

Ceiling Sound Insulation Test

Test Date: 10/8/2018
For: Armstrong World Industries, Inc
2500 Columbia Avenue
Lancaster, PA
17603

Report Issued: 6/17/2019

Specimen Designation: Armstrong Item 2604 - ACOUSTIBuilt™ - Recommended Field Finish CAC

The test method conforms explicitly to the requirements of ASTM E1414-16 - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum except as noted in the Comment section. The Armstrong Acoustics Laboratory is accredited by NVLAP of the Department of Commerce as having the competence to perform this test in accordance with the prescribed test method. Descriptions of the facility and measuring technique are available separately.

Material Description: Mineral fiber board

Face Finish: Acoustically transparent membrane with joint compound and ACOUSTIBuilt™ Fine Texture Finish. The Fine Texture Finish was factory applied in three coats totaling 40 – 42 grams/ft². The joint compound was laboratory applied in two coats with finish coverage approximately 16 in² at the field fasteners and 10" wide strips along panel joints.

Back Finish: Standard

Nominal Unit Size: 48 by 72 by 7/8 in.

Sample Mounting: ICNX – The samples were mounted in accordance with the product installation instructions. The partition cap was modified to provide the mounting surface as shown on page 4 below.

Conditioning: The test was performed in a test room at 22.3°C (72.2°F) and 47.2%RH. The sample was conditioned at least 16 hours at 21 ± 3°C (70 ± 5°F) and 50 ± 5% RH.

Suspension System: The grid system employed was Armstrong Drywall Grid System which includes Armstrong items HD8906, XL8945P, and KAM10.

Normalization Technique: The normalization term has been determined using the Steady State Method described in ASTM E1414, Annex A1

Significance: The data in this report was obtained in a laboratory environment specified by ASTM E1414 and according to ASTM E1414 section 5, this environment does not include many elements typical in real world environments which may substantially alter the performance of a system by providing alternate paths for the sound to be transmitted between rooms. In addition, these results are specific to the suspension system utilized in the test. Nonetheless, this type of test method has been used successfully for a number of years to compare ceiling systems.

Uncertainty: Based on the round robin which was the source of the reproducibility and repeatability in ASTM E1414-11a specified in section 11, the difference between the results for the Armstrong Acoustics Laboratory and the average result in the round robin was less than the reproducibility limit at all frequencies and the standard deviation from repeated tests for the Armstrong Acoustics Laboratory was less than the repeatability limit at all frequencies. A more detailed discussion of the uncertainties associated with this test is available upon request.

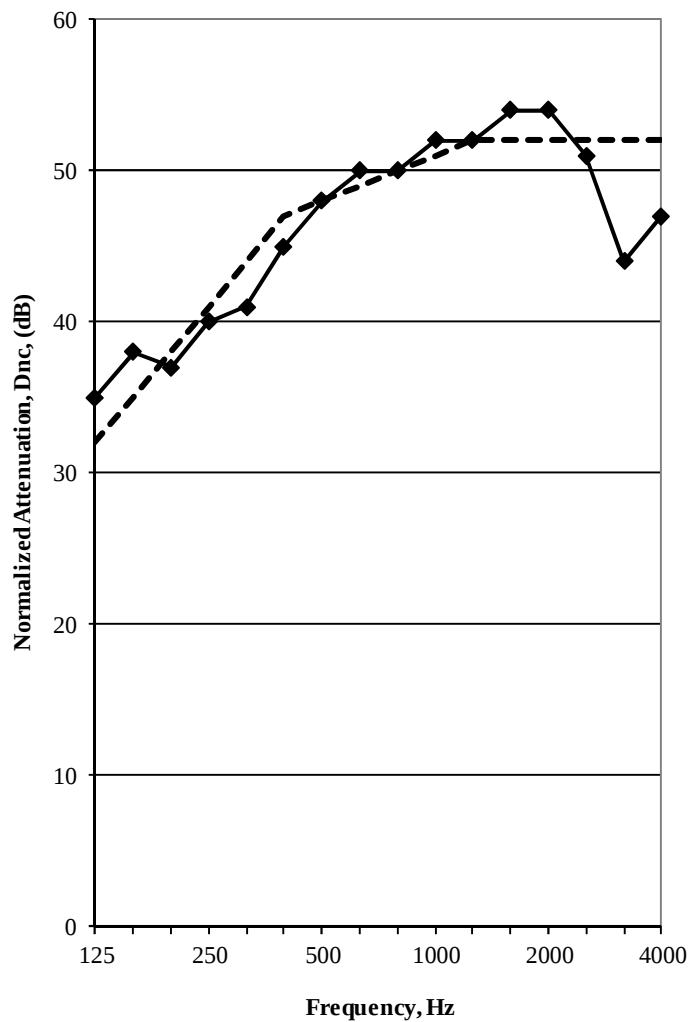
Traceability: These test results are traceable to NIST.

Comments: None



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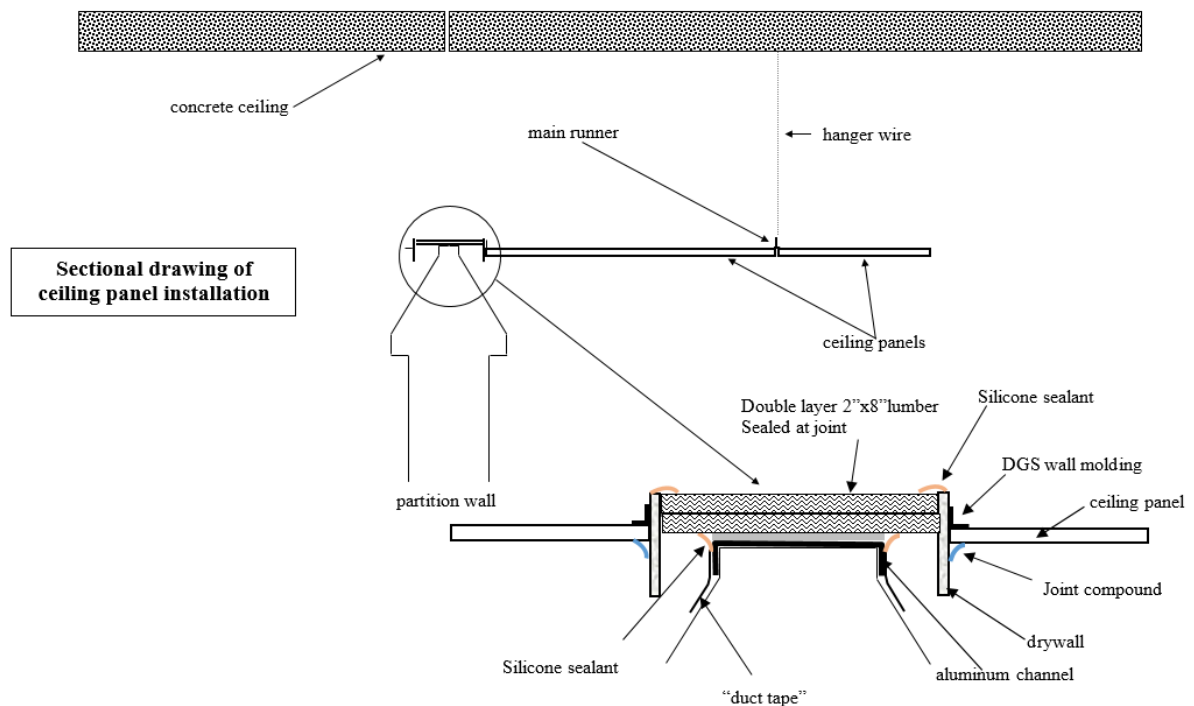
Results According to ASTM E1414



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Results According to ASTM E1414

Frequency Hz	D _{n,c} (dB)	Deficiency (dB)
125	35	0
160	38	0
200	37	1
250	40	1
315	41	3
400	45	2
500	48	0
630	50	0
800	50	0
1000	52	0
1250	52	0
1600	54	0
2000	54	0
2500	51	1
3150	44	8
4000	47	5

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Total
CAC **Deficiencies**
48 **21**

Approved by:

Robert Alan Hallman
Facility Manager