Test Specimen Identification:
Floor Topping: 5.16 mm Mohawk Luxury Vinyl Plank
Floor Underlayment: 1.5 mm Foam Noise Reduction Underlayment
Subfloor: 19.05 mm Extremegreen™ Subfloor Panel
Insulation: 88.9 mm Knauf EcoBatt® Fiberglass Insulation
Joist: 254 mm ClarkDietrich TradeReady® Steel Joist
Ceiling Isolation: 12.7 mm ClarkDietrich RC Deluxe™ Resilient Channel
Ceiling: 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel

Reference should be made to Intertek-ATI Report H3258.03-113-11 for complete test specimen description. This page alone is not a complete report.
Acoustical Performance Test Report

EXTREMEGREEN BUILDING PRODUCTS, LLC
1501 Telegraph Road
Mobile, Alabama 36611

Report Date 07/31/17
Test Date 07/20/17

Project Scope
Architectural Testing, Inc., an Intertek company (Intertek-ATI), was contracted to conduct airborne sound transmission loss and impact sound transmission tests. The complete test data is included as attachments to this report. The full test specimen was assembled on the day of testing by Intertek-ATI. All materials provided by the client were installed on an existing Intertek-ATI assembly (Steel C-Channel Assembly - 254 mm) utilizing Intertek-ATI-supplied materials.

Test Methods
The acoustical tests were conducted in accordance with the following standards. The equipment listed in the attachments meets the requirements of the following standards.

ASTM E 413-16, Classification for Rating Sound Insulation
ASTM E 989-06 (2012), Classification for Determination of Impact Insulation Class (IIC)

Test Procedure
All testing was conducted in the VT test chambers at Intertek-ATI located in York, Pennsylvania. The microphones were calibrated before conducting the tests.

The airborne transmission loss test was conducted in accordance with the ASTM E 90 test method using the single direction method. Two background noise sound pressure level and five sound absorption measurements were conducted at each of five microphone positions. Four sound pressure level measurements were made simultaneously in both rooms, at each of five microphone positions.
Test Procedure (Continued)
The impact sound transmission test was conducted in accordance with the ASTM E 492 test method. Two background noise sound pressure level, two sound pressure level measurements with the tapping machine operating at each position specified by ASTM E 492, and five sound absorption measurements were conducted at each of five microphone positions.

The air temperature and relative humidity conditions were monitored and recorded during all measurements.

Test Conditions

<table>
<thead>
<tr>
<th>Source Room</th>
<th>Receive Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Temperature</td>
<td>24.6°C</td>
</tr>
<tr>
<td>Maximum Temperature</td>
<td>24.9°C</td>
</tr>
<tr>
<td>Minimum Relative Humidity</td>
<td>40%</td>
</tr>
<tr>
<td>Maximum Relative Humidity</td>
<td>41%</td>
</tr>
</tbody>
</table>

Test Calculations
The STC (Sound Transmission Class) and IIC (Impact Insulation Class) ratings were calculated in accordance with ASTM E 413 and ASTM E 989, respectively.

Test Specimen Materials and Installation Details

<table>
<thead>
<tr>
<th>Material</th>
<th>Dimensions (mm)</th>
<th>Thickness (mm)</th>
<th>Manufacturer and Series</th>
<th>Quantity</th>
<th>Average Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxury Vinyl Plank</td>
<td>234.9 by 1499</td>
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<td>Mohawk</td>
<td>10.98 m²</td>
<td>8.46 kg/m²</td>
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<td>Foam Noise Reduction Underlayment</td>
<td>914.4 by 3048</td>
<td>1.5</td>
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<td>10.98 m²</td>
<td>0.61 kg/m²</td>
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<td>Subfloor Panel</td>
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<td>Fiberglass Insulation</td>
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<td>Knauf EcoBatt®</td>
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<td>Steel Joist</td>
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<td>ClarkDietrich TradeReady®</td>
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<tr>
<td>Resilient Channel</td>
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<td>ClarkDietrich RC Deluxe™</td>
<td>23.2 lin m</td>
<td>0.03 kg/m</td>
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Note: Installed on 406 mm centers perpendicular to the joists. The measured thickness of the metal was 0.7 mm.
Test Specimen Materials and Installation Details (Continued)

<table>
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<th>Material</th>
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</table>

Note: Fastened to the channels on 305 mm centers with 25.4 mm Type S bugle head screws. The seams of the gypsum panels were sealed with Pecora AC-20 FTR caulk and covered with pressure sensitive tape.

Comments
The total weight of the floor/ceiling assembly was 565.9 kg. Intertek-ATI will store samples of the test specimen for four years. Photographs of the test specimen are included in the attachments. The client did not supply drawings of the test specimen.

Detailed test procedures, data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.
Intertek-ATI will service this report for the entire test record retention period. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period. The test record retention period ends four years after the test date.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report is intended to help in the client’s quality assurance program, but it does not represent a continuous or exhaustive evaluation of the specimen tested or of other products or materials that were not evaluated. The statements and data provided herein do not constitute approval, disapproval, certification, or acceptance of performance or materials.

This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

FOR INTERTEK-ATI:

Cody R. Snyder  
Technician I - Acoustical Testing  

Jordan Strybos  
Project Manager - Acoustical Testing  

Attachments (6 pages): This report is complete only when all attachments listed are included.  
   Instrumentation (1)  
   Airborne Sound Transmission Loss Data (2)  
   Impact Sound Transmission Data (2)  
   Photographs (1)

* Stated by Client/Manufacturer
N/A - Non Applicable
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<th>Date</th>
<th>Page(s)</th>
<th>Description</th>
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## Instrumentation

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* The calibration frequency for this equipment is every two years per the manufacturer’s recommendation.

## Test Chambers

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<td>VT Source Room Volume</td>
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AIRBORNE SOUND TRANSMISSION LOSS  
ASTM E 90

Test Date: 07/20/17  
Data File No.: H3258.03  
Client: Extremegreen Building Products, LLC  
Description: 5.16 mm Mohawk Luxury Vinyl Plank, 1.5 mm Foam Noise Reduction Underlayment, 19.05 mm Extremegreen™ Subfloor Panel, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich TradeReady® Steel Joist, 12.7 mm ClarkDietrich RC Deluxe™ Resilient Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel  
Specimen Area: 10.98 m²  
Technician: Cody R. Snyder

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<th>Freq (Hz)</th>
<th>Background SPL (dB)</th>
<th>Absorption (m²)</th>
<th>Source SPL (dB)</th>
<th>Receive SPL (dB)</th>
<th>Specimen TL (dB)</th>
<th>95% Confidence Limit</th>
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</table>

STC Rating: 58  
(Sound Transmission Class)  
Deficiencies: 26  
(Sum of Deficiencies)

Notes:  
1) Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.  
2) Specimen TL levels listed in red are potentially limited by the laboratory flanking limit.  
3) Specimen TL levels listed in blue indicate the lower limit of the transmission loss.  
4) Specimen TL levels listed in green indicate that there has been a filler wall correction applied.
### Test Date
07/20/17

### Data File No.
H3258.03

### Client
Extremegreen Building Products, LLC

### Description
5.16 mm Mohawk Luxury Vinyl Plank, 1.5 mm Foam Noise Reduction Underlayment, 19.05 mm Extremegreen™ Subfloor Panel, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich TradeReady® Steel Joist, 12.7 mm ClarkDietrich RC Deluxe™ Resilient Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel

### Specimen Area
10.98 m²

### Technician
Cody R. Snyder

---

![Airborne Sound Transmission Loss Graph](image)

- **Specimen TL**: Specimen Transmission Loss
- **Contour Curve**: Contour sound transmission loss curve

---

**Frequency (Hz)**: 63, 125, 250, 500, 1000, 2000, 4000, 8000

**Sound Transmission Loss (dB re: 20 μPa)**: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
## IMPACT SOUND TRANSMISSION

ASTM E 492

---

**Test Date:** 07/20/17  
**Data File No.:** H3258.03  
**Client:** ExtremeGreen Building Products, LLC

### Description

5.16 mm Mohawk Luxury Vinyl Plank, 1.5 mm Foam Noise Reduction Underlayment, 19.05 mm ExtremeGreen™ Subfloor Panel, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich TradeReady® Steel Joist, 12.7 mm ClarkDietrich RC Deluxe™ Resilient Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel

### Specimen Area

10.98 m²

### Technician

Cody R. Snyder

---

<table>
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<tr>
<th>Freq (Hz)</th>
<th>Background SPL (dB)</th>
<th>Absorption (m²)</th>
<th>Normalized Impact SPL (dB)</th>
<th>95% Confidence Limit</th>
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</tbody>
</table>

**IIC Rating:** 50  
**Deficiencies:** 24

(Note: Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.)
Client: Extremegreen Building Products, LLC

Description: 5.16 mm Mohawk Luxury Vinyl Plank, 1.5 mm Foam Noise Reduction Underlayment, 19.05 mm Extremegreen™ Subfloor Panel, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich TradeReady® Steel Joist, 12.7 mm ClarkDietrich RC Deluxe™ Resilient Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel

Specimen Area: 10.98 m²

Technician: Cody R. Snyder
Photographs

Close-Up of Test Specimen

Receive Room View of Test Specimen Installation