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Investigative Chemistry Geotechnical Construction Materials Non Destructive Testing Failure Analysis Product Evaluation Metallurgical Analysis Materials Testing Welder Qualification

SOUND ABSORPTION TESTING OF WHITE POLYESTER PANELS

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The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.

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SOUND ABSORPTION / NOISE REDUCTION COEFFICIENT (ASTM C423)

INTRODUCTION:

This report presents the results of sound absorption tests conducted on a sample of polyester boards. The testing was authorized by Ms. Sumi Kim of Hueintek Inc. The testing and data analysis were completed on February 4, 2010.

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SUMMARY OF RESULTS:

NOISE REDUCTION COEFFICIENT (NRC)

Sound Abs	orption Testing	Test Results				
Test #	Sample Identification	Thickness (in)	Total Weight (lbs)	Weight (psf)	NRC	SAA
2	1/2" Polyester Panels	0.5	28.5	0.4	0.40	0.41

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SAMPLE IDENTIFICATION:

Manufacturer: Hueintek Inc Sample #2, Model #: ½" Polyester Panel Panel Size: 24" x 48" x ½"

Panel Size: 24" x 48" x ½"
Panel Weight: 3.2-lbs (0.4-psf)
Quantity of Panels: 9
Area tested: 72-ft²

Specimen Description: The material was in panel form.



TEST METHOD:

Sound Absorption Test

ASTM C 423-09," Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method", was followed in every respect. The samples were tested in a Type A mounting (on the floor).

NRC was calculated by rounding the sound absorption coefficients for 250, 500, 1000 and 2000 Hz to the nearest 0.05. SAA was calculated by rounding the sound absorption coefficients for the twelve frequencies from 200 Hz to 2500 Hz to the nearest 0.01.

TEST EQUIPMENT:

Manufacturer	Model	Description	S/N
Norwegian Electronics	NE830	Real Time Analyzer	10722
Brüel & Kjær	3923	Rotating Microphone Boom	815424
Norsonic (Source Rm)	1230	Pressure Condenser Microphone	26361
Brüel & Kjær (Term Rm)	4192	Pressure Condenser Microphone	2360314

REMARKS:

The test sample will be retained for a period of 15-days and then discarded unless notified by the client.

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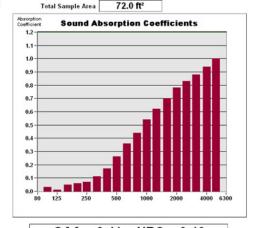
TEST DATA:

Thu, Feb 04, 2010 - 10:47 AM

F (Hz)	Absorption Coefficient	Absorption (Sabins)*
100	0.03	2.44
125	0.01	1.01
160	0.05	3.36
200	0.06	4.57
250	0.07	4.89
315	0.11	7.91
400	0.17	12.48
500	0.26	18.48
630	0.36	25.84
800	0.44	31.69
1000	0.54	38.80
1250	0.62	44.46
1600	0.70	50.15
2000	0.78	56.00
2500	0.83	59.57
3150	0.88	63.53
4000	0.94	68.00
5000	1.00	71.82



^{*} total absorption based on 72.0 ft2



SAA = 0.41 NRC = 0.40

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