

Dubai Central Laboratory
Engineering Materials Laboratory Section – Structural Unit
TEST REPORT
THERMAL TRANSMISSION PROPERTIES BY HEAT FLOW METER

REPORT NO.	: 2015010481	DATE	: 29/01/15		
WEB REQUEST NO.	: DCL-20012015-0069	SAMPLE NO.	: 2015007794		
REQUEST NO.	: 2015005496				
PROJECT NO.	: PS15-0008				
PROJECT NAME	: ESPAC FOR BUILDING MATERIALS				
CONSULTANT	: NO SPECIFIC CONSULTANT				
CONTRACTOR	: NO SPECIFIC CONTRACTOR				
LOCATION	: FACTORY YARD ESPAC @ DAMMAM 2nd IND. CITY - KSA				
SOURCE	: ESPAC BUILDING MATERIAL CO.- KSA				
SAMPLE DESCRIPTION	: AUTO CLAVED AERATED CONC BLOCK				
SAMPLE TYPE	: NG				
SUPPORT / FACING	: NIL				
NOM. THICKNESS (mm)	: 50				
NOM. DENSITY (kg/m ³)	: 350				
Date of Sampling	: 15/01/15	Time	: 10:00	Lot No.	: NG
Date of Receiving Sample	: 20/01/15	Time	: 10:00	Lot Size	: NG
Size of Sample	: 2 pcs.	Area No.	: -	Sender No.	: NG

DATE SPECIMEN RECEIVED	20/01/15
DATE OF MEASUREMENT	26/01/15
DRYING TEMPERATURE (°C) & TIME (h)	105°C, 120 h
SPECIMEN NOMINAL THICKNESS (mm)	50
SPECIMEN NOMINAL DENSITY (kg/m ³)	350
SPECIMEN NO.	2

THICKNESS (MEASURED)	MEASURED DENSITY (DRY CONDITION)	MEAN TEMPERATURE	THERMAL CONDUCTIVITY		THERMAL RESISTANCE	
			W/(m·K)		(m ² ·K) / W	
mm	kg/m ³	°C	DRY CONDITION	@ 35°C, 60% RH*	DRY CONDITION	@ 35°C, 60% RH
51.0	411.6	34.77	0.1088	0.1169	0.4686	0.4363

ABSORBED MOISTURE BY WEIGHT (%) @ 35°C & 60% RH	1.87
<i>Uncertainty of measurement for thermal conductivity at dry condition 0.0011 W/m·K @ 95% confidence level, k factor 2. Abridged ASTM C 518 Test Report.</i>	

* CALCULATED VALUE AS PER BS EN ISO 10456:2000

SAMPLED BY	: G.H HASSAH (Mfr.)	TESTED BY	: SANKAR RAJU
SAMPLES BROUGHT IN BY	: G.H HASSAH (Mfr.)	TEST START DATE	: 21/01/15
SAMPLING METHOD	: NOT GIVEN		
SAMPLING REPORT NO.	: NG		
TEST METHOD	: ASTM C-518 : 2010		
TEST METHOD VARIATION	: NIL		
REMARKS	: TEST CARRIED OUT AT DRY CONDITION. THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.		

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HEAD OF UNIT**

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Dubai Central Laboratory
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THERMAL TRANSMISSION PROPERTIES BY HEAT FLOW METER

REPORT NO.	: 2015012542	DATE	: 04/02/15
WEB REQUEST NO.	: DCL-20012015-0073		
REQUEST NO.	: 2015008310	SAMPLE NO.	: 2015011440
PROJECT NO.	: PS15-0008		
PROJECT NAME	: ESPAC FOR BUILDING MATERIALS		
CONSULTANT	: NO SPECIFIC CONSULTANT		
CONTRACTOR	: NO SPECIFIC CONTRACTOR		
LOCATION	: FACTORY YARD ESPAC @ DAMMAM 2nd IND. CITY - KSA		
SOURCE	: ESPAC BUILDING MATERIAL CO.- KSA		
SAMPLE DESCRIPTION	: AUTO CLAVED AERATED CONC BLOCK		
SAMPLE TYPE	: NG		
SUPPORT / FACING	: NIL		
NOM. THICKNESS (mm)	: 50		
NOM. DENSITY (kg/m ³)	: 550		

Date of Sampling	: 15/01/15	Time	: 10:00	Lot No.	: NG
Date of Receiving Sample	: 20/01/15	Time	: 10:00	Lot Size	: NG
Size of Sample	: 2 pcs.	Area No.	: -	Sender No.	: NG

DATE SPECIMEN RECEIVED	20/01/15
DATE OF MEASUREMENT	26/01/15
DRYING TEMPERATURE (°C) & TIME (h)	105°C, 120 h
SPECIMEN NOMINAL THICKNESS (mm)	50
SPECIMEN NOMINAL DENSITY (kg/m ³)	550
SPECIMEN NO.	1

THICKNESS (MEASURED)	MEASURED DENSITY (DRY CONDITION)	MEAN TEMPERATURE	THERMAL CONDUCTIVITY		THERMAL RESISTANCE	
			W/(m·K)		(m ² ·K) / W	
mm	kg/m ³	°C	DRY CONDITION	@ 35°C, 60% RH*	DRY CONDITION	@ 35°C, 60% RH
49.8	581.9	34.46	0.1521	0.1659	0.3271	0.2999

ABSORBED MOISTURE BY WEIGHT (%) @ 35°C & 60% RH	2.21
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*Uncertainty of measurement for thermal conductivity at dry condition 0.0011 W/m·K @ 95% confidence level, k factor 2.
Abridged ASTM C 518 Test Report.*

* CALCULATED VALUE AS PER BS EN ISO 10456:2000

SAMPLED BY	: G.H HASSAH (Mfr.)	TESTED BY	: SANKAR RAJU
SAMPLES BROUGHT IN BY	: G.H HASSAH (Mfr.)	TEST START DATE	: 21/01/15
SAMPLING METHOD	: NOT GIVEN		
SAMPLING REPORT NO.	: NG		
TEST METHOD	: ASTM C-518 : 2010		
TEST METHOD VARIATION	: NIL		
REMARKS	: TEST CARRIED OUT AT DRY CONDITION. THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.		

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Engineering Materials Laboratory Section – Structural Unit

TEST REPORT

THERMAL TRANSMISSION PROPERTIES BY HEAT FLOW METER

REPORT NO. : 2013044067 DATE : 22/05/2013
 WEB REQUEST NO. : DCL-15052013-0098
 REQUEST NO. : 2013030697 SAMPLE NO. : 2013041299
 PROJECT NO. : PS13-0049
 PROJECT NAME : TESTING SERVICE FOR ESPAC BUILDING MATERIALS CO.
 CONSULTANT : NO SPECIFIC CONSULTANT
 CONTRACTOR : NO SPECIFIC CONTRACTOR
 LOCATION : ESPAC BUILDING MATERIALS CO.- K.S.A
 SOURCE : ESPAC BUILDING MATERIAL CO.- KSA
 SAMPLE DESCRIPTION : AUTO CLAVED AERATED CONC BLOCK
 SAMPLE TYPE : NG
 SUPPORT / FACING : NIL
 NOM. THICKNESS (mm) : 200
 NOM. DENSITY (kg/m³) : NG

Date of Sampling	: 11/04/2013	Time	: 10:00	Lot No.	: NG
Date of Receiving Sample	: 15/05/2013	Time	: 9:00	Lot Size	: NG
Size of Sample	: 1 No.	Area No.	: -	Sender No.	: NG

DATE SPECIMEN RECEIVED	15/05/2013
DATE OF MEASUREMENT	19/05/2013
DRYING TEMPERATURE (°C) & TIME (h)	105°C, 36 h
SPECIMEN NOMINAL THICKNESS (mm)	50
SPECIMEN NOMINAL DENSITY (kg/m ³)	NG
SPECIMEN NO.	A

THICKNESS (MEASURED)	MEASURED DENSITY (DRY CONDITION)	MEAN TEMPERATURE	THERMAL CONDUCTIVITY		THERMAL RESISTANCE	
			W/(m·K)		(m ² ·K) / W	
mm	kg/m ³	°C	DRY CONDITION	@ 35°C, 60% RH*	DRY CONDITION	@ 35°C, 60% RH
50.6	469.5	35.54	0.1209	0.1295	0.4187	0.3910

ABSORBED MOISTURE BY WEIGHT (%) @ 35°C & 60% RH

1.92

*Uncertainty of measurement for thermal conductivity at dry condition 0.0011 W/m·K @ 95% confidence level, k factor 2.
 Abridged ASTM C 518 Test Report.*

* CALCULATED VALUE AS PER BS EN ISO 10456:2000

SAMPLED BY : ALLAM HANBALI (Mfr.) TESTED BY : MAITHA AL JUMAIRI
 SAMPLES BROUGHT IN BY : ALLAM HANBALI (Mfr.) TEST START DATE : 16/05/2013
 SAMPLING METHOD : NOT GIVEN
 SAMPLING REPORT NO. : NG
 TEST METHOD : ASTM C-518 : 2010
 TEST METHOD VARIATION : NIL
 REMARKS : TEST CARRIED OUT AT DRY CONDITION.
 THIS REPORT REPRESENTS THE SUBMITTED SAMPLE ONLY.

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EFFECTIVE THICKNESS AND FIRE RATING OF CONCRETE MASONRY UNITS TEST REPORT
ASTM C140/C140M:2015 / ACI 216r.1-14

Client:	Emirati Saudi Precast Aerated Concrete Company (ESPAC)	Report No.	KSA/C16/0886
Request No.	SA/C15/1360	Date Received:	2-Mar-16
Client Ref.	Solid Block	Production Date:	Not Given
Project Name:	Internal Quality Tests	Date Tested:	20-Mar-16
Consultant:	Not Given	Date Reported:	21-Mar-16
Contractor:	Emirati Saudi Precast Aerated Concrete Company (ESPAC)	Tested by:	RHL
Project Location:	Dammam, KSA.	Sample Brought in By:	Client
Sample Description:	Solid Block	Sampling Certificate:	Not Given
Source & Supplier:	Emirati Saudi Precast Aerated Concrete Company (ESPAC)	Date of Sampling:	Not Given
Test Method:	ASTM C140/C140M:2015 / ACI 216r.1-14	Sampling Location:	Dammam, KSA
Temperature at Time of Test:	23.0 °C	Test Method Variation:	None

Sample No.	Age @ Test Days	Length (cm.)	Width (cm.)	Height (cm.)	Equivalent Thickness (cm.)	Equivalent Thickness (inch.)
1	N.G	60	10	10	10	3.9
2	N.G	60	10	10	10	3.9

Fire Rating in Time (Hours) for 60cm x 10cm x 10cm	02:51:00
Fire Rating in Time (Hours) for 60cm x 20cm x 20cm	05:02:00

Client Information: Emirati Saudi Precast Aerated Concrete Company (ESPAC) Dammam KSA Mob: +966 59 327 7710	For and on-behalf of Exova (Saudi Arabia) Co. Ltd  Approved by: A. Pettitt MCS (Country Manager) R. Lagunilla (Lab. Manager)
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These results pertain only to the item(s) tested as sampled by the client unless otherwise indicated.
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Registered office: Exova (Saudi Arabia) Co. Ltd. P.O. Box 31775, Al Khobar 31952, Kingdom of Saudi Arabia. Registration No. 2051037581



Arab Company الشركة العربية
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Sulphate & Chloride Content Report for Autoclaved Aerated Concrete Products

Owner	ESPAC	Report No.	KMR16000524
Project Name	Autoclaved Aerated Concrete Products testing	Date Reported	3/11/2016
Request No.	KMQ000141	Sample No.	KMS16000182
Project No.	-	Client Reference	PO
Sample Description	Autoclaved Aerated Concrete Proucts	Sample Size	-
Specimen Preparation	BS1881	Date Tested	3/11/2016
Test Method	BS1881	Tested By	Ali

Sample No.	Test	Results (%)
1	Chloride Content	0.59
2	Sulphate Content	0.72

Rashad A. Al Kilani
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Arab Company for Laboratories & Soil



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شركة ذات مسؤولية محدودة رأس المال ٣,٦٠٠,٠٠٠

Report on Surface Moisture of Blocks

Page 1 of 1

ACES Client	ESPAC -Precast Aerated Concrete	Report No.	KMR16000655
Sample No.	KMS16000182	Date Reported	21-03-16
Request No.	KMQ16000141	Sample No.	KMS16000182
Project Name	Autoclaved Aerated Concrete Products testing		
Test Method	ASTM 796	Test Date	14-03-16
Notes	-	Tested By	Wassel

Sr No	Time	Moisture Penetration Depth
1	72 hr	2mm



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شركة ذات مسؤولية محدودة رأس المال ٣,٠٠٠,٠٠٠

Report for Blocks Dimensions

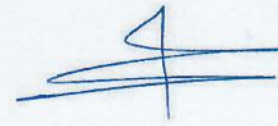
Page 1 of 1

ACES Client	ESPAC -Precast Aerated Concrete	Report No.	KMR16000531
Sample No.	KMS16000182	Date Reported	13-03-16
Owner	ESPAC -Precast Aerated Concrete	Request No.	KMQ16000141
Project No.	N.P.	Client Reference	PO
Project Name	Autoclaved Aerated Concrete Products testing		
Test Method	ASTM C1386	Date Tested	11-03-16
Test Method Var.	ASTM C1386	Tested By	Ali

Test Results:

Specimen No.	Length (mm)	Width (mm)	Height (mm)
1	600	198	198
2	600	199	199
3	600	200	197

Remarks :- The test results related only to the specimen(s) tested




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شركة ذات مسؤولية محدودة رأس المال ٣

Compressive Strength Report for Autoclaved Aerated Concrete Products

Owner	ESPAC	Report No.	KMR16000524
Project Name	Autoclaved Aerated Concrete Products testing	Date Reported	3/3/2016
Request No.	KMQ000141	Sample No.	KMS16000182
Project No.	-	Client Reference	PO
Sample Description	Autoclaved Aerated Concrete Proucts	Sample Size	-
Specimen Preparation	ASTM C1386	Date Tested	3/10/2016
Test Method	ASTM C1386	Tested By	Ali

Sample No.	Load (kN)	Density (g/cm ³)	Compressive Strength (Mpa)
1	90.9	0.57	3.2
2	92	0.52	3.3
3	194.4	0.55	3.3
4	219.1	0.59	3.7



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Report for Shrinkage the Blocks

Page 1 of 1

ACES Client	ESPAC -Precast Aerated Concrete	Report No.	KMR16000654
Sample No.	KMS16000182	Date Reported	19-03-16
Owner	ESPAC -Precast Aerated Concrete	Request No.	KMQ16000141
Project No.	N.P.	Client Reference	PO
Project Name	Autoclaved Aerated Concrete Products testing		
Test Method	BSEN6076	Date Tested	13-03-16
Test Method Var.	BSEN6076	Tested By	Ali

Test Results:

Sr. No.	Result of Shrinkage
1	0.05 mm/m

Remarks :- The test results related only to the specimen(s) tested



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شركة ذات مسؤولية محدودة رأس المال ٣٠٠٠٠٠٠٠



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Fire Rating & Melting Point Report for Autoclaved Aerated Concrete Products

Owner	ESPAC	Report No.	KMR16000528
Project Name	Autoclaved Aerated Concrete Products testing	Date Reported	12-03-16
Request No.	KMQ000141	Sample No.	KMS16000182
Project No.	-	Client Reference	PO
Sample Description	Autoclaved Aerated Concrete Proucts	Sample Size	-
Specimen Preparation	ASTM E119	Date Tested	12-03-16
Test Method	ASTM E119	Tested By	Wasel

Sample No.	Test	Standard	Results	Thickness (cm)
1	Fire Rating	ASTM E119	6.4 hrs	20
2	Melting Point		1290 C	



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