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Your Ref.: P.O. No.: PO/1287/AA07 **Our Ref.: CT-6145/THK/2** **Date: 24/09/2007**
P.O. Dated: 24/07/2007

TEST REPORT

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

Subject : Testing of C-Lite Cellular Lighweight Concrete Block (CLC Block) submitted by M/s Alumex Alliance Holdings Pte Ltd on 24/07/2007.

Tested For : **M/s C-LITE PTE LTD**
1, Sophia Road,
#07-09 Peace Centre,
Singapore 228149
Attn: Mr. Denny Lim

Method of Test :
1) Dimensions: BS EN 772: Part 16: 2000
2) Net Dry Density : BS EN 772: Part 13: 2000
3) Compressive Strength : BS EN 772: Part 1: 2000

Specification : BS EN 771: Part 4: 2003: Specification for Masonry Units – Autoclaved Aerated Concrete Masonry Units

Description of Sample : Twelve (12) nos. C-Lite Cellular Lighweight Concrete Block with nominal dimensions 600 × 100 × 200mm were received.
1) Six (6) nos of units marked 1 to 6 for dimension and net dry density.
2) Six (6) nos of units marked 1 to 6 for compressive strength test. Three (3) pieces of approximate 100mm x 100mm x 100mm cubes were cut from each unit for this test.

Ting Choo Chuan
Testing Officer

Tan Hong Kian
Executive Engineer (CMTD)
Construction Technology Division

cc: **Alumex Alliance Holdings P L**
10 Ubi Crescent
#06-51/54 (Lobby C)
Ubi Techpark
Singapore 408564
Attn: Ms. Selin Sim

AA/CT-6145-2/C-Lite/THK/Mar

Results:

Table 1: Dimensions and Net Dry Density of whole unit of CLC Blocks

Sample Reference	*C-Lite Cellular Lightweight Concrete Block 600 × 100 × 200mm*							* Permissible deviations for individual unit of regular shaped AAC units for erection with joints made of		
	1	*2*	*3*	*4*	*5*	*6*	*Mean*	General purpose and Lightweight mortar	Thin layer mortar	
									TLMA	TLMB
Date of Test	12/09/2007									
Length (mm)	605.0	603.5	602.5	603.5	605.0	603.5	**604.0**	+3 mm -5 mm	± 3 mm	± 3 mm
Height (mm)	102.5	101.0	100.5	101.5	100.5	100.0	**101.0**	+3 mm -5 mm	± 2 mm	± 1 mm
Width (mm)	199.5	199.5	199.5	199.5	200.0	199.5	**199.5**	± 3 mm	± 2 mm	±2 mm
Net Dry Density (kg/m^3)	1080	1070	1080	1070	1080	1070	**1080**	*The limit deviation of the measured dry density from the declared value shall not exceed ± 50 kg/m^3.		

Remark: *Refer to BS EN 771-4: 2003: Table 2 and Clause 5.4.3.

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Results:

Table 2: Compressive Strength of Representative portions of whole unit of CLC Blocks

Sample Reference	C-Lite Cellular Lightweight Concrete Block 600 × 100 × 200mm																	
	1			2			3			4			5			6		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Length (mm)	99.4	100.3	100.5	98.6	100.1	100.5	99.5	100.3	100.2	100.3	98.6	99.3	99.7	100.2	98.6	99.7	100.3	100.5
Width (mm)	102.7	103.0	102.2	100.1	100.6	100.5	100.2	101.4	100.6	99.9	100.4	100.2	100.9	100.4	100.6	101.2	100.7	100.6
Height (mm)	100.7	97.6	99.1	100.9	99.7	100.3	100.5	99.8	100.1	100.0	100.3	99.5	99.2	100.5	100.9	100.1	100.0	99.4
Moisture Content at test (%)	6.06	5.88	6.06	6.35	6.95	6.58	5.86	5.90	6.08	6.59	6.72	6.83	5.64	5.20	5.79	6.40	6.07	7.41
Failure Load (kN)	42.94	59.10	65.10	70.00	49.93	59.56	82.20	65.30	93.50	83.40	72.10	62.30	83.90	56.89	67.90	51.16	54.07	57.52
Compressive Strength(N/mm^2)	4.2	5.7	6.3	7.1	5.0	5.9	8.2	6.4	9.3	8.3	7.3	6.3	8.3	5.7	6.8	5.1	5.4	5.7
Unit Compressive Strength(N/mm^2)	5.4			6.0			8.0			7.3			6.9			5.4		
Mean Compressive Strength (N/mm^2)	6.5																	
Standard Deviation (N/mm^2)	1.07																	
Characteristic Strength (N/mm^2)	4.7																	

Remarks:

1. Refer to BS EN 771-4: 2003: Clause 5.5: The compressive strength shall not be less than the declared value and no individual AAC masonry unit shall have a compressive strength of less than 80% of the mean declared value or 90% of the characteristic declared value.
2. The specimens were surface prepared by grinding and conditioned to a moisture content of 6±2 % by mass.

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