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**EVALUATION OF "MODEL PAN" BOARD MATERIAL  
FOR NAIL HEAD PULL THROUGH PROPERTIES  
IN ACCORDANCE WITH ICC-ES AC308 (FEB 2016)**

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A Report to:

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16-06-P0117-NH, RV1  
3 pages, 1 appendix

Date:

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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 nail head pull through properties in accordance with ICC-ES AC 386 (Feb 2016), "Acceptance Criteria for Fiber Reinforced Magnesium-Oxide-Based Sheets", Section 3.1.7, referencing ASTM D1037 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-NH

## 2.0 PROCEDURE

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

Test Description	AC 386, Section	Referenced Test Method
Nail-Head Pull Through	3.1.7	ASTM D1037, Section 15

### 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>Result Table 1 – Nail Head Pull Through Test Result Summary</b> Evaluated against ICC-ES AC386 (Feb 2016) requirement Exova Sample No.: 16-06-P0117 – NH			
<b>Test Description</b>	<b>Requirement</b>	<b>Result</b>	<b>Comment</b>
<b>Nail-Head Pull Through, N</b>	560	694	Pass

### 4.0 CONCLUSIONS

The "Modelplan" material submitted by Ak Alev Manyezit Levha Üretim San. ve Tic. A.Ş., has met the Nail Head Pull Through testing requirement set by ICC –ES AC 386, when tested 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 "Modelpan"

**Reported by:**



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## **APPENDIX A**

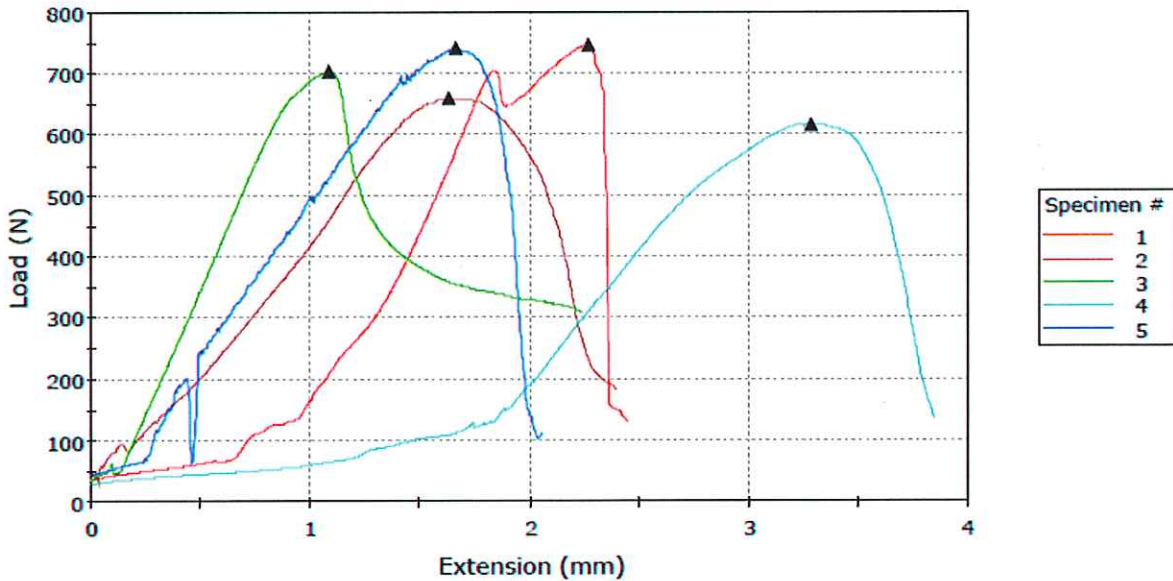
Detailed Test Results: Nail Head Pull Through  
Applicable Standard: ASTM D1037, Section 15  
(1 page)

**A1 NAIL HEAD PULL THROUGH**

Method: ICC-ES AC 386, Section 3.1.7, ASTM D1037, Section 15

Test Date: 2016-05-25      Instron UTM Frame: MII# A04407  
 Test Conditions: 23°C; 50% RH      Instron Load Cell: MII# A06348  
 Calipers: MII# B13123      Environ. Controller: MII# A11356  
 Speed: 1.5 mm/min      Roofing Nail: 10 mm head, shank dia. 3 mm

<b>Table A1 – Nail-Head Pull Through</b> ASTM D1037, Section 15 Exova Sample No.: 16-06-P0117-NH	
Specimen No.	Nail Pull Resistance, N
Board 1, Specimen 1	748
Board 2, Specimen 2	659
Board 3, Specimen 3	704
Board 4, Specimen 4	617
Board 5, Specimen 5	742
<b>Average</b>	<b>694</b>



**Figure A1** – Compressive load (nail pull resistance) vs. Extension into board