COMMON WALL RATINGS
INDUSTRY EXCLUSIVE
FIRE & SOUND

The more you install, the more you save.

Electrical contractors wiring multi-family buildings save the most.

Forget putty pads. Forget mineral wool. Forget about being limited to a single electrical box in a stud cavity. Unlike their metal or PVC counterparts, Allied Moulded FiberglassBOX™ wall boxes can be placed a mere ***three inches apart**** — with no additional fire protection — and still meet the fire safety standards outlined in the International Building Code. They're also suitable for use in STC rated common walls without additional sound pads. Testing has shown STC rated common walls are not negatively impacted with Allied Moulded FiberglassBOX™ products installed.

What does that mean for you? More flexibility in electrical design. Easier standardization in multi-family construction. Lower material and labor costs. And the benefits keep stacking up with every Allied Moulded FiberglassBOX™ box you use.

We've packed some big savings into a very small space. To learn more and see our UL documentation, visit ***www.alliedmoulded.com***.

fiberglassBOX™
From Allied Moulded Products

222 North Union Street
Bryan, Ohio 43506

(419) 636.4217
(419) 636.2450 FAX

ALLIED MOULDED PRODUCTS, Inc.

*Suitable for installation in 2HR wall assemblies: All 52 – U300 series walls, non-load bearing steel stud walls and staggered stud wall assemblies

ALLIED MOULDED PRODUCTS, Inc.
222 North Union Street • Bryan, Ohio 43506 USA
Manufacturer of Nonmetallic Electrical Boxes & Enclosures

December 29, 2024

RE: Sound Transmission Class (STC)

The single gang, Vapor Seal™, fiberglassBOX™ (**1099-NV**) from Allied Moulded Products is acoustically rated to maintain the sound rating of a wall up to a Sound Transmission Class (STC) 55 without sound pads or ancillary sound protection.

This rating was achieved by performing the ASTM E-90 Sound Transmission Loss Test on Allied's single gang, vapor seal, fiberglass box (1099-NV) installed in a 50 STC rated wall. The outlet boxes were installed in the standard manner on opposite sides of a common wall within the same study cavity.

In addition to the 1099-NV's acoustical rating, Allied Moulded's two gang, fiberglass box, **2302** has also been acoustically rated at an STC of 54 without sound pads or ancillary sound protection. The 2302 was installed in the standard manner on opposite sides of a common wall within the same stud cavity and underwent the ASTM E-90 Sound Transmission Loss Test.

STC rated walls and partitions are required by most Building Codes for separating dwelling units from each other or from public service areas. The 2021 International Building Code (IBC) requires these walls and partitions to have a STC rating of not less than 50 when tested in accordance with ASTM E-90.

Included with this announcement is the test report from NGC Testing Services describing the installation and performance of Allied's Fiberglass 1099-NV and 2302. Due to the complexity of this construction, it is recommended that this report be provided to the project architect or acoustical engineer for proper evaluation.

Allied Moulded Products electrical boxes have been tested for STC ratings in the most common applications. Additional sound proofing options are available from acoustical pad manufacturers to increase the sound transmission rating if deemed necessary. Please contact Allied Moulded Products customer service for additional information.

Thank you!

Dustin Morr

Product Manager

☎ (419) 636-4217 (419) 636-2450 www.alliedmoulded.com

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TEST REPORT

For

Allied Moulded Products
222 N. Union Street
Bryan, OH 48506
Lawrence Schmidt / 419-636-4217

Sound Transmission Loss Test

ASTM E 90 – 09 / E 413 – 04 / E 1332 – 10a
On

Vertically Mounted -
Double Layer of 5/8 Inch Type C Gypsum Wallboard - Side 1
Double Layer of 5/8 Inch Type C Gypsum Wallboard - Side 2
On 3-5/8 Inch (24 Inch o.c.) Metal Studs and Mineral Wool Batt Insulation
Two Single-Gang Fiberglass Vapor-Seal Flanged Outlet Boxes,
One in Each Room, Same Stud Cavity, Foam Seal

Report Number: NGC 2011053

Assignment Number: G-681

Test Date: 11/09/2011

Report Date: 01/27/2012

Submitted by: _____
Andrew E. Heuer
Test and Quality Engineer

Reviewed by: _____
Robert J. Menchetti
Director

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
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Report Number: NGC 2011053

Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements - Designation: E 90 - 09 / E 413 – 10.

Specimen Description: The test specimen was a partition assembly constructed within the 12 ft. Wide by 9 ft. High (3657mm W by 2743mm H) test opening. The test specimen was described by client as, 3-5/8 inch metal stud framing 24 inches on center. 2 layers of 5/8 inch Type C gypsum board mounted on Side 1 (Source Room) and 2 layers of 5/8 inch Type C gypsum board on Side 2 (Receiving Room). Mineral wool insulation was placed into the cavities formed by the framing members. Single-gang Fiberglass outlets were installed, identified as single-gang box with vapor seal flange, 1099NV2. Outlets located on adjacent studs, common cavity. Spray foam used to seal boxes.

Standard direction of sound from Source Room (Room 1) to Receiving Room (Room 2).

The wall system was constructed in the test opening and consisted of:
From Room 1 to Room 2.

- 2 layers of 15.9mm (5/8 in.) Type C gypsum wallboard. Sample weight was 25.4 kg/m^2 (5.2 PSF) mounted vertically and attached directly to the steel framing members. Base layer screw spacing was 609.6mm (24 in.) o.c., using 25.4mm (1 in.) fine thread bugle head screws. The face layer screw spacing was 304.8mm (12 in.) o.c., using 41.3mm (1-5/8 in.) fine thread bugle head screws.
- Single-gang Fiberglass outlet box was installed and sealed with spray foam.
- 92.1mm (3-5/8 in.) wide by 31.8mm (1-1/4 in.) deep 25 ga., metal studs mounted vertically 609.6mm (24 in.) o.c. between the top and bottom tracks. Sample weight was 1.12 kg/m^2 (0.23 PSF).
- 92.1mm (3-5/8 in.) 25 ga. metal track top and bottom. Sample weight was 0.39 kg/m^2 (0.08 PSF). A bead of acoustical caulk was placed between metal track and test frame opening.
- 1 layer of 76.2mm (3 in.) mineral wool insulation was friction fit into stud cavities. The sample weight was found to be 3.52 kg/m^2 (0.72 PSF).
- 2 layers of 15.9mm (5/8 in.) Type C gypsum wallboard. Sample weight was 25.4 kg/m^2 (5.2 PSF) mounted vertically and attached directly to the steel framing members. Base layer screw spacing was 609.6mm (24 in.) o.c., using 25.4mm (1 in.) fine thread bugle head screws. The face layer screw spacing was 304.8mm (12 in.) o.c., using 41.3mm (1-5/8 in.) fine thread bugle head screws.
- Single-gang Fiberglass outlet box was installed and sealed with spray foam.

Total weight of the wall system was 3.52 kg/m^2 (11.43 PSF)

The perimeter of the wall system was sealed with acoustical caulk and exposed board joints were taped.

Specimen size: 3657.6mm x 2743.2mm (12 ft x 9 ft.)

Conditioning: Test components were tested as received.

Test Results: The results of the tests are given on pages 3 and 4.

The results reported above apply to specific samples submitted for measurement.
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Sound Transmission Loss Test Data

Test: ASTM E 90 - 09 / ASTM E 413 - 10

Test Report: NGC2011053 Date: 11/9/2011
Specimen Size [m²]: 10.1

Source room		Receiving room	
Volume [m³]:	91.2	Volume [m³]:	98.6
Rm Temp [°C]:	19	Rm Temp [°C]:	19
Humidity [%]:	51	Humidity [%]:	51

Sound Transmission Class STC [dB]: 55
Sum of Unfavorable Deviations [dB]: 18
Max. Unfavorable Deviation [dB]: 8 at 2000 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	37	105.2	73.2	15.1	5.0		0.0
125	40	104.4	68.2	14.3	3.8		1.7
160	43	103.2	65.4	10.8	5.2		2.3
200	46	102.8	61.3	11.0	4.5		1.4
250	50	101.3	56.7	11.3	5.4		1.4
315	51	101.0	54.8	11.4	4.8		0.6
400	55	100.5	49.9	12.7	4.4		0.4
500	58	102.8	49.5	12.1	4.7		0.3
630	59	103.3	48.8	11.9	4.5		0.1
800	61	101.7	45.1	12.9	4.4		0.1
1000	63	102.2	43.6	13.8	4.4		0.1
1250	64	100.4	40.4	14.9	4.0		0.0
1600	62	97.4	39.3	17.5	3.9		0.0
2000	51	96.8	48.5	21.0	2.7	8	0.0
2500	52	96.9	47.2	24.1	2.3	7	0.0
3150	56	95.7	41.6	26.2	1.9	3	0.0
4000	60	94.3	35.4	29.7	1.1		0.0
5000	63	93.4	30.4	34.8	0.0		0.0

STL = Sound Transmission Loss, dB
L1 = Source Room Level, dB
L2 = Receiving Room Level, dB
d = Decay Time, dB/second
Δ STL = Uncertainty for 95% Confidence Level

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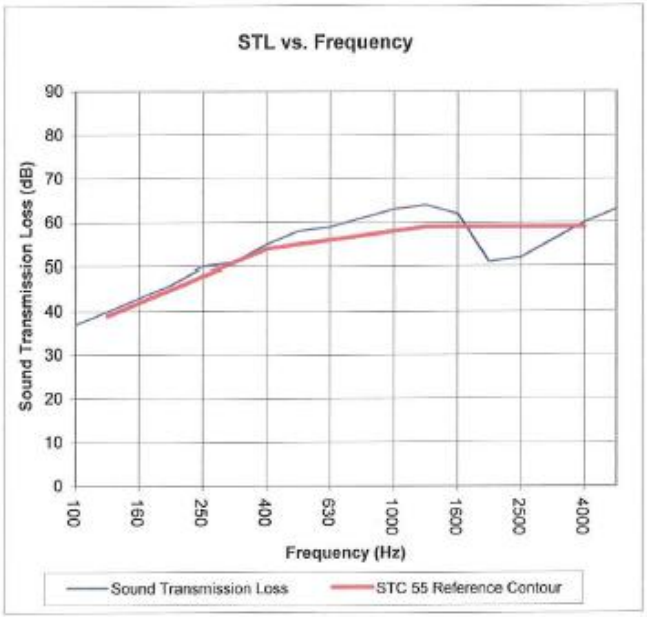
Sound Transmission Loss Test Data

Per: ASTM E 90 - 09 / ASTM E 413 - 10

Test Report: NGC2011053
Test Date: 11/9/2011
Specimen Size [m²]: 10.1

Sound Transmission Class STC = 55 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	37	2.3
125	40	1.4
160	43	1.4
200	46	0.6
250	50	0.4
315	51	0.3
400	55	0.1
500	58	0.1
630	59	0.1
800	61	0.0
1000	63	0.0
1250	64	0.0
1600	62	0.0
2000	51	0.0
2500	52	0.0
3150	56	0.0
4000	60	0.0
5000	63	0.0



* Due to high insulating value of specimen, background levels limit results at these frequencies.

STL = Sound Transmission Loss, dB
Δ STL = Uncertainty for 95% Confidence Level

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TEST REPORT

For

Allied Moulded Products
222 N. Union Street
Bryan, OH 48506
Lawrence Schmidt / 419-636-4217

Sound Transmission Loss Test

ASTM E 90 – 09 / E 413 – 04 / E 1332 – 10a
On

Vertically Mounted -
Double Layer of 5/8 Inch Type C Gypsum Wallboard - Side 1
Double Layer of 5/8 Inch Type C Gypsum Wallboard - Side 2
On 3-5/8 Inch (24 Inch o.c.) Metal Studs and Mineral Wool Batt Insulation
Two Double-Gang Fiberglass Outlet Boxes,
One in Each Room, Same Stud Cavity, Foam Seal

Report Number: NGC 2011054
Report Reissued on 06/01/2012

Assignment Number: G-681

Test Date: 11/10/2011

Report Date: 01/27/2012

Submitted by: _____
Andrew E. Heuer
Test and Quality Engineer

Reviewed by: _____
Robert J. Menchetti
Director

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Report Number: NGC 2011054

Report Reissued on 06/01/2012

Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements - Designation: E 90 - 09 / E 413 – 10.

Specimen Description: The test specimen was a partition assembly constructed within the 12 ft. Wide by 9 ft. High (3657mm W by 2743mm H) test opening. The test specimen was described by client as, 3-5/8 inch metal stud framing 24 inches on center. 2 layers of 5/8 inch Type C gypsum board mounted on Side 1 (Source Room) and 2 layers of 5/8 inch Type C gypsum board on Side 2 (Receiving Room). Mineral wool insulation was placed into the cavities formed by the framing members. Double-gang Fiberglass outlets were installed, identified by client as Double-gang box. Outlets located on adjacent studs, common cavity. Spray foam used to seal boxes.

Standard direction of sound from Source Room (Room 1) to Receiving Room (Room 2).

The wall system was constructed in the test opening and consisted of:
From Room 1 to Room 2.

- 2 layers of 15.9mm (5/8 in.) Type C gypsum wallboard. Sample weight was 25.4 kg/m^2 (5.2 PSF) mounted vertically and attached directly to the steel framing members. Base layer screw spacing was 609.6mm (24 in.) o.c., using 25.4mm (1 in.) fine thread bugle head screws. The face layer screw spacing was 304.8mm (12 in.) o.c., using 41.3mm (1-5/8 in.) fine thread bugle head screws.
- Double-gang Fiberglass outlet box was installed and sealed with spray foam.
- 92.1mm (3-5/8 in.) wide by 31.8mm (1-1/4 in.) deep 25 ga., metal studs mounted vertically 609.6mm (24 in.) o.c. between the top and bottom tracks. Sample weight was 1.12 kg/m^2 (0.23 PSF).
- 92.1mm (3-5/8 in.) 25 ga. metal track top and bottom. Sample weight was 0.39 kg/m^2 (0.08 PSF). A bead of acoustical caulk was placed between metal track and test frame opening.
- 1 layer of 76.2mm (3 in.) mineral wool insulation was friction fit into stud cavities. The sample weight was found to be 3.52 kg/m^2 (0.72 PSF).
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- Double-gang Fiberglass outlet box was installed and sealed with spray foam.

Total weight of the wall system was 3.52 kg/m^2 (11.43 PSF)

The perimeter of the wall system was sealed with acoustical caulk and exposed board joints were taped.

Specimen size: 3657.6mm x 2743.2mm (12 ft x 9 ft.)

Conditioning: Test components were tested as received.

Test Results: The results of the tests are given on pages 3 and 4.

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Sound Transmission Loss Test Data

Test: ASTM E 90 - 09 / ASTM E 413 - 10

Test Report: NGC2011054 Date: 11/10/2011
Specimen Size [m²]: 10.1

Source room		Receiving room	
Volume [m³]:	91.2	Volume [m³]:	98.6
Rm Temp [°C]:	19.5	Rm Temp [°C]:	20
Humidity [%]:	50	Humidity [%]:	50

Sound Transmission Class STC [dB]: 54
Sum of Unfavorable Deviations [dB]: 18
Max. Unfavorable Deviation [dB]: 8 at 2000 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	36	105.8	73.5	17.3	3.7		0.0
125	42	104.2	66.6	14.0	4.4		1.8
160	43	102.6	65.4	11.2	5.8		2.0
200	46	102.4	61.6	11.2	5.2		1.1
250	50	100.6	56.3	11.7	5.7		1.0
315	53	100.4	53.5	11.4	6.1		0.6
400	56	100.4	49.1	12.8	4.7		0.5
500	58	102.5	49.3	12.2	4.8		0.2
630	59	103.0	49.5	11.9	5.5		0.1
800	61	101.6	45.6	12.9	5.0		0.1
1000	62	102.0	44.6	13.6	4.6		0.1
1250	63	100.0	41.0	15.0	4.0		0.0
1600	61	97.1	39.8	17.6	3.7		0.1
2000	50	96.6	49.0	21.1	2.4	8	0.1
2500	51	96.9	47.5	24.4	1.6	7	0.0
3150	55	95.5	41.8	26.4	1.3	3	0.0
4000	59	94.2	36.0	30.0	0.8		0.0
5000	62	93.1	31.1	34.6	0.0		0.0

STL = Sound Transmission Loss, dB
L1 = Source Room Level, dB
L2 = Receiving Room Level, dB
d = Decay Time, dB/second
Δ STL = Uncertainty for 95% Confidence Level

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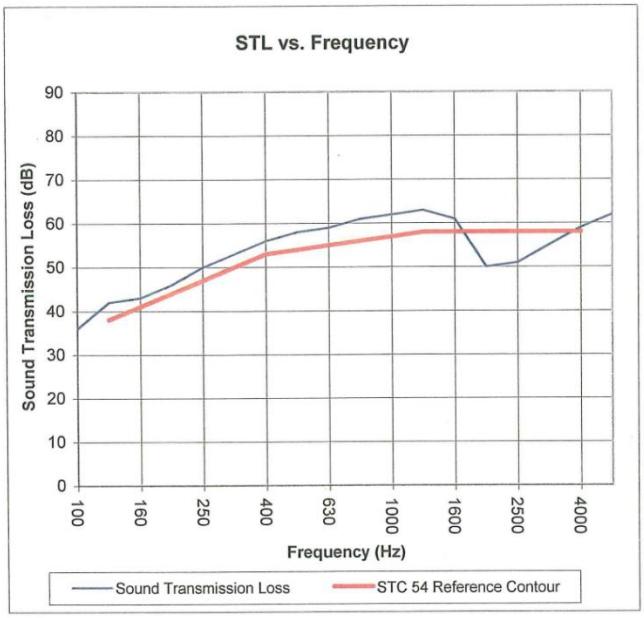
Sound Transmission Loss Test Data

Per: ASTM E 90 - 09 / ASTM E 413 - 10

Test Report: NGC2011054
Test Date: 11/10/2011
Specimen Size [m²]: 10.1

Sound Transmission Class STC = 54 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	36	2.0
125	42	1.1
160	43	1.0
200	46	0.6
250	50	0.5
315	53	0.2
400	56	0.1
500	58	0.1
630	59	0.1
800	61	0.0
1000	62	0.1
1250	63	0.1
1600	61	0.0
2000	50	0.0
2500	51	0.0
3150	55	0.0
4000	59	0.0
5000	62	0.0



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