

**Dubai Central Laboratory**

Engineering Materials Laboratory Section – Structural Unit

**TEST REPORT**

Steady-State Heat Flux Measurements and Thermal Transmission Properties by Guarded-Hot-Plate Apparatus

REPORT NO. : 2014030887 DATE : 14/04/2014  
 WEB REQUEST NO. : DCL-25032014-0111  
 REQUEST NO. : 2014017613 SAMPLE NO. : 2014025398  
 PROJECT NO. : PS-1661  
 PROJECT NAME : TESTING SERVICE FOR LECA BUILDING MAT. TRADING LLC  
 CONSULTANT : NO SPECIFIC CONSULTANT  
 CONTRACTOR : NO SPECIFIC CONTRACTOR  
 LOCATION : LECA - UAE  
 SOURCE : NOT GIVEN  
 SAMPLE DESCRIPTION : LIGHT EXPANDED CLAY AGGREGATE(LECA)  
 SAMPLE TYPE : LECA CONCRETE  
 SUPPORT / FACING : NIL  
 NOM. THICKNESS (mm) : 50 NOM. DENSITY (kg/m<sup>3</sup>) : NG

Date of Sampling	: 24/03/2014	Time	: 10:45	Lot No.	: NG
Date of Receiving Sample	: 24/03/2014	Time	: 11:15	Lot Size	: NG
Size of Sample	: 2 Nos.	Area No.	: -	Sender No.	: NG

**APPARATUS : TAURUS HOTPLATE APPARATUS [TLP 800-S]**

SIZE OF PLATE (mm)	500
SHAPE OF PLATE	SQUARE
ORIENTATION OF PLATE	HORIZONTAL
SINGLE OR DOUBLE SIDE OPERATION	SINGLE
SECONDARY GUARDING DETAILS	NA
FILL GAS PRESSURE (Pa)	NA

**CALIBRATION DETAILS**

TYPE OF MATERIAL USED FOR CALIBRATION	CERTIFIED REFERANCE MATERIAL 1RMM-440
DATE OF CERTIFICATION	MARCH - 2010
SOURCE OF CERTIFICATION	INSTITUTE OF REFERENCE MATERIALS AND MEASUREMENTS

**SPECIMEN**

DEGREE OF HOMOGENITY OR ANISOTROPY : LIGHT EXPANDED CLAY AGGREGATE CONCRETE  
 SPECIMEN CONDITIONING TEMP; HUMIDITY & DURATION : 35±2°C, 60±5% RH, 24 h

Specimen No.	BEFORE CONDITIONING				AFTER CONDITIONING				AFTER TEST
	Length (mm)	Width (mm)	Thickness (mm)	Mass (Kg.)	Length (mm)	Width (mm)	Thickness (mm)	Mass (Kg.)	Mass (Kg.)
1	200.4	199.4	50.1	1.6404	200.3	199.5	50.0	1.6480	1.6480

**AUTHORIZED BY  
HEAD OF UNIT**

**This report is computer approved, it does not require any signature**

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**TEST DETAILS & MEASURED VALUES**

TEST / SPECIMEN NO.	THICKNESS (MEASURED)	DENSITY (MEASURED)	HOT SURFACE TEMP.	COLD SURFACE TEMP.	TEMP. DIFFERENCE ON SAMPLE	HEATING POWER	MEASURED SECTION AREA	SPECIFIED MEAN TEMP.	THERMAL CONDUCTIVITY AT SPECIFIED MEAN TEMP.	THERMAL RESISTANCE AT SPECIFIED MEAN TEMP.
	mm	kg/m <sup>3</sup>	°C	°C	K	W	m <sup>2</sup>	°C	W/m.K	m <sup>2</sup> K/W
1	50.0	825.0	46.3	28.0	18.3000	3.205	0.040	35.0	0.22097	0.22563

SAMPLED BY : HAMED (TRADER) TESTED BY : JAI GOVIND  
 SAMPLES BROUGHT IN BY : HAMED (TRADER) TEST START DATE : 26/03/2014  
 SAMPLING METHOD : NOT GIVEN  
 SAMPLING REPORT NO. : NG  
 TEST METHOD : ASTM C 177:10  
 TEST METHOD VARIATION : NIL  
 REMARKS : THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.

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