

## TEST REPORT

FOR: Panelfold, Inc.

Sound Absorption Test  
RAL™-A03-068

ON: Panelfold Steel Operable Wall  
With STC 51 Construction  
As Per RAL™-TL03-135

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CONDUCTED: 10 April 2003

RESULT: NRC 0.80

### TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-02 and E795-00. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring procedure and room qualifications is available separately.

### DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as two Panelfold steel operable wall panels taken directly from a fully operable Panelfold steel operable wall that had been tested for sound transmission loss on 3 April 2003 by Riverbank Acoustical Laboratories (STC 51 per RAL™-TL03-135). The nominally 102 mm (4 in.) thick panels were constructed with a sound absorbing perforated steel face on one side and a non-perforated 0.91 mm (0.0359 in.) thick (20 gauge) steel face on the other side with steel frames and interior sound retarding material. The perforations were 2.38 mm (3/32 in.) diameter round holes having staggered centers and an approximate open area of 23%. Prior to testing, each of the two panels were 102 mm (4 in.) thick by 1.29 m (50.875 in.) wide by 2.59 m (102 in.) high including seals and weighed an average of 175 kg (385 lbs), or 52.3 kg/m<sup>2</sup> (10.7 lbs/ft<sup>2</sup>), including seals and trolley. The overall dimensions of the specimen as measured were 102 mm (4 in.) thick by 2.53 m (99.5 in.) wide by 2.54 m (99.875 in.) long, with perimeter seals and trollies removed. Each panel was 1.26 m (49.75 in.) wide by 2.54 m (99.875 in.) long and 102 mm (4 in.) thick. The weight of the entire specimen as measured was 281 kg (620 lbs), an average of 43.8 kg/m<sup>2</sup> (8.98 lbs/ft<sup>2</sup>). The area used in the calculations was 6.4 m<sup>2</sup> (69 ft<sup>2</sup>). The room temperature at the time of the test was 21°C (70°F) and 61±1% relative humidity.

### MOUNTING A

The test specimen was laid directly against the test surface. The perimeter was sealed using wood and metal framing.

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### TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.71	48.77
** 125	0.36	25.05
160	0.39	26.66
200	0.48	33.13
** 250	0.51	35.47
315	0.67	46.27
400	0.73	50.58
** 500	0.80	54.99
630	0.82	56.34
800	0.87	59.96
** 1000	0.90	62.39
1250	0.96	66.04
1600	0.96	66.18
** 2000	0.98	67.73
2500	0.96	66.39
3150	0.92	63.29
** 4000	0.89	61.14
5000	0.89	61.75

SAA = 0.80

NRC = 0.80

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TEST RESULTS (Continued)

The sound absorption average (SAA) is defined as a single number rating, the average, rounded to the nearest 0.01, of the sound absorption coefficient of a material for the twelve one-third octave bands from 200 through 2500 Hz, inclusive.

The noise reduction coefficient (NRC) is defined from previous versions of this same test method as the average of the coefficients at 250, 500, 1000, and 2000 Hz, expressed to the nearest integral multiple of 0.05.

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Tested by \_\_\_\_\_ Approved by \_\_\_\_\_

Dean Victor  
Senior Experimentalist

David L. Moyer  
Laboratory Manager

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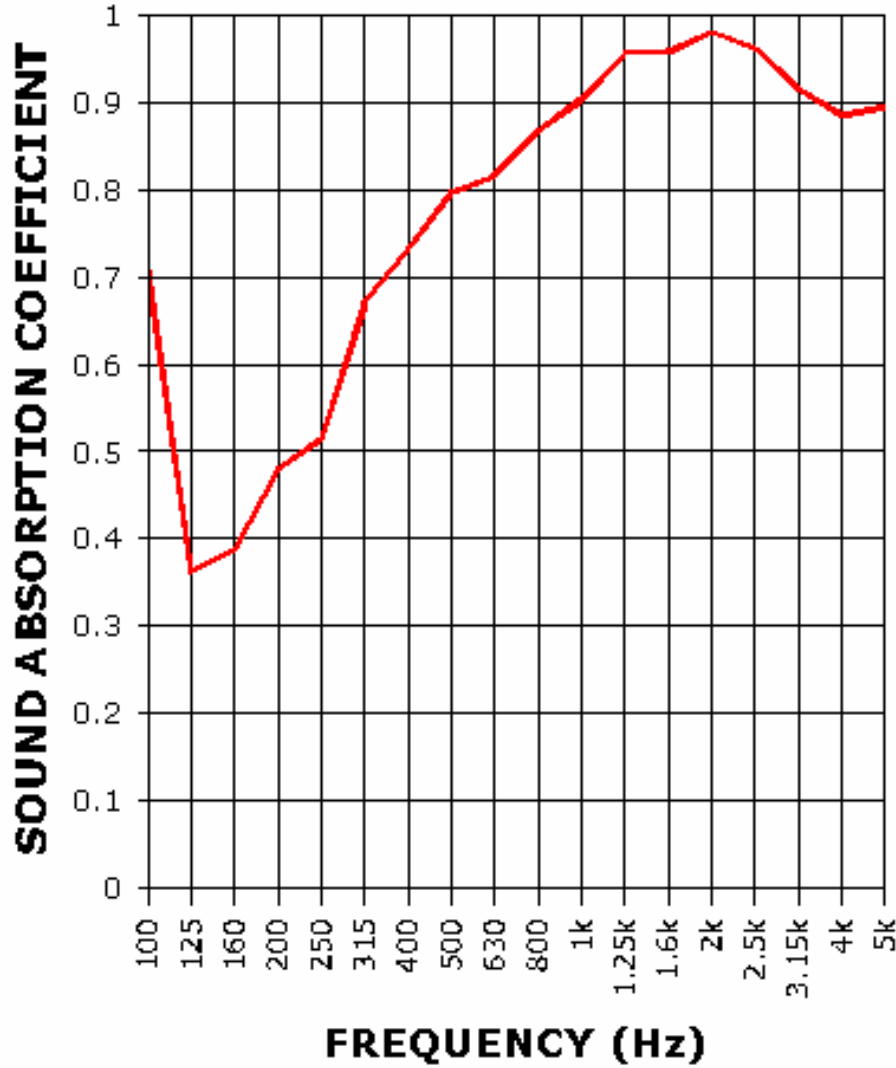
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**TEST REPORT**

SOUND ABSORPTION REPORT  
RAL - A03-068



SAA = 0.80  
NRC = 0.80

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