

**Dated 11 MAR 2015**  
**Job No C15/0018**



AL Technologies

**Choose certainty.**  
**Add value.**

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 AL Technologies Pte Ltd. In addition, this report is governed by the terms set out within this report.

**SUBJECT:**

Determination of Compressive Strength & Density of Twelve (12) nos of Concrete Cores For DJ Builders & Construction Pte Ltd - proposed Additional & Alteration to an existing 2 Storey Detached House on lot 96977A MK 25 at 90 Meyer Road

**TESTED FOR:**

**DJ BUILDERS & CONSTRUCTION PTE LTD**

No.8 Ubi Road 2, #08-08 Zervex  
Singapore 408538

Attn: Mr. Eric Loh

**DATE OF TEST:**

11-Mar-15

**TEST METHOD:**

The tests were conducted in accordance with BS EN 12390-3: 2009 "Compressive Strength of Test Specimens and BS EN 12390-3: 2009 "Density of Hardened Concrete" for product LIGHTHERM 250

**TESTING LOCATION**

TÜV SÜD PSB Pte Ltd (Tuas Lab) No. 10 Tuas Avenue 10 Singapore 639134

CHOY WAI HONG  
TESTING OFFICER

FARZEEA  
ENGINEER  
CIVIL ENGINEERING CENTRE



LA-2014-0555-G  
LA-2014-0555-G-1  
LA-2014-0556-B  
LA-2014-0556-B-1

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme. Tests/Calibrations marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our laboratory.

<b><u>TEST DETAILS</u></b>	
<b>Coring Location</b>	90 Meyer Road
<b>Date of Coring</b>	06-03-15
<b>Direction of Coring</b>	Vertical
<b>Name of Coring Personnel</b>	-
<b>Method of End Preparation</b>	Grinding
<b>Condition As Received</b>	Satisfactory
<b>Determination of Mass</b>	As-Received

**COMPRESSIVE STRENGTH OF LIGHTERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	1	2
<b>Sample Ref</b>	B1	B2
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	314.83	298.65
<b>Minimum Length as Received (mm)</b>	311.71	293.87
<b>Average Diameter (mm)</b>	117.22	117.52
<b>Average Height (mm)</b>	120.22	123.65
<b>Mass (g)</b>	335.8	340.9
<b>Density (kg/m<sup>3</sup>)</b>	263.8	259.2
<b>Maximum Load (kN)</b>	10.45	9.91
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.97	0.91

**COMPRESSIVE STRENGTH OF LIGHTHERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	3	4
<b>Sample Ref</b>	B3	B4
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	297.85	281.35
<b>Minimum Length as Received (mm)</b>	294.14	267.76
<b>Average Diameter (mm)</b>	117.54	117.60
<b>Average Height (mm)</b>	120.12	117.85
<b>Mass (g)</b>	335.6	331.2
<b>Density (kg/m<sup>3</sup>)</b>	262.5	263.7
<b>Maximum Load (kN)</b>	10.25	10.01
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.94	0.92

**COMPRESSIVE STRENGTH OF LIGHTHERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	5	6
<b>Sample Ref</b>	B5	B6
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	273.74	290.35
<b>Minimum Length as Received (mm)</b>	269.22	274.71
<b>Average Diameter (mm)</b>	117.72	115.93
<b>Average Height (mm)</b>	120.00	120.57
<b>Mass (g)</b>	333.6	338.4
<b>Density (kg/m<sup>3</sup>)</b>	260.4	262.2
<b>Maximum Load (kN)</b>	10.38	9.64
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.95	0.89

**COMPRESSIVE STRENGTH OF LIGHTHERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	7	8
<b>Sample Ref</b>	B7	B8
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	307.18	319.81
<b>Minimum Length as Received (mm)</b>	294.37	292.73
<b>Average Diameter (mm)</b>	116.99	115.93
<b>Average Height (mm)</b>	120.55	120.57
<b>Mass (g)</b>	329.8	332.9
<b>Density (kg/m<sup>3</sup>)</b>	259.5	261.3
<b>Maximum Load (kN)</b>	9.36	10.74
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.87	0.99

**COMPRESSIVE STRENGTH OF LIGHTHERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	9	10
<b>Sample Ref</b>	B9	B10
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	237.27	302.18
<b>Minimum Length as Received (mm)</b>	223.45	296.34
<b>Average Diameter (mm)</b>	117.21	115.93
<b>Average Height (mm)</b>	125.61	120.57
<b>Mass (g)</b>	350.4	327.7
<b>Density (kg/m<sup>3</sup>)</b>	263.5	262.3
<b>Maximum Load (kN)</b>	10.31	10.52
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.96	0.97

**COMPRESSIVE STRENGTH OF LIGHTHERM 250**

<b><u>TEST RESULTS</u></b>		
<b>Lab Ref</b>	11	12
<b>Sample Ref</b>	B11	B12
<b>Date of Casting</b>	-	-
<b>Age at Test (days)</b>	-	-
<b>Maximum Length as Received (mm)</b>	308.31	204.73
<b>Minimum Length as Received (mm)</b>	302.83	185.28
<b>Average Diameter (mm)</b>	116.95	115.93
<b>Average Height (mm)</b>	121.79	120.57
<b>Mass (g)</b>	333.4	339.5
<b>Density (kg/m<sup>3</sup>)</b>	259.8	262.4
<b>Maximum Load (kN)</b>	9.77	10.21
<b>Compressive Strength at Failure (N/mm<sup>2</sup>)</b>	0.91	0.94



Appendix: 1 of 2



Appendix: 2 of 2



**Please note that this Report is issued under the following terms:**

1. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD AL Technologies approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD AL Technologies in any way "guarantees" the later performance of the product/equipment. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product/equipment.
2. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client. TÜV SÜD AL Technologies therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.
3. Nothing in this report shall be interpreted to mean that TÜV SÜD AL Technologies has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.
4. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to TÜV SÜD AL Technologies or to the report or results furnished by TÜV SÜD AL Technologies in any advertisements or sales promotion.
5. Unless otherwise stated, the tests were carried out in TÜV SÜD AL Technologies Pte Ltd, 139 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416004

January 2014