constructed in accordance with the Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition, and:
 - Table 1, Table 2 and Table 5
 - Loxo 50mm AAC Party Wall System Design and Installation Manual, August 2012 Edition
 - Loxo 50mm AAC Floor System Design and Installation Manual, August 2012 Edition
- Volume One CP1, CP2, and Volume Two P2.3.1**, in respect of fire performance, when designed and constructed in accordance with the fire-rated construction specifications and details in the Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition, the Loxo 50mm AAC Party Wall System Design and Installation Manual, August 2012 Edition achieve the following Fire Resistance Levels (FRL):
 - External wall exposed to fire source outside with 10mm internal plasterboard lining: 120/120/90
 - External wall exposed to fire source outside with 13mm internal fire-grade plasterboard lining: 120/120/120
 - Party wall exposed to fire source either side with 10mm plasterboard lining both sides: 90/90/90
- Volume One FP1.4 and Volume Two P2.2.2** in respect of weatherproofing for external walls, when detailed and constructed in accordance with the Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition.
- Volume One FP1.5 and Volume Two P2.2.3** in respect of damp-proofing for external walls, if provided with damp-proof courses complying with AS 3700–2011 Clauses 4.7.3, 11.6, and 12.4.16.
- Volume One FP5.2 and Volume Two P2.4.6** in respect of acoustic performance of walls separating units, when detailed and constructed in accordance with:
 - Table 3,
 - Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition and,
 - Loxo 50mm AAC Party Wall System Design and Installation Manual, August 2012 Edition
- Volume One GP5.1 and Volume Two P2.3.4 and P3.7.4** in respect of buildings constructed in a designated bushfire prone area, when designed and constructed in accordance with the fire-rated construction specifications and details in the Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition, and the requirements of AS 3959–2009, is acceptable for use in all bushfire attack levels including BAL–FZ.
- Volume One JP1 and Volume Two P2.6.1** in respect of energy efficiency of walls when designed and constructed in accordance with:
 - Table 4 and,
 - Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition



In applications where complying thermal resistances of walls or floors are to be calculated, a thermal resistance of $R\ 0.336\ m^2.K/W$ shall be used for 50mm thick Loxo AAC panels.



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CodeMark Certification Body			18/9/2012	26/9/2012	18/9/2015	GM_CM30031 Rev A1
Global-Mark Pty Ltd, Suite 4.07, 32 Delhi Road, North Ryde NSW 2113, Australia - www.Global-Mark.com.au	Herve Michoux Managing Director	Unrestricted Building Certifier, Peter Gardner	Date of issue	Last update	Date of expiry	Certificate Number

This Certificate of Conformity is issued by an accredited certification body under arrangement with JAS-ANZ. The ABCB does not in any way warrant, guarantee or represent that the Product the subject of this Certificate of Conformity conforms with the BCA, nor accepts any liability arising out of the use of the Product. The ABCB disclaims to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Certificate.

It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the ABCB website, www.abcb.gov.au



CERTIFICATE OF CONFORMITY

This is to certify that
LOXO CLADDING SYSTEMS: 50mm AAC Panel

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Page 2 of 3

State Additions or Variations

1. Volume One:

- NSW J(A)P1
- In NT, Qld and TAS Section J is replaced by BCA 2009 Section J
- SA FP1.5
- NT FP5.2
- NSW and Qld GP5.1
- Tas GP5.1 (a)

2. Volume Two:

- In NSW Part 2.6 does not apply. New South Wales BASIX classifications are as tabulated as per the NSW Addition.
- In NT and TAS Part 2.6 is replaced by BCA 2009 Part 2.6
- Vic P2.6.1
- SA P2.2.3, NSW P2.2.3,
- SA P2.3.1
- Tas P2.3.4
- NT P2.4.6 (a)

Subject to the following conditions and limitations:

1. Product selection, and incorporation into the building design, shall be made by a professional Architect or Engineer or other appropriate person who:
 - Has qualifications and experience acceptable to the relevant approval authorities; and
 - Has ready access to:
 - Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition
 - Loxo 50mm AAC Party Wall System Design and Installation Manual, August 2012 Edition
 - Loxo 50mm AAC Floor System Design and Installation Manual, August 2012 Edition
2. Product installation shall be carried out by a competent tradesman under the direction of a Builder, both of whom have ready access to:
 - Loxo 50mm AAC Panel System Design and Installation Manual, August 2012 Edition
 - Loxo 50mm AAC Party Wall System Design and Installation Manual, August 2012 Edition
 - Loxo 50mm AAC Floor System Design and Installation Manual, August 2012 Edition
3. Installer must complete, sign and send to the Certificate Holder a Certificate of Installation when installation is completed.

Limit of the scope of certification

This certification includes the weather-proofing and damp-proofing requirements of the AAC walls and flooring, but does not apply to:

- Control of condensation, which requires additional consideration; nor
- Weatherproofing of windows, doors or other items built into the walls. For these, frames must drain to the outside of the building (not into the cavity), frames must be properly sealed and properly flashed.

Table 1, Properties

Property	Value	Units
Ambient ¹ Density, ρ_{amb}	520	kg/m ³
Dry ² Density, ρ_{dry}	500	kg/m ³
Working ³ Density, ρ_{design}	610	kg/m ³
Permanent Action, G	0.3	kN/m ²
Characteristic Unconfined Compressive Strength, f_{uc}	1.1	MPa
Modulus of Rupture, f_{ut}	0.73	MPa
Design Ultimate Limit State Bending Capacity, ϕM	0.12	kNm
Design Serviceability Limit State Deflection Limit, δ_{max}	SPAN/240	
Coefficient of contraction	0.4	mm/m
Coefficient of thermal expansion	10	x10 ⁻⁶ /°C



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Page 3 of 3

Notes:

1. Ambient density is that achieved by the product when it has reached equilibrium at 23°C, 50% RH. The moisture content by mass in this state is typically between 2% and 5%.
2. Dry density is the manufacturer's reported density, the typical frame of reference for grading AAC material. It is achieved by oven drying specimens so that the moisture content is 0%.
3. Working density is to be used for calculation of effects due to permanent actions.

Table 2, Fixing Specification

Wind Class	Max Horizontal Spacing for Battens and Panel Screws		Max. Panel Screw Spacing Vertically	
	Corner Zone	Typical Zone	Corner Zone	Typical Zone
N1, N2, N3, C1	600	900	500 (2 screws/600mm)	500 (2 screws/600mm)
N4, C2	600	600	250 (3 screws/600mm)	500 (2 screws/600mm)
N5, C3	450	450	250 (3 screws/600mm)	250 (3 screws/600mm)

Screw size should be No. 14 as specified.

Table 3, Acoustic Insulation

Loxo System	System Details	Acoustic Rating	
		R _w	R _w +C _{tr}
70mm timber frame	<ul style="list-style-type: none"> 1 layer of 10mm plasterboard both sides 1 layer of R2.0 insulation against the plasterboard on both sides Minimum 10mm cavity both sides of Loxo panel 	63	53
90mm timber frame		65	55
76mm steel frame		64	53
92mm steel frame		65	55

Table 4, Thermal Insulation

Loxo System	System Details	Total R-Value (m ² .K/W)	
		Summer	Winter
5070-02 NS and 5090-02 NS	Based on: 10mm plasterboard lining 20-40mm cavity, no sarking, 70mm or 90mm frame, R2.0 glasswool insulation	2.63 (min.)	2.84 (min.)
5090-03 NS	20-40mm cavity, no sarking, 90mm frame, R2.5 glasswool insulation	3.11 (min.)	3.24 (min.)
5090-01 DS	40mm cavity, double-sided anti-glare foil sarking, 90mm frame, R2.5 glasswool insulation	3.49	3.83

The above figures refer to a system R-Value (i.e. including air films, cavity and other components)

Table 5, Panel Bending Capacity

Panel Span (mm)	Ultimate Limit State Load (kPa)
450	6.65
600	3.76
900	1.67
1200	0.94
1500	0.60
1800	0.42
2100	0.32

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