



Acoustical Testing Laboratory



Accredited by the National Voluntary
Laboratory Accreditation Program
for the specific scope of accreditation
under Lab Code 200291

TEST REPORT

For

Arcoplast[®], Inc.
1873 Williamstown Drive
St. Peters, MO 63376
Ghislain Beauregard / 636-978-7781

Sound Transmission Loss Test

ASTM E 90 – 09 / E 413 – 10
On

Wall Partition Assembly Consisting of

Side 1 – No Face Materials

Side 2 - Single Layer of 3/8 Inch (9.5mm) Arcoplast[®] Modular Glass / Resin Panels
3-5/8 Inch Steel Studs, 16 Inches o.c.

Page 1 of 4

Report Number: NGC 2012041

Assignment Number: G-815

Test Date: 07/25/2012

Report Date: 08/10/2012

Submitted by:

Andrew E. Heuer
Senior Test 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.

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

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.



Acoustical Testing Laboratory



Accredited by the National Voluntary
Laboratory Accreditation Program
for the specific scope of accreditation
under Lab Code 200291

Page 2 of 4

Report Number: NGC 2012041

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 (3657.6mm W by 2743.2mm H) test opening. The test specimen was described by client as, steel stud framing 16 in. on center. The sound source side did not have face materials installed. The sound receive side had a single layer of Arcoplast® 3/8 in. (9.5mm) Modular Glass/Resin Panels.

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.

- Open stud cavities with no face materials applied to studs.
- 3-5/8 in. (92.1mm) wide by 1-1/4 in. (31.8mm) deep, 20 ga. metal studs mounted vertically 16 in. (406.4mm) o.c. between the top and bottom tracks and doubled up at the vertical Arcoplast® panel joints. Sample weighed 2.88 kg/m² (0.59 PSF).
- 3-5/8 in. (92.1mm) 20 ga metal track top and bottom. 0.49 kg/m² (0.10 PSF).
- 1 Layer of Arcoplast® 3/8 in. (9.5mm) Modular Glass/Resin Panels.
Observed thickness was 9.3mm (0.367 in.) and observed sample weight was 15.6 kg/m² (3.20 PSF). The three 1219.2mm by 2743.2mm (4 ft. by 9 ft) panels were mounted vertically to the stud framework using Arcoplast® extruded aluminum splines which accepted the panel's slot existing at the panel's joint edges. Splines were screw attached to doubled up studs using a 15.9mm (0.625 in.) Pancake screws. In addition, 12 inch strips of double-sided 1 in. wide 3M 4959 tape were placed at the 1/3 points of each receiving side stud and the panels adhered to them. Spline weight was 0.10 kg/m² (0.02 PSF).

The tile joints were sealed with tape.

Total weight of the wall system was 19.1 kg/m² (3.91 PSF)

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

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.

No responsibility is assumed for performance of any other specimen.

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

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

Sound Transmission Loss Test Data

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

Page 3 of 4

Test Report: NGC2012041

Date: 7/25/2012

Specimen Size [m²]: 10.1

Source room

Volume [m³]: 91.4

Rm Temp [°C]: 25.5

Humidity [%]: 48

Receiving room

Volume [m³]: 98.6

Rm Temp [°C]: 26

Humidity [%]: 48

Sound Transmission Class STC [dB]: 31

Sum of Unfavorable Deviations [dB]: 22

Max. Unfavorable Deviation [dB]: 8 at 3150 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	22	104.5	86.6	17.1	4.1		0.0
125	22	103.7	86.1	16.0	4.4		0.9
160	21	102.0	86.4	10.7	5.4		1.3
200	22	101.9	85.0	11.1	5.1		1.1
250	23	99.8	82.1	12.5	5.3	1	0.4
315	25	100.0	80.0	11.8	5.0	2	0.6
400	27	99.6	77.0	12.3	4.4	3	0.3
500	30	100.8	76.4	11.3	5.6	1	0.2
630	32	101.3	74.9	11.3	5.6		0.1
800	34	101.4	72.9	11.8	5.5		0.1
1000	35	100.6	70.2	12.8	4.6		0.1
1250	36	99.0	67.4	14.0	4.4		0.1
1600	36	96.4	63.8	16.5	3.4		0.0
2000	35	95.4	63.6	19.7	3.2		0.0
2500	28	95.2	69.8	23.7	2.6	7	0.0
3150	27	94.3	68.7	25.9	1.4	8	0.0
4000	32	93.1	62.7	28.9	1.6	3	0.0
5000	34	92.9	59.1	33.4	0.2		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

The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

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

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

Sound Transmission Loss Test Data

Page 4 of 4

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

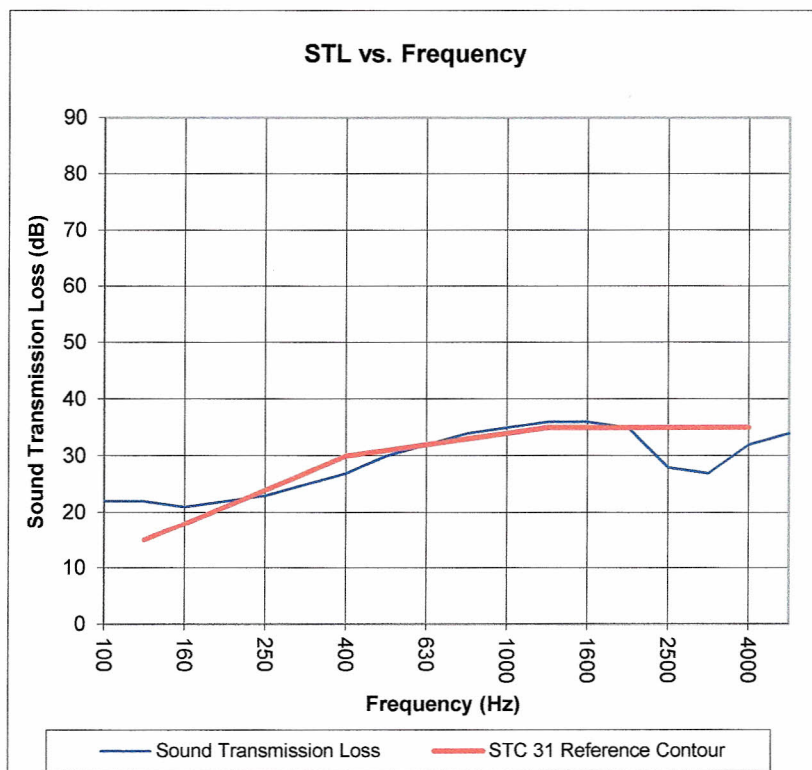
Test Report: NGC2012041

Test Date: 7/25/2012

Specimen Size [m²]: 10.1

Sound Transmission Class STC = 31 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	22	1.3
125	22	1.1
160	21	0.4
200	22	0.6
250	23	0.3
315	25	0.2
400	27	0.1
500	30	0.1
630	32	0.1
800	34	0.1
1000	35	0.0
1250	36	0.0
1600	36	0.0
2000	35	0.0
2500	28	0.0
3150	27	0.0
4000	32	0.0
5000	34	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

The results reported above apply to specific samples submitted for measurement.

No responsibility is assumed for performance of any other specimen.

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

The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.