



تاریخ: ۱۳۹۴/۰۸/۲۴

شماره: ۹۴/ن/۱۲۱

پیوست: .....

## نتایج جهانی آزمایشگاهی مقاومت فشاری و خمشی دیوارهای اکوتک

نتایج آزمایشگاهی کشور سنگاپور با دیوارهای اکوتک

(ضخامت ۱۰۰ میلیمتر)

Test Report No. 7191047494-3C-MEC12-NLH  
dated 05 December 2012



PSB Singapore

Note: This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.

**SUBJECT:**

Testing of "Great Wall Ultra-Lightweight" precast panels submitted by Lian Wang Trading Pte Ltd on 09 Nov 2012.

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**TESTED FOR:**

Lian Wang Trading Pte Ltd  
No 10 Senoko Loop  
Singapore 758148  
Attn : Mr Steven Tan

**TEST METHOD:**

Adopted to BS EN 772-1:2000 Methods of test for masonry units –  
Part 1: Determination of compressive strength

**DESCRIPTION OF SAMPLE:**

6 pieces of "Great Wall Ultra-Lightweight" precast panels of nominal size 100 x 100 x 100 mm were received for testing (Refer to Appendix for photograph of the test sample).

**TEST RESULTS:**

Compressive Strength Test

Sample Reference	1	2	3	4	5	6
Maximum Load (N)	37975.5	46415.9	47636.0	36740.4	46933.1	35500.8
Effective Loaded Area (mm <sup>2</sup> )	7420.9	7716.1	7532.2	7602.7	7552.6	7292.1
Compressive Strength (N/mm <sup>2</sup> )	5.12	6.02	6.32	4.83	6.21	4.87
Average Compressive Strength (N/mm <sup>2</sup> )	5.56					
Standard Deviation (N/mm <sup>2</sup> )	0.69					
Coefficient of Variation (%)	12.4					

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**TEST REPORT**

(This Report is issued subject to the terms & conditions set out below)

Your Ref: confirmation of 29043-CQ dated 12/10/2012

2/11/2012

Our Ref: CT- 21752/ THC

Page 1 of 2

**Subject** : Determination of Thermal Conductivity (K-value) on 100mm thick "Ultra-lightweight" precast panel, submitted by Lian Wang Trading Pte Ltd on 12/10/2012.

**Tested For** : Lian Wang Trading Pte Ltd  
No.10 Senoko Loop  
Singapore 758148  
Attn : Ms Jeslyn Chan

**Description of Sample** : Two (02) numbers of size: 280 x 280 x 100mm thick hollow core "Ultra-lightweight" precast panel were received on 12/10/2012 (see Photo. 1).

**Results:**

**Thermal Properties (K-Value and R-Value)**

Sample Reference	S1	S2
Size of test specimen (mm)	279.7 x 279.6 x 99.30	279.6 x 279.4 x 99.21
Weight of test specimen (g)	2775.0	2821.5
Density (oven-dry, gross) at test (Kg/m <sup>3</sup> )	357.3	364.1
Method of Test	ASTM C 518 : 10	
Date of Test	24/10/2012	18/10/2012
Mean Temperature at test (°C)	27.8	27.8
Temperatures: cold / hot plates (°C)	32 / 24	32 / 24
Thermal Conductivity (W/m <sup>2</sup> °K)	0.1702	0.1776
Average Thermal Conductivity (W/m <sup>2</sup> °K)	0.1739	
Thermal Resistance (m <sup>2</sup> °K/ W)	0.5836	0.5588
Average Thermal Resistance (m <sup>2</sup> °K/ W)	0.5712	

Tan Hong Choon  
CMTD (Building Systems)  
Construction Technology Division

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**TEST REPORT**

(This Report is issued subject to the terms & conditions set out below)

Your Ref: MQ-76253 dated 27 March 2013      Our Ref: MM-33560/TKC/1      Date: 12 April 2013  
(Supplementary Report No. S/0182/13)

**Subject :** Compressive Load test of Lightweight Precast Panel submitted by Lian Wang Trading Pte Ltd on 01 April 2013.

**Tested For :** LIAN WANG TRADING PTE LTD  
No. 10 Senoko Loop,  
Singapore 758148  
Attn: Mr. Steven Tan

**Date and Place of Test :** 04 April 2013 at Setsco Laboratory

**Method of Test :** Compression Load test (See Photograph 4 for the test set-up)  
The test sample was mounted vertically in the compression test fixture. The base of the sample was supported by two (02) 150 x 150 x 150mm concrete cube and approximately 395mm apart. Compression load was applied gradually until failure. The maximum load was then recorded.

**Description of Sample :** Eight (08) pieces of Greatwall Ultra Lightweight Precast panel (Refer Photograph 1 to 3 and Appendix A) were received for testing -

S/No	Sample Reference	Date of Casting (Said to be)	Batch No	Qty
1	(Nominal size) Greatwall Ultra Lightweight Precast Panel 605mm(W) x 1000mm(L) x 95.8mm(TK) with 7 Hollow section Dia.60mm	October 2012	01	04
2	(Nominal size) Greatwall Ultra Lightweight Precast Panel 605mm(W) x 1000mm(L) x 97.2mm(TK) with 7 Hollow section Dia.60mm	September 2012	02	04

Reports/Other/2013/100000

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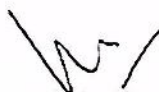
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Results : Compression Load test  
(Refer Table 1 and 2 attached)

Witnesses : 1) Mr. Steven Tan - Lian Wang Trading Pte Ltd  
2) Mr. Jerry Qin - STI Construction Pte Ltd



TAN KOK CHUAN  
Testing Officer



CHENG KWANG MENG  
Manager (Mechanical Testing)  
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