Test Report No. 6610.0101 No. of Pages 4

REPORT OF TEST ON

Sound Absorption Test
on
Fabrasorb II 150
for
Chemfab Corporation

NOISE UNLIMITED, INC.

1485 U.S. Hwy. 22, Watchung, N.J. 07060-6506

9 April 1992

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4-13-92	4-13-92	4-14-92

1. Introduction

The sound absorption coefficient of a surface in a specified frequency band is, aside from the effects of diffraction, the fraction of randomly incident sound energy absorbed or otherwise not reflected. The unit of measurement is sabin per square foot. The noise reduction coefficient, NRC, is the average of the sound absorption coefficients at 250, 500, 1000, and 2000 Hz expressed to the nearest integral multiple of 0.05.

2. Applicable Standard

Measurements were made according to:

ASTM Designation: C 423-90a, "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method."

Standard Mountings are defined in:

ASTM Designation: E 795-91, "Standard Practices for Mounting Test Specimens During Sound Absorption Test."

3. Test Specimen

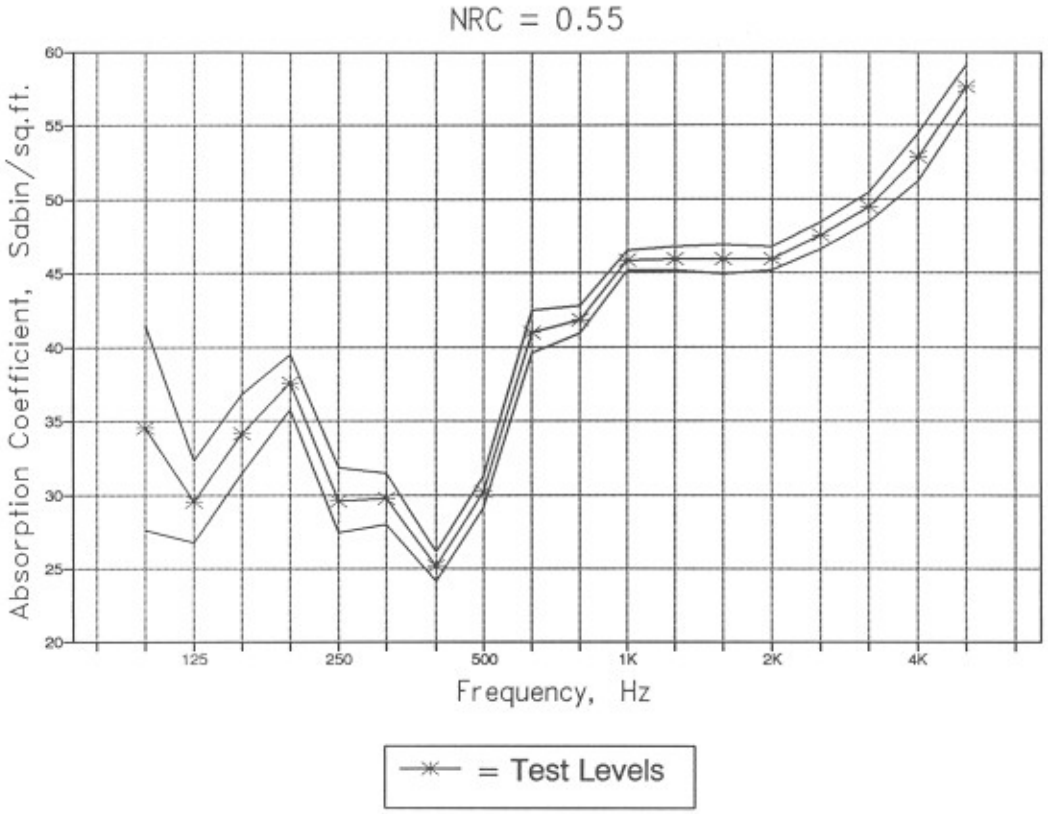
The test specimen consisted of an 8 ft by 9 ft long piece of Fabrasorb II 150 in a type E-400 mounting. The specimen was placed in the E-400 mounting flush with the top edge of the E400, and supported with a wire mesh to keep it from sagging. The cloth specimen was taped to the top edge of the E-400 mounting fixture around the perimeter to prevent sound getting under the edge of the specimen. The specimen was submitted for testing by Chemfab Corporation, and was identified as Fabrasorb II 150. The weight of the specimen 4 lbs, 10 oz. The area used to calculated sound absorption coefficients was 72 sq ft, the face area of the specimen.

4. Test Results

The calculated values of the sound absorption of the specimen and sound absorption coefficients together with the calculated measurement uncertainty for each are Tabulated in Table 1 and shown graphically in Figure 1.

Table 1. Sound Absorption and Sound Absorption Coefficient vs. Frequency on Fabrasorb II 150 for Chemfab Corporation.

Frequency (Hz)	Absorption (Sabin)	Coefficient (Sabin/ft²)
100	34.5 ± 6.9	0.48 ± 0.10
125	29.5 ± 2.8	0.41 ± 0.04
160	34.1 ± 2.7	0.47 ± 0.04
200	37.6 ± 1.9	0.52 ± 0.03
250	29.6 ± 2.2	0.41 ± 0.03
315	29.7 ± 1.7	0.41 ± 0.02
400	25.1 ± 1.0	0.35 ± 0.01
500	30.2 ± 1.1	0.42 ± 0.01
630	41.0 ± 1.4	0.57 ± 0.02
800	41.8 ± 0.9	0.58 ± 0.01
1000	45.8 ± 0.7	0.64 ± 0.01
1250	45.9 ± 0.8	0.64 ± 0.01
1600	45.9 ± 1.0	0.64 ± 0.01
2000	45.9 ± 0.8	0.64 ± 0.01
2500	47.5 ± 0.9	0.66 ± 0.01
3150	49.4 ± 1.0	0.69 ± 0.01
4000	52.8 ± 1.6	0.73 ± 0.02
5000	57.6 ± 1.5	0.80 ± 0.02
Noise Reduction Coefficient, NRC 0.55		



Sound Absorption Coefficient (Sab/ft²) vs. Frequency (Hz)
on Fabrasorb II 150

Figure 1