



CERTIFICATE OF CONFORMITY



This is to certify that

ECOL-MEGA PANEL Reinforced AAC Wall and Floor Panel Systems

Product description
Reinforced Autoclaved Aerated Concrete (AAC) Wall and Floor Panel System of external and internal wall cladding panels for residential, institutional, commercial or industrial buildings and floors in residential buildings using ECOL-MEGA PANEL Reinforced AAC (Autoclaved Aerated Concrete) Panels.
Product purpose or use
The product can be used for external and internal walls and floors. Wall Panels are 50mm thick and dimensions are 2200 X 600mm, or 75mm thick and dimensions are 1200 X 600mm, 1800 X 600mm, 2400 X 600mm, 2550 X 600mm, 2700 X 600mm, 2850 X 600mm, 3000 X 600mm, 3300 X 600mm, or 100mm thick and dimensions are 2700 x 450mm, 3000 x 450mm. Floor Panels are 75mm thick and dimensions are 1800 x 600mm.
Certificate holder
One Stop Building and Hardware Pty Ltd and LiteW8 Pty Ltd 126 Days Road, Ferryden Park, SA 5010 – Tel: 08 8243 0930, web: www.osbh.com.au

Complies with the Building Code of Australia 2014:

- Volume One BP1.1, BP1.2 and Volume Two P2.1.1 (a), (b), (c) in respect of structural performance, when designed and constructed in accordance with Table 1 and ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013) and Construction Manual (Issue August 2013).
- Volume One CP1, and CP2, and Volume Two P2.3.1 in respect of fire performance subject to a fire source on the panel side of the wall, when designed and constructed in accordance with ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), and Construction Manual (Issue August 2013) and the following:
 ECOL-MEGA AAC Reinforced AAC Panels not less than 75 mm thick, fixed to steel framing: Fire Resistance Levels (FRLs) -/240/180
 ECOL-MEGA AAC Reinforced AAC Panels not less than 75 mm thick, fixed to steel framing, with Bradford R1.5 fibreglass batts and 10 mm standard plasterboard: Fire Resistance Levels (FRLs) -/240/240
 ECOL-MEGA AAC Reinforced AAC Panels not less than 50 mm thick, fixed to steel framing: with Bradford R1.5 fibreglass batts and 10 mm standard plasterboard: Fire Resistance Levels (FRLs) 180/180/120
- Volume One FP1.4 and Volume Two P2.2.2 in respect of weatherproofing for external walls, if properly flashed in accordance with AS 3700-2011 Clauses 4.7, 11.6 and 12.4.16, AS 4773.2-2010 Clauses 5.6 and 9.6; coated with approved render and acrylic coating systems in accordance with ECOL-MEGA PANEL Autoclaved Aerated



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CodeMark Certification Body			<u>15/12/2011</u>	<u>2/3/2015</u>	<u>2/3/2018</u>	<u>GM-CM30023</u> <u>Rev D</u>
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

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Concrete Wall and Floor Technical Manual (Issue August 2013), and Construction Manual (Issue August 2013); and, if single leaf external walls, coated in accordance with AS 4773.1 2010 Clause 14.8.1.

4. 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, and AS 4773.2-2010 Clauses 5.6 and 9.6, and AS 4773.1-2010 Clause 14.8.2.
5. Volume One GP5.1 and Volume Two P2.3.4 in respect of buildings constructed in a designated bushfire prone area, when designed and constructed in accordance with the fire-rated construction specifications in ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue May 2013) and Construction Manual (Issue August 2013) and the requirements of AS 3959–2009 (Amdt 1, Amdt 2 and Amdt 3), for all bushfire attack levels including BAL-FZ, where a minimum setback distance of 10 m is maintained from the classified vegetation in BAL-FZ.
6. Volume One JP1 and Volume Two P2.6.1 in respect of energy efficiency of walls or floors in applications where complying thermal resistances of the walls or floors have been determined using a thermal conductivity, k , of 0.336 W/m.K (Thermal resistance of R 0.15 m².K/W for 50 mm thick AAC panels, R 0.22 m².K/W for 75 mm thick AAC panels and R 0.30 m².K/W for 100 mm thick AAC panels).

State Additions or Variations

1. Volume One SA FP1.5, NSW GP5.1, Qld GP5.1, Tas GP5.1, NSW Section J, NT Section J and Qld Section J
2. Volume Two SA P2.3.1, SA P2.2.3, NSW P2.2.3, Tas P2.3.4, and Vic P2.6.1

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 ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), related to the product design and installation.
2. Product installation shall be carried out by a competent tradesman under the direction of a Builder, both of whom have ready access to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue May 2013) and Construction Manual (Issue August 2013).
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, 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 should drain to the outside of the building (not into the cavity), frames must be properly sealed, properly flashed, and drips provided at sills.

This certification does not include assessment for applications in flood hazard areas as per BCA Volume One Clause BP1.4 nor BCA Volume Two Clause P2.1.2 nor does it include BCA Volume Two QLD P2.1.3.

Certification applies only to those Building Code of Australia parts specifically mentioned. Parts omitted are not covered by the CodeMark certification. Omission should not be interpreted as either “the part does (or does not) apply to the specific building” or “the part does apply and the system does or does not conform”.

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Table 1 Summary of Properties of the ECOL-MEGA PANEL (AAC) Products				
Product Code	50 W 25	75 W37	100 W18	75 F37
Application	Wall	Wall	Wall	Floor
Panel thickness, T, mm	50	75	100	75
Panel width, W, mm	600	600	450	600
Panel length, L, mm	Varies	Varies	Varies	1,800
Unconditioned density, ρ_b , kg/m ³	720-820	720-820	720-820	720-820
Oven-dry density, ρ_d , kg/m ³	520-620	520-620	520-620	520-620
Charact unconditioned compressive strength, f'_{ck} , MPa	1.1	1.1	1.1	1.1
Charact oven-dry compressive strength, f'_{ck} , MPa	1.9	1.9	1.9	1.9
Mean elastic modulus, E, MPa	1,800	1,800	1,800	1,800
Reinforcement strength, f_y , MPa	500	500	500	250
Number of layers of reinforcement	1	1	2	1
Main reinforcement diameter, mm	5	5	5	5
No of reinforcement strands	5	5	3	5
Reinforcement centres, mm	25/25	37/37	18/64/18	37/37
Effective reo depth, d, mm	25	37	82	37
Moment capacity, kN.m/panel	0.10	0.22	0.72	0.22
	Span mm	Capacity kPa		
	300	14.66	32.00	
	450	6.51	14.22	
	600	3.66	8.00	
	750	2.35	5.12	
	900	1.63	3.56	
	1,050	1.20	2.61	
	1,200	0.92	2.00	
	1,500		1.28	5.66
	1,800		0.89	3.93
	2,100		0.65	2.89
	2,400		0.50	2.21
	2,700			1.75
	3,000			1.41
	3,300			1.17

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Notes:

1. For 50 mm and 75 mm thick panels, the design tables are based on the main reinforcement being located at the centre of the panels. Where the main reinforcement is offset from the centre, the designer shall nominate the orientation on the drawings, and the builder shall ensure that the correct orientation is achieved in construction.
2. Tests have been performed on 75 mm panels, and general equations developed and calibrated accordingly. Values for 50 mm and 100 mm panels have derived using these equations,
3. Secondary reinforcing strands across the panel, as per the drawing, provide anchorage for the main reinforcement.
4. Dimensional Category DW4. Refer to definitions in Specification.
5. General Purpose Salt Attack Resistance Grade, except for applications requiring Exposure Grade. Applications requiring Exposure Grade are saline wetting or drying, aggressive soils, severe marine environments, saline or contaminated water including tidal or splash zones, or within 1 km of an industry producing chemical pollutants. Refer to definitions in Specification.

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