

REPORT HOLDER

Masons Plastabrick Ltd
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PRODUCT DESCRIPTION

Masons Thermalcrete Lightweight Concrete Panel System is a cladding system comprising of 50mm - 120mm thick layers and is made up of three layers. It mainly uses 50mm-75mm for cladding flooring and fencing and the larger sizes 90mm-120mm for partition walls. Thermalcrete Interlocking Panel has a core of eps beads and cement with two outside layers of calcium silicate board that are bonded together (not laminated) during the manufacturing process. The panels are fixed to the wall frames using Masons Thermalcrete Lightweight Concrete System cavity battens to create a 20mm-45mm breathable cavity between the framing and the panels. The panels are finished with a coating system consisting of 4mm-5mm thick fiberglass reinforced mesh; a plaster base coat followed by a levelling coat; a 1mm-2mm thick finishing plaster and a 100% acrylic exterior paint system or acrylic texture coating.

USE

Masons Thermalcrete Lightweight Concrete Panel System is designed for homes built with either timber or steel framing and can be used in new dwelling construction, second story additions, extensions, and for re-cladding.

Masons Thermalcrete Lightweight Concrete Panel System has a mass of approximately 45kg/m²; when the Masons Plaster System is applied the completed wall cladding is considered a "medium wall cladding" in terms of NZS 3604.

1.0 CERTMARK EVALUATION

Masons Thermalcrete Lightweight Concrete Panel System has been evaluated by CertMark as an external wall cladding system for buildings within the following scope:

1. Scope of limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and, a risk score of 0-20 calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2;
2. Weather tightness and structural wind loading has been evaluated when used for timber or steel framed buildings subject to specific design up to a design differential ultimate limit state (ULS) wind pressure of 2500 Pa.
3. Buildings constructed with either timber or steel framing must comply with the relevant NZBC requirements for timber and steel framing, and;
4. All joinery used in conjunction with this system must meet the requirements of NZS 4211 and be installed with vertical jambs and horizontal heads and sills.
5. Masons Thermalcrete Lightweight Concrete Panel System must be installed by suitably qualified and licensed contractors, trained and certified by Masons Plastabrick Ltd.

2.0 TECHNICAL OPINION

When installed in accordance with the scope limitations outlined in this assessment brief and Masons Thermalcrete Lightweight Concrete Panel System Technical Manual & Installation Guide September 2013, Masons Thermalcrete Lightweight Concrete Panel System is deemed to meet the following performance provisions:

1. NZBC Durability B2.3.1(b)
2. NZBC Protection from Fire. C3.4 (a) walls C3.5 Spread of fire C3.6 (buildings within one metre of a shared boundary)
3. NZBC External Moisture E2.3.2, E2.3.3, E2.3.5

Note:

Testing has demonstrated that there is adequate resistance to reasonable impact loads that the cladding system is likely to be subjected to when used in a residential situation. However, it is noted that there is a higher likelihood of impact damage if the system is

utilised in light commercial environments. Appropriate steps should be taken to protect the system in such circumstances.

3.0 SCOPE OF ASSESSMENT BRIEF

3.1 Coverage

This CodeMark Assessment Brief applies only to Masons Thermalcrete Lightweight Concrete Panel System as described herein, and in Masons Thermalcrete Lightweight Concrete Panel System Technical Manual & Installation guide September 2013. Any and all other components of the building are not covered by either this assessment brief or the CodeMark Certificate. It is the responsibility of the Designer/Builder to ensure compliance with any and all NZBC regulations and requirements.

3.2 Withdrawal:

This Evaluation Report will be withdrawn or amended if CMA considers that a change in design or manufacturing quality renders the basis of the appraisal invalid, or if reported field experience convinces CMA of unsatisfactory quality or performance.

3.3 Term of Validity:

This CertMark assessment will expire three years after from the date of issue unless revalidation has been requested and granted.

4.0 INSTALLATION

Masons Thermalcrete Lightweight Concrete Panel System must be installed in accordance with the Masons Thermalcrete AAC Panel System Technical Manual & Installation guide September 2013

5.0 BASIS OF THIS EVALUATION REPORT

8.1 This Evaluation Report has considered the following aspects in issuing this recognition:

1. Installation procedures
2. Physical properties
3. Relevant NZBC requirements

6.0 SPECIFICATIONS

Panel size: 50mm x 610mm x 2270mm & 75mm x 610mm x 2270mm

Properties L2270mmH610mmxD50mm

PROPERTY	UNIT	thermalCRETE Interlocking Panel
Material		EPS & Cement Core Calcium Silicate Board
Dry Density:	Kg/m ²	45kg/m ²
Dry Shrinkage Value	Mm/m	≤ 0.3
Water Absorption (by volume)	%	3.2%
Thermal Conductivity:	w/mk	0.14
Sound Transmission Class (STC)	db	36
Fire resistance 60mm	/h	4 hrs
Strength	MPA	5

7.0 TEST REPORTS and supporting data:

1. Assessment Report No: JL2012121117010
Lightweight Panels for Partition walls
2. Assessment Report No: 12C-12W079
3. Light Weight Sandwich Panel
4. Assessment Report No:2012-616
5. Report No:2012-3-868
6. Lightweight panels for partition walls
7. Assessment Report No: 2010-3283
8. Lightweight Panels for Partition walls.
9. Technical report 30B-13-0045-TRP-334897-0

Other Documents:

Lightweight High Strength Concrete with Expanded Polystyrene Beads; Tengku Fitriani L, Subhan. BASF Lightweight, Thermal-Insulating, Expanded Polystyrene Bead (EPS) Concrete. Branz STUDY REPORT No. 85 (1999): Polystyrene Aggregate Concrete

8.0 INSPECTIONS

CMA representatives have inspected installations of the systems and found the level of performance satisfactory.

thermalCRETE Interlocking Panel




9.0 PRODUCT IDENTIFICATION AND BRANDING

The Client may affix the CertMark International mark as shown below.

10. COPYRIGHT STATEMENT:

All material contained in this report, unless otherwise stated, remains the property of **Masons Plasta Brick Ltd.** Copyright and other intellectual property laws protect these materials. Reproduction or transmission of the materials, in whole or in part, in any manner, without the prior written consent of the copyright holder, is a violation of copyright law.



John Thorpe Director	
Issue Date	23/10/2013
Valid till	23/10/2016

CodeMark Certification:

CodeMark is a building product certification scheme. The CodeMark scheme supports the use of new and innovative building products by providing a nationally and internationally accepted process for products to be assessed for compliance with the requirements of the building codes of Australia and New Zealand. The scheme provides confidence and certainty to regulatory authorities and the market through the issue of a Certificate of Conformity.

The ABCB and New Zealand's Department of Building and Housing (DBH) manage the scheme in their respective countries. The Joint Accreditation System of Australia and New Zealand (JAS-ANZ) have accredited CertMark to evaluate and certify building products. Relevant legislation requires building control authorities to accept CodeMark certified products.

CertMark Australasia Pty Ltd
JAS-ANZ Accreditation Number Z4450210AK

