

TO: Tecnifoam, Inc.
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DATE: August 14, 1990
PROJECT NO: 4143 90-0411 D

PROJECT: TECNIFOAM TF-BAFFLES: ACOUSTICAL FOAM BAFFLES

SOUND ABSORPTION TEST

GENERAL:

This report presents the results of a Sound Absorption Test conducted on acoustical foam baffles.

Twin City Testing Corporation has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST, formerly NBS) under their National Voluntary Laboratory Accreditation Program (NVLAP) for conducting this test procedure.

TEST RESULTS SUMMARY:

The average Sabins per baffle for the six octave band frequencies was 12.2 (see individual frequency values below under TEST RESULTS).

SPECIMEN IDENTIFICATION:

Manufacturer: Tecnifoam, Inc.
Type: TF-Baffles: Acoustical Foam Baffles
Size: Sample-3" X 72" X 96", Specimen-3" X 24" X 48"
Weight: 38.40lbs or 0.80psf

TEST PROCEDURE:

The test was conducted in accordance with ASTM:C423(84a), "Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method". The sample was placed near, but not at the center of a 5300 cubic foot reverberation chamber. The three 24" X 48" baffles were suspended away from the walls not parallel to any wall with a space of 2 feet between baffles (mounting type "H"). Reverberation times of the empty chamber are compared to the reverberation times of the chamber with the specimen in place to obtain absorption coefficients at the six octave band test frequencies.

TEST PROCEDURE (cont):

The sound absorption value for each frequency was calculated by the following equation:

$$A = [(A2 - A1)/S]$$

Where

- A = Absorption of test specimen, Sabins
- A1 = Absorption of empty room, Sabins
- A2 = Absorption of room with specimen, Sabins
- S = Number of Baffles

TEST EQUIPMENT:

<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>S/N</u>
Norwegian Electronics	NE830	Real Time Spectrum Analyzer	11511
Brüel & Kjær	4132	Pressure Condenser Microphone	239016
Brüel & Kjær	3923	Rotating Microphone Boom	263439
Larson-Davis	2560	Pressure Condenser Microphone	1032

TEST RESULTS:

FREQ	ABSORPTION (SABINS/BAFFLE)	C.L.	FREQ	ABSORPTION (SABINS/BAFFLE)	C.L.
125	4.44	0.07	1000	15.5	0.02
250	6.00	0.05	2000	17.9	0.01
500	10.0	0.03	4000	19.2	0.01

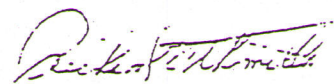
- FREQ = Frequency - Octave Band (Hz)
- ABSORPTION = Sabins per baffle
- C.L. = Uncertainty, Sabins/ft² (95% Confidence Limit)

TWIN CITY TESTING CORPORATION



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