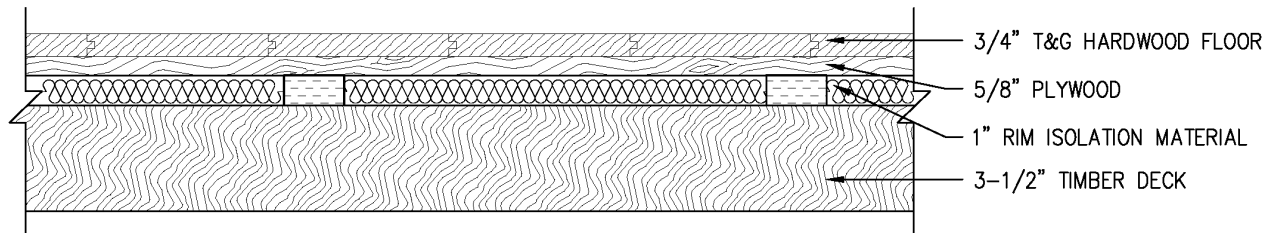


# KINETICS NOISE CONTROL TEST REPORT #AT001108

- **KINETICS NOISE CONTROL PRODUCTS:**
  - 1" RIM
- **ACOUSTICAL RATINGS:**
  - ATSC 49
  - FIIC 48
- **TESTING AGENCY & REPORT NUMBER:**
  - ACENTECH, INC.
  - PROJECT No. 619530
  - DATED: JULY 30, 2007



KINETICS DRAWING NUMBER: AT001108



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July 30, 2007

Matt Swysgood  
Kinetics Incorporated  
PO Box 655  
Dublin, OH 43017

Subject: Field Test Report  
1-inch RIM System in Mill Construction  
Acentech Project No. 619530

Dear Matt:

We measured impact sound isolation and airborne sound isolation tests on a mock-up construction of a wood floor system on a 1-inch thick Kinetics RIM System. This report summarizes the results of those field tests.

### ***Test Specimen and Site Conditions***

A Test Chamber, 10 feet by 12 feet in plan and approximately 16 feet tall, was constructed with GWB walls over the Model Unit in a mill building slated for conversion into condominiums. On top of the existing (approx.) 3.5-inch timber deck of this room, the contractor installed the 1-inch tall Kinetics RIM System, one layer of 5/8" plywood, and 3/4" tongue-and-groove hardwood finished flooring. The Model Unit (downstairs) was modestly furnished, and the receiving space area was approximately 20 feet by 30 feet in plan and 16 feet tall. On the day of the testing, the interior temperature was approximately 25 degrees Celsius.

### ***Test Procedures***

For the airborne tests, we placed a loudspeaker in the Model Unit and measured the sound pressure level in both the Model Unit and in the Test Chamber upstairs. We measured the reverberation time of the Test Chamber so that we could normalize the results. We have reported the results in terms of Apparent Sound Transmission Class (ASTC), a field metric that is analogous to the laboratory STC rating.

For the impact tests, we placed a calibrated tapping machine on the floor of the Test Chamber and measured the sound pressure level in the Model Unit downstairs. We used a calibrated sound level meter outfitted with third-octave band filters. We also measured the reverberation time of the Model Unit so that we could normalize the results. For each test, we calculated the Field Impact Insulation Class (FIIC), the *in situ* metric analogous to the laboratory Impact Insulation Class (IIC) metric.

Matt Swysgood  
July 30, 2007  
Page 2 of 2

**Results**

We measured ASTC 49 and FIIC 48 for the specimen described above. See the attached field test reports for detailed test results.

**Observations**


The door to the Test Chamber was not tight-fitting – the door had a 2-inch undercut. Flanking (through the timber construction outside the Chamber and then under the doors) may have slightly limited the airborne (ASTC) performance of the sample, particularly at high frequencies. We did not observe other significant flanking paths.

\* \* \* \* \*

If you have any questions about this field test report, please do not hesitate to contact me at 617.499.8086.

Sincerely,

ACENTECH INCORPORATED



Benjamin E. Markham

*Consultant*

Encl. Field Test Reports (2)

## Airborne Sound Insulation Measurement Report Condominiums - Kinetics Sample

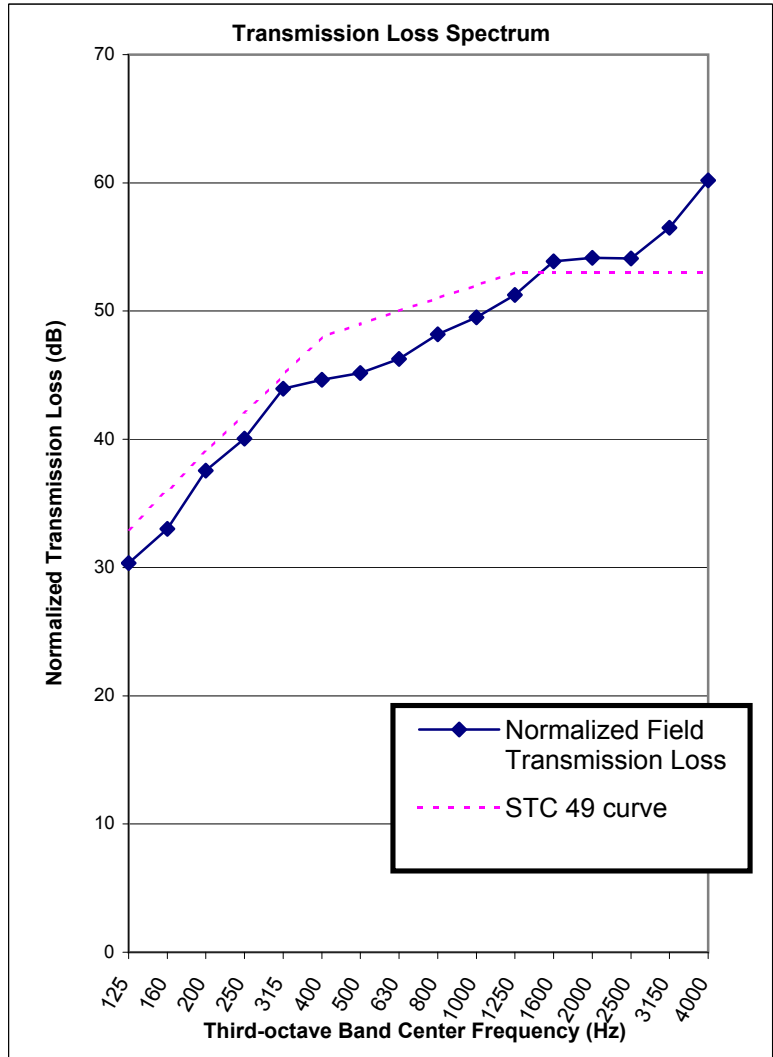
**Date of measurement:** 03-Oct-06  
**Consultant:** BEM  
**Acentech Project:** -

**Description of construction:**  
 Existing timber deck, 1" Kinetics RIM System, 5/8" plywood, 3/4" T&G  
 hardwood strips. (See drawing.)

**Third-Octave Band**

Center Frequency (Hz)	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000
Average Source Room Sound Pressure Levels	94.9	96.7	94	93.7	96	94.6	91.7	91.4	91	88.4	88.2	86.5	86.6	86.8	87.8	86.2
Average Receiving Room Sound Pressure Levels	63.4	63.2	57.5	55.5	53.9	51.8	47.6	46.6	44.3	39.5	38	34.1	33.5	33.3	31.4	26.1
Absorption Effects	1.15	0.48	-1.07	-1.86	-1.86	-1.86	-1.07	-1.48	-1.48	-0.61	-1.07	-1.48	-1.07	-0.61	-0.1	-0.1
<b>Normalized Field Transmission Loss</b>	<b>30.3</b>	<b>33</b>	<b>37.6</b>	<b>40.1</b>	<b>44</b>	<b>44.7</b>	<b>45.2</b>	<b>46.3</b>	<b>48.2</b>	<b>49.5</b>	<b>51.3</b>	<b>53.9</b>	<b>54.2</b>	<b>54.1</b>	<b>56.5</b>	<b>60.2</b>

<b>Apparent Sound Transmission Class (ASTC):</b>	<b>49</b>
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This test procedure was based on ASTM Standard E336.

## Impact Insulation Measurement Report Condominiums - Kinetics Sample

Date of measurement: 03-Oct-06

Consultant: BEM

Acentech Project: -

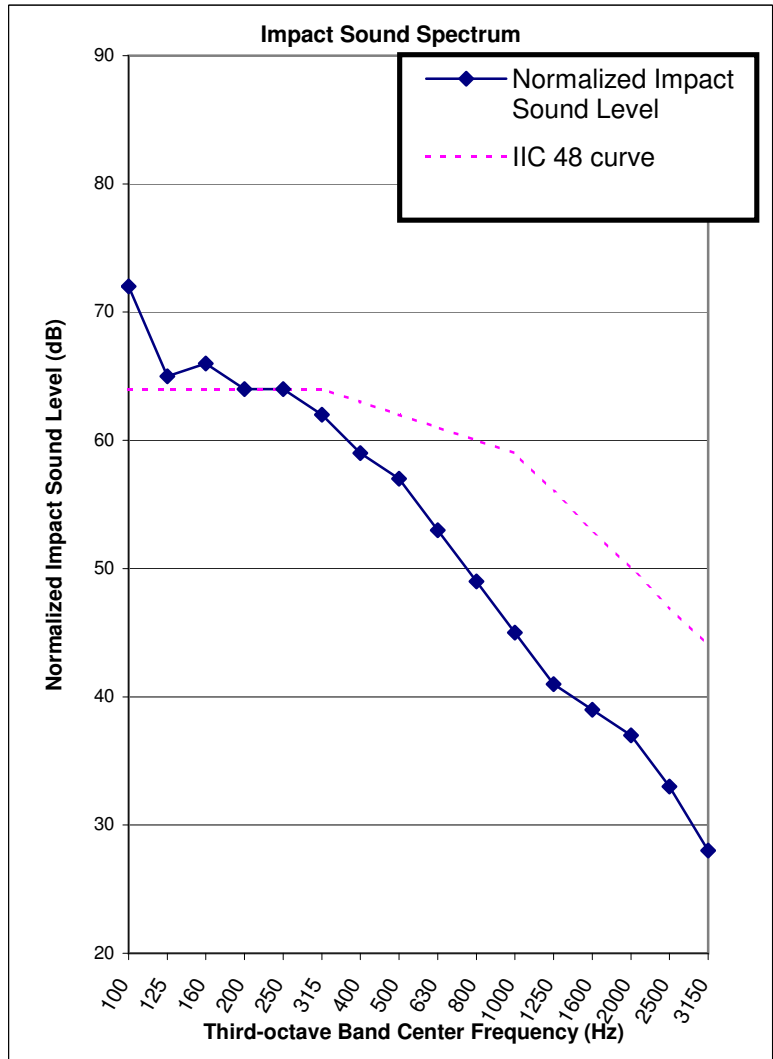
Description of construction:

Existing timber deck, 1" Kinetics RIM System, 5/8" plywood, 3/4" T&G  
hardwood strips. (See drawing.)

**Third-Octave Band**

Center Frequency (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150
Average Impact Sound Levels	64.7	58.7	60.4	57.3	57.3	55.5	53.5	51	46.9	42.6	39.3	35.6	33	30.4	27	22.7
Ambient Sound Levels	39	41	35	36	35	30	30	30	27	24	24	23	22	20	19	19
Absorption Effects	7.1	6.53	6.01	6.53	6.53	6.01	5.56	6.01	6.01	6.01	6.01	5.56	6.01	6.53	6.53	6.53
Normalized Impact Sound Levels	72	65	66	64	64	62	59	57	53	49	45	41	39	37	33	28

Field Impact Insulation Class (FIIC):	48
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This test procedure is based on ASTM Standard E1007-97.