REGUPOL AMERICA
ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK
ASTM E90 AND ASTM E492 TESTING ON LVP WITH REGUPOL SONUS UNDERLAYMENT - AMERIFORM NOCOM STRUCTURAL MAGNESIUM BOARD

SPECIMEN TYPE
254 mm Steel C-Joist Assembly with Regupol® SonusClip™ Sound Isolation Clip

REPORT NUMBER
J8051.09-113-11-R0

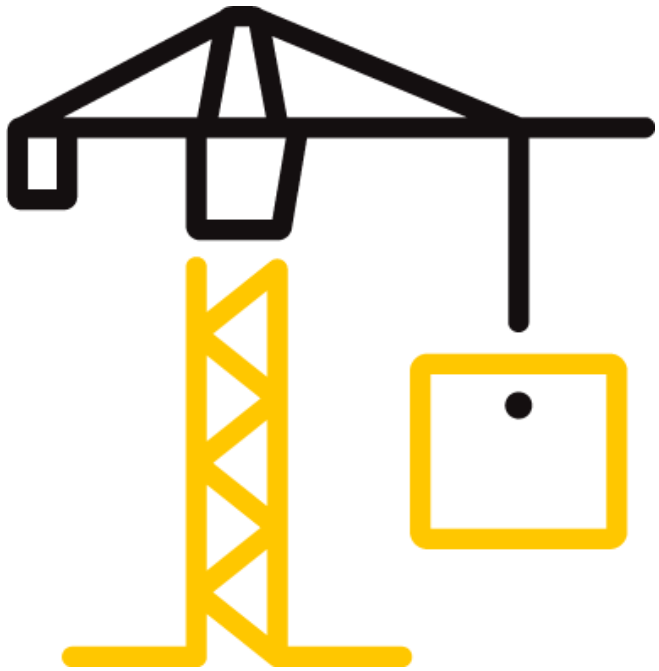
TEST DATE
06/20/19

ISSUE DATE
09/11/19

RECORD RETENTION END
06/20/23

PAGES
12

DOCUMENT CONTROL
ATI 00629 (03/21/18)
RTTDS-R-AMER-Test-2844



130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR REGUPOL AMERICA

Report No.: J8051.09-113-11-R0
Date: 09/11/19

REPORT ISSUED TO

REGUPOL AMERICA
11 Ritter Way
Lebanon, Pennsylvania 17042

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted to perform testing in accordance with ASTM E90 AND ASTM E492 on LVP with Regupol Sonus Underlayment - Ameriform NOCOM Structural Magnesium Board. This report is a reissue in the name of Regupol America through written authorization from the original report holder. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted in the VT test chambers at Intertek B&C located in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

DATA FILE NO.	J8051.04
SERIES/MODEL:	LVP with Regupol Sonus Underlayment - Ameriform NOCOM Structural Magnesium Board
STC	58
IIC	55

COMPLETED BY:	David M. Dacheux III	**COMPLETED BY:**	Jordan Strybos
TITLE:	Technician - Acoustical Testing	**TITLE:**	Engineer, Team Lead - Acoustical Testing
SIGNATURE:	Digitally Signed by: David Dacheux	**SIGNATURE:**	Digitally Signed by: Jordan Strybos
DATE:	09/11/19	**DATE:**	09/11/19

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 3
TEST METHODS

The specimen was evaluated in accordance with the following:

ASTM E90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*

ASTM E413-16, *Classification for Rating Sound Insulation*

ASTM E492-09(2016)e1, *Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine*

ASTM E989-18, *Classification for Determination of Impact Insulation Class (IIC)*

ASTM E2235-04 (2012), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

SECTION 4
MATERIAL SOURCE/INSTALLATION

The full test specimen was assembled on the day of testing by B&C. All materials provided by the original client were installed on an existing B&C assembly (254 mm Steel C-Joist Assembly with Regupol® SonusClip™ Sound Isolation Clip) utilizing B&C-supplied materials. The assembly was installed in a steel test frame which was installed into the opening between the source and receive rooms in the test chamber. The test frame was isolated from the structure with dense neoprene gasket.

The total weight of the floor/ceiling assembly was 433.9 kg. B&C will store samples of the test specimen for four years. Photographs of the test specimen are included in the report. The client did not supply drawings of the test specimen.

This report is reissued in the name of Regupol America through written authorization from the original report holder. The original Report No. is J8051.04-113-11.

B&C 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 B&C for the entire test record retention period.

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 5
EQUIPMENT

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE	
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	INT00977	08/18	*
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	65124	05/18	*
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	63763-1	06/18	*
Microphone Calibrator	Larson Davis	CAL200	Acoustical Calibrator	INT00852	09/18	
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	63741	04/19	
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	63739	04/19	
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	67340	04/19	
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	63746	09/18	
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	63747	07/18	
Receive Room Environmental Indicator	Comet	T7510	Temperature and Humidity Transmitter	63810	10/18	
				63811	10/18	
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	65029	03/19	
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	65586	02/19	
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT01089	01/19	
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00652	01/19	
Source Room Microphone	PCB Electronics	378C20	Microphone and Preamplifier	63742	03/19	
Source Room Environmental Indicator	Comet	T7510	Temperature and Humidity Transmitter	63812	10/18	
Tapping Machine	Norsonic	Nor277	Tapping Machine	INT00936	12/18	

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

VT RECEIVE ROOM VOLUME	156.8 m^3
VT SOURCE ROOM VOLUME	190 m^3

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Daniel R. Deickman	Intertek B&C
Jordan Strybos	Intertek B&C

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 7
TEST PROCEDURE

The microphones were calibrated before conducting the tests. The air temperature and relative humidity conditions were monitored and recorded during all measurements. The average temperature and humidity of both the source and received rooms are listed in Sections 10 and 11. The maximum and minimum temperatures and humidities of the receive room from the duration of the test are listed in Sections 12 and 13.

The airborne transmission loss test was conducted in accordance with the ASTM E90 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. Two sound pressure level measurements were made simultaneously in both rooms, at each of five microphone positions.

The impact sound transmission test was conducted in accordance with the ASTM E492 test method. Two background noise sound pressure level, two sound pressure level measurements with the tapping machine operating at each position specified by ASTM E492, and five sound absorption measurements were conducted at each of five microphone positions.

Detailed test procedures, data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

SECTION 8
TEST CALCULATIONS

The STC (Sound Transmission Class) and IIC (Impact Insulation Class) ratings were calculated in accordance with ASTM E413 and ASTM E989, respectively.

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR REGUPOL AMERICA
Report No.: J8051.09-113-11-R0
Date: 09/11/19

SECTION 9
TEST SPECIMEN DESCRIPTION

MATERIAL	DIMENSIONS (mm)	THICKNESS (mm)	MANUFACTURER AND SERIES	QUANTITY	AVERAGE WEIGHT
Luxury Vinyl Plank	1219 by 152.4	6.8	Shaw Como Plus	10.98 m²	6.49 kg/m²
	Note: Loose laid				
Rubber Underlayment	3048 by 1219	5.0	Regupol Sonus	10.98 m²	4.3 kg/m²
	Note: Loose laid				
Structural Magnesium Board	1219 by 2438	19.2	Ameriform NOCOM	10.98 m²	19.82 kg/m²
	Note: Fastened to the floor joists with 41 mm #8 screws spaced on 152.4 mm centers along the perimiter and on 406.4 mm centers in the field				
Fiberglass Insulation	2940 by 406	88.9	Knauf EcoBatt®	10.98 m²	1.03 kg/m²
	Note: Laid directly over resilient channels				
Steel C-Joist	3023 by 41.3	254.0	ClarkDietrich S162	6 joists	11.6 kg/joist
	Note: Installed on 610 mm centers using JUS414 hanger brackets				
Resilient Sound Isolation Clip	76.2 by 36.5	31.8	Regupol® SonusClip™	24 clips	0.06 kg/clip
	Note: Installed in a 610 mm by 1219 mm grid pattern				
Furring/Hat Channel	3658 by 76.2	22.3	ClarkDietrich 087F125-18	29.1 lin m	0.48 kg/m
	Note: Installed into the isolation clips, spaced 610 mm on center				
Gypsum Panel	1219 by 3023	15.9	USG SHEETROCK® Brand FIRECODE® C Core	10.98 m²	11.91 kg/m²
	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.				

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR REGUPOL AMERICA

Report No.: J8051.09-113-11-R0
Date: 09/11/19

SECTION 10

TEST RESULTS - AIRBORNE SOUND TRANSMISSION LOSS

TEST DATE	6/20/2019				
DATA FILE NO.	J8051.04				
CLIENT	Regupol America				
DESCRIPTION	6.8 mm Shaw Como Plus Luxury Vinyl Plank, 5 mm Regupol Sonus Rubber Underlayment, 19.2 mm Ameriform NOCOM Structural Magnesium Board, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich S162 Steel C-Joist, 31.75 mm Regupol® SonusClip™ Resilient Sound Isolation Clip, 22.3 mm ClarkDietrich 087F125-18 Furring/Hat Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel				
SPECIMEN AREA	10.98 m²	**Receive Temp.**	20.4°C	**Source Temp.**	22.7°C
TECHNICIAN	DRD	**Receive Humidity**	62%	**Source Humidity**	62%

FREQ (Hz)	**BACKGROUND SPL** (dB)	**ABSORPTION** m²	**SOURCE SPL** (dB)	**RECEIVE SPL** (dB)	**SPECIMEN TL** (dB)	**95% CONFIDENCE LIMIT**	**NUMBER OF DEFICIENCIES**
80	39.1	16.8	108	68	39	2.1	-
100	29.5	12.1	106	68	39	2.0	-
125	30.1	10.9	104	64	41	1.4	1
160	27.9	9.2	106	64	45	1.6	0
200	24.4	10.2	103	59	46	1.0	2
250	20.9	9.8	101	53	50	0.9	1
315	20.9	9.4	105	55	52	0.8	2
400	17.0	8.3	103	54	50	0.7	7
500	18.8	7.9	102	53	51	0.6	7
630	19.6	7.6	103	51	54	0.5	5
800	18.7	7.8	103	47	57	0.3	3
1000	20.7	7.5	103	45	60	0.3	1
1250	18.5	7.5	103	44	61	0.3	1
1600	13.5	7.7	103	42	63	0.4	0
2000	12.9	8.6	103	40	65	0.2	0
2500	9.9	9.5	100	36	66	0.3	0
3150	9.4	10.3	100	31	69	0.3	0
4000	8.2	11.4	102	30	72	0.4	0
5000	8.2	12.8	103	28	75	0.5	-
6300	7.8	15.7	96	18	77	0.7	-
8000	7.8	20.0	96	14	81	0.8	-
10000	7.5	20.0	90	8	81	0.8	-
STC Rating	**58**	*(Sound Transmission Class)*			**Sum of Deficiencies**		**30**

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

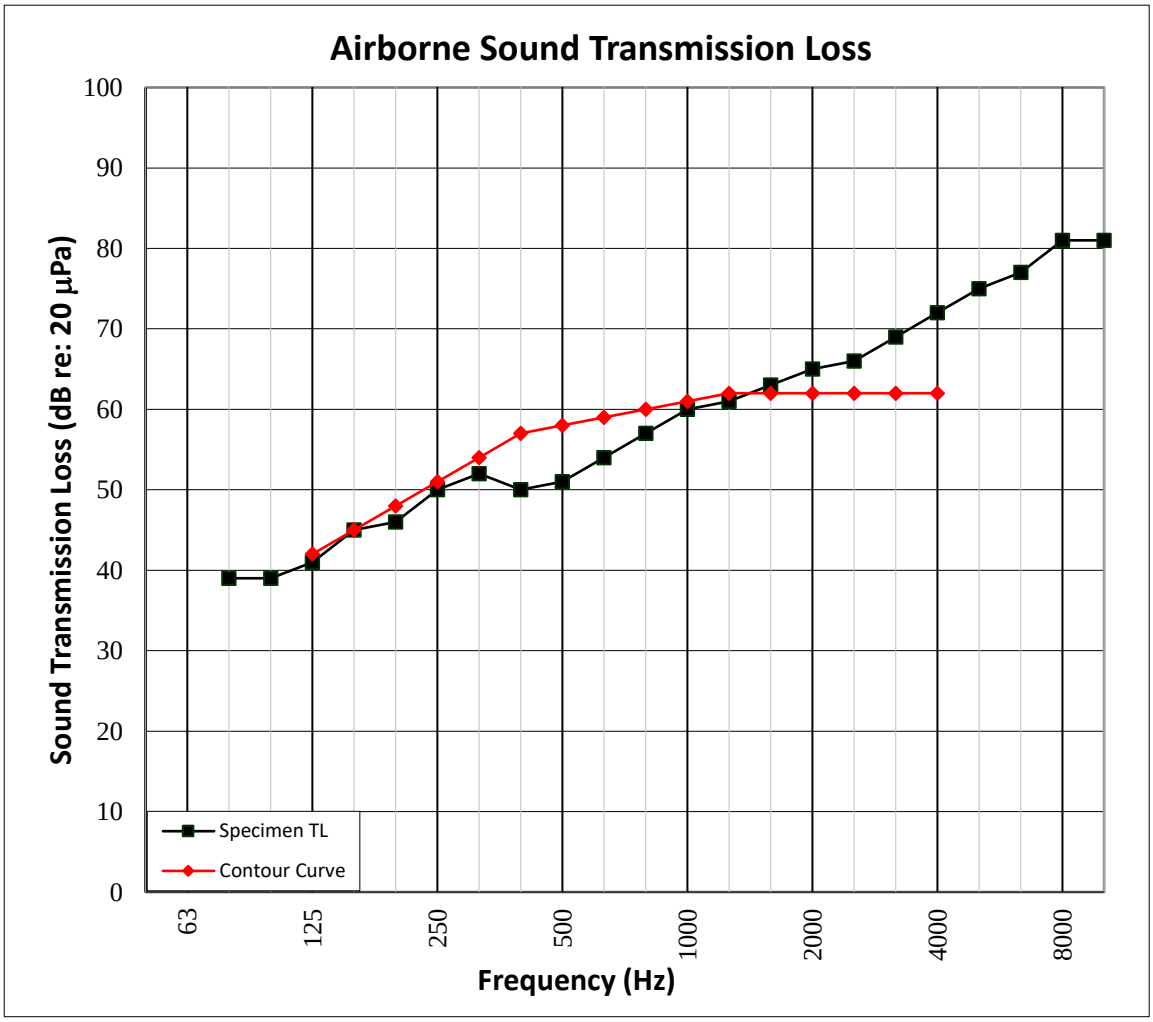
130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR REGUPOL AMERICA
Report No.: J8051.09-113-11-R0
Date: 09/11/19

SECTION 11
TEST RESULTS - AIRBORNE SOUND TRANSMISSION LOSS GRAPH

TEST DATE	6/20/2019				
DATA FILE NO.	J8051.04				
CLIENT	Regupol America				
DESCRIPTION	6.8 mm Shaw Como Plus Luxury Vinyl Plank, 5 mm Regupol Sonus Rubber Underlayment, 19.2 mm Ameriform NOCOM Structural Magnesium Board, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich S162 Steel C-Joist, 31.75 mm Regupol® SonusClip™ Resilient Sound Isolation Clip, 22.3 mm ClarkDietrich 087F125-18 Furring/Hat Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel				
SPECIMEN AREA	10.98 m²	**Receive Temp.**	20.4°C	**Source Temp.**	22.7°C
TECHNICIAN	DRD	**Receive Humidity**	62%	**Source Humidity**	62%



intertek
Total Quality. Assured.

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR REGUPOL AMERICA

Report No.: J8051.09-113-11-R0
Date: 09/11/19

SECTION 12

TEST RESULTS - IMPACT SOUND TRANSMISSION

IAS ACCREDITED Testing Laboratory

TEST DATE	6/20/2019				
DATA FILE NO.	J8051.04				
CLIENT	Regupol America				
DESCRIPTION	6.8 mm Shaw Como Plus Luxury Vinyl Plank, 5 mm Regupol Sonus Rubber Underlayment, 19.2 mm Ameriform NOCOM Structural Magnesium Board, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich S162 Steel C-Joist, 31.75 mm Regupol® SonusClip™ Resilient Sound Isolation Clip, 22.3 mm ClarkDietrich 087F125-18 Furring/Hat Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel				
SPECIMEN AREA	10.98 m²	**Maximum Temp.**	20.4°C	**Minimum Temp.**	20.3°C
TECHNICIAN	DRD	**Max. Humidity**	62%	**Min. Humidity**	62%

FREQ (Hz)	**BACKGROUND SPL** (dB)	**ABSORPTION** m²	**NORMALIZED IMPACT SPL** (dB)	**95% CONFIDENCE LIMIT**	**NUMBER OF DEFICIENCIES**
80	36.7	17.4	68	1.3	-
100	27.9	12.9	65	1.0	8
125	29.7	10.8	62	1.1	5
160	26.7	8.5	60	0.8	3
200	24.2	9.9	62	0.5	5
250	20.9	9.8	62	0.7	5
315	21.4	9.4	58	0.4	1
400	16.9	8.5	56	0.7	0
500	18.0	7.6	50	0.4	0
630	18.9	7.5	44	0.2	0
800	18.6	7.7	41	0.2	0
1000	22.4	7.4	38	0.2	0
1250	21.1	7.5	35	0.4	0
1600	15.6	7.7	31	0.2	0
2000	16.1	8.7	30	0.2	0
2500	13.2	9.5	27	0.2	0
3150	12.6	10.3	23	0.3	0
4000	9.9	11.4	16	0.3	-
5000	8.8	12.9	11	0.3	-
6300	8.0	15.5	9	0.4	-
8000	7.8	19.8	9	0.3	-
10000	7.5	19.8	9	0.4	-
IIC Rating	**55**	*(Impact Insulation Class)*		**Sum of Deficiencies**	**27**

Notes: *Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.*

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

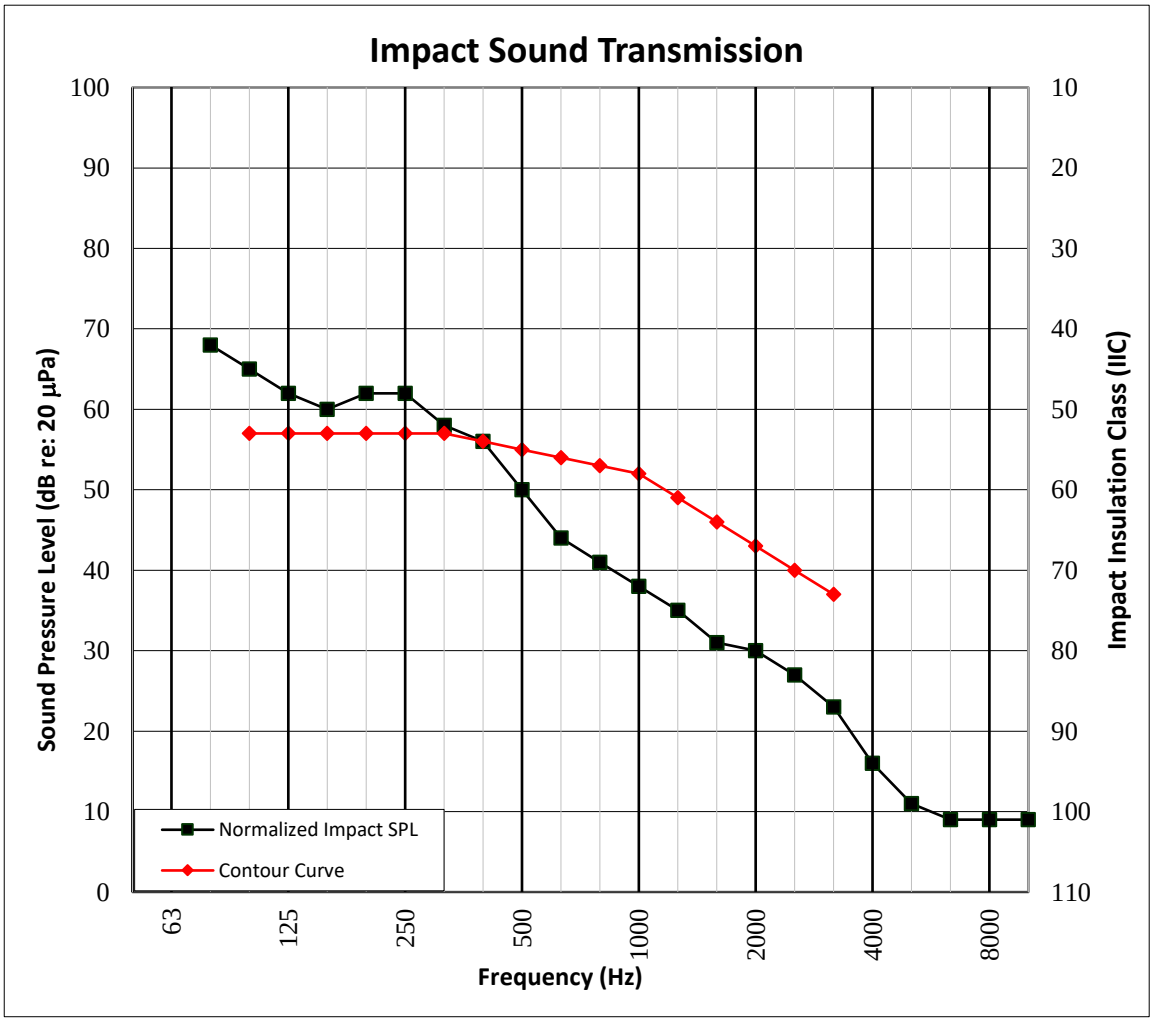
TEST REPORT FOR REGUPOL AMERICA

Report No.: J8051.09-113-11-R0
Date: 09/11/19

SECTION 13

TEST RESULTS - IMPACT SOUND TRANSMISSION GRAPH

TEST DATE	6/20/2019				
DATA FILE NO.	J8051.04				
CLIENT	Regupol America				
DESCRIPTION	6.8 mm Shaw Como Plus Luxury Vinyl Plank, 5 mm Regupol Sonus Rubber Underlayment, 19.2 mm Ameriform NOCOM Structural Magnesium Board, 88.9 mm Knauf EcoBatt® Fiberglass Insulation, 254 mm ClarkDietrich S162 Steel C-Joist, 31.75 mm Regupol® SonusClip™ Resilient Sound Isolation Clip, 22.3 mm ClarkDietrich 087F125-18 Furring/Hat Channel, 15.9 mm USG SHEETROCK® Brand FIRECODE® C Core Gypsum Panel				
SPECIMEN AREA	10.98 m²	**Maximum Temp.**	20.4°C	**Minimum Temp.**	20.3°C
TECHNICIAN	DRD	**Max. Humidity**	62%	**Min. Humidity**	62%



130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 14
PHOTOGRAPHS

Photo No. 1
Source Room View of Test Specimen Installation

Photo No. 2
Receive Room View of Test Specimen Installation

130 Derry Court
York, PA 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 15

REVISION LOG

REVISION #	DATE	PAGES	DESCRIPTION
R0	09/11/19	N/A	Original Report Issue - Reissue of Report No. J8051.04-113-11 in the name of Regupol America.