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**EVALUATION OF "MODEL PAN" BOARD MATERIAL  
FOR HUMIDIFIED DEFLECTION PROPERTIES  
IN ACCORDANCE WITH ICC-ES AC308 (FEB 2016), SECTION 3.1.10**

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A Report to:

**Ak Alev Manyezit Levha Üretim San. ve Tic. A.Ş.**  
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16-006-401691, Revision 6

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16-06-P0117-HD, RV1  
3 pages, 1 appendices

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## 1.0 INTRODUCTION

At the request of Ak Alev Manyezit Levha Üretim San. ve Tic. A.Ş., Exova was retained to evaluate a cement / gypsum board type material for humidified deflection properties in accordance with ICC-ES AC 386 (Feb 2016), "Acceptance Criteria for Fiber Reinforced Magnesium-Oxide-Based Sheets", Section 3.1.10, referencing ASTM C473 test method.

Upon receipt, the sample was assigned the following Exova Sample No.:

Client Sample Identification	Exova Sample No.
"Modelpan" a fire protective glass fiber reinforced magnesium-oxide board Board size: 8' x 4' x 1/2" (nominal)	16-06-P0117

## 2.0 PROCEDURE

The sample was tested using the following sections ICC-ES AC386:

Test Description	AC 386, Section	Referenced Test Method
Humidified Deflection	3.1.10	ASTM C473, Section 14

### 3.0 RESULTS

A summary of test results is presented in Table 1. Detailed test results are shown in Appendix A. SI units are the primary units of measure.

<b>Table 1 – Humidified Deflection Test Result Summary</b> Evaluated against ICC-ES AC386 (Feb 2016) requirement Exova Sample No.: 16-06-P0117 – HD			
<b>Test Description</b>	<b>Requirement (max allowable)</b>	<b>Result</b>	<b>Comment</b>
<b>Humidified Deflection</b>	7.9 mm (5/16 in.) for Ceiling finish 1.62 mm (0.0639 in.) for base for tile	0.25 mm (0.01 in.)	Pass

### 4.0 CONCLUSIONS

The "Modelplan" material submitted by *Ak Alev Manyezit Levha Üretim San. ve Tic. A.Ş.*, has a humidified deflection of 0.25 mm [0.01 in.] when tested in accordance with ICC –ES AC 386, Section 3.1.10, as described in this report.

### 5.0 REVISION HISTORY

<b>Date:</b>	<b>Revision:</b>	<b>Comments:</b>
2016-12-12	Original Document	N/A
2016-12-28	1	"Modelplan" is replaced by "Modelplan"

**Reported by:**



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## APPENDIX A

Detailed Test Results: Humidified Deflection

Applicable Standard: ICC –ES AC386, Section 3.1.10, referencing ASTM C473, Section 14  
(1 page)

**A1 HUMIDIFIED DEFLECTION**

Method: ICC-ES AC 386, Section 3.1.10, ASTM C473, Section 14

Specimen Size: 610 mm x 305 mm x 12.5 mm (nominal)

Test Conditions: 48 hours; 32 ± 1.7°C; 90% RH  
THERMOTRON Chamber, MII# B04271

Pre Conditioning: 23°C; 50% RH  
Environmental controller, MII# A11356

Equipment: Mitutoyo digital calipers, MII# B04807  
Digital timer, MII# B10672  
Sartorius digital balance, MII# B12518

Test Date : 2016-06-13 to 2016-06-15

<b>Table A1 – Humidified Deflection</b> ASTM C 473 Section 14 Exova Sample No.: 16-06-P0117-HD		
Specimen No.	Constant Mass (23°C; 50% RH), g	Max. Deflection (after 48 hrs@32°C and 90%RH), mm
Board 1, Specimen 1	2542.01	0.04
Board 1, Specimen 2	2515.79	0.11
Avg.	-	<b>0.07</b>
Board 2, Specimen 1	2225.97	0.11
Board 2, Specimen 2	2226.48	0.11
Avg.	-	<b>0.11</b>
Board 3, Specimen 1	2470.32	0.88
Board 3, Specimen 2	2510.80	0.24
Avg.	-	<b>0.56</b>
<b>Average</b>	-	<b>0.25</b>