

REPORT NUMBER: AU12094055-2
ORIGINAL ISSUE DATE: January 19, 2013

EVALUATION CENTER

Intertek Testing Services Ltd., Shanghai Jinqiao Branch
Building T52-8, No. 1201 Gui Qiao Road,
Jinqiao Development Area, Pudong District
Shanghai 201206

RENDERED TO

Jiangsu Xiecheng Science And Technology Deve.Co.,Ltd
Industrial Zone, Jinhua county Jiangsu,China

PRODUCT EVALUATED

A2 Fire Resistant Aluminum Composite Panel
Model: PVDF 4mm 50S

EVALUATION PROPERTY

Sound Transmission Loss Test and Classification

- Report of Testing A2 Fire Resistant Aluminum Composite Panel for compliance with the applicable requirements of the following criteria: **ASTM E90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements and ASTM E413-10, Classification for Rating Sound Insulation.**

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2 Introduction

Intertek has conducted testing for Jiangsu Xiecheng Science And Technology Deve.Co.,Ltd on A2 Fire Resistant Aluminum Composite Panel - PVDF 4mm 50S, to evaluate Sound Transmission Loss Test and Classification. This evaluation began November 28, 2012 and was completed December 20, 2012.

Testing was conducted in accordance with ASTM E90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements. It was classified in accordance with ASTM E413-10: Classification for Rating Sound Insulation.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were randomly selected on November 16, 2012 by Intertek representative Star Shi, at Jiangsu Xiecheng Science And Technology Deve.Co.,Ltd manufacturing facility, located at Industrial Zone, Jintu county Jiangsu,China. Samples were received at the Evaluation Center on November 25, 2012.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

A2 Fire Resistant Aluminum Composite Panel
Nominal Thickness: 4mm
Trade name: ALMINE

The test samples consisted of one layer of A2 Fire Resistant Aluminum Composite Panel. Area of the test samples was 10 square meter.

The panel assembly system consisted of one layer of A2 Fire Resistant Aluminum Composite Panel supported by the soft wood frame forming the vertical separation between two rooms. The 40mm x 100mm soft wood was spaced 1250mm on center. The receiving room was 99 cubic meter in volume.

4 Testing and Evaluation Methods

4.1. CONDITIONING

The test specimens were conditioned in ambient atmosphere for 48 hours before testing. The ambient temperature of the source room and receiving room was 12°C, and the relative humidity was 61%.

4.2. SOUND TRANSMISSION LOSS

The test method, ASTM E90, is designed to measure the airborne sound transmission loss of building partitions, in a controlled laboratory environment. The sound-insulating property of a

partition element is expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source room and receiving room. The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

4.3. CLASSIFICATION FOR STC

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC), the greater the sound insulating properties of the partition.

5 Testing and Evaluation Results

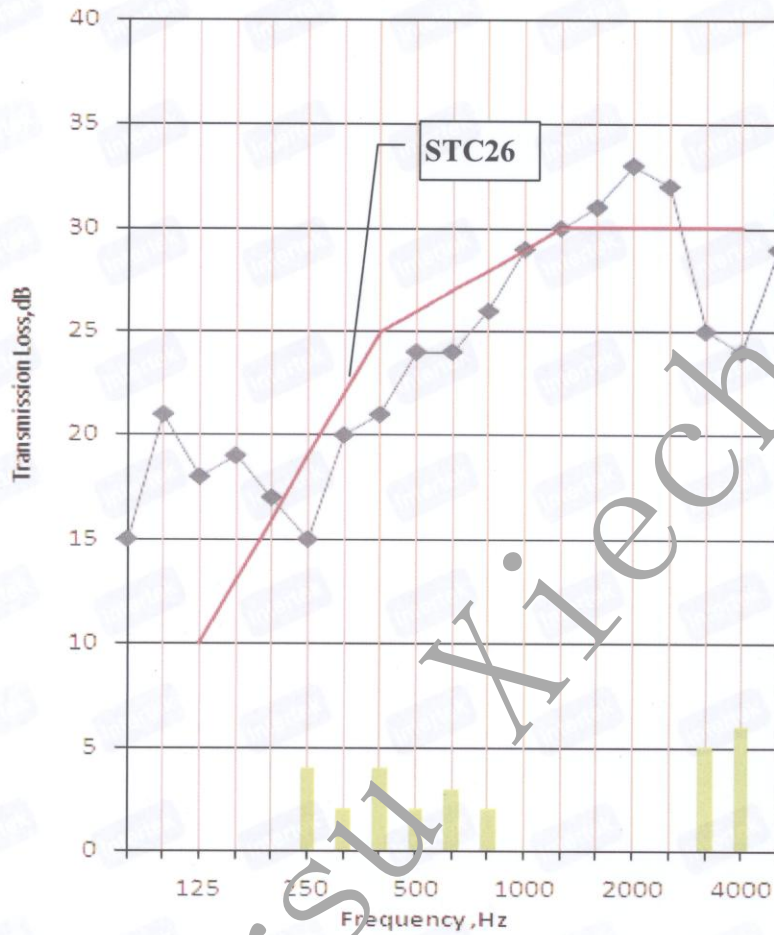
5.1. RESULTS AND OBSERVATIONS

The data obtained in the room below the panel normalized to $A_0 = 10$ square meters, is shown in Table 1 below.

1/3 Octave Band Center Frequency	Sound Transmission Loss
Hertz	dB
80	15
100	21
125	18
160	19
200	17
250	15
315	20
400	21
500	24
630	24
800	26
1000	29
1250	30
1600	31
2000	33
2500	32
3150	25
4000	24
5000	29



Table 1. Test Results (continued)	
Sound Transmission Class (STC)	26 dB



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6 Conclusion

The A2 Fire Resistant Aluminum Composite Panel-PVDF 4mm 50S identified and evaluated in this report have been tested in accordance with ASTM E90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements. It was classified in accordance with ASTM E413-10: Classification for Rating Sound Insulation.

The results were presented in Section 5 of this test report and the test method employed for this test has no pass-fail criteria. Therefore, the evaluation of the test results is left to the discussion of the client.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by:

Star Shi

Star Shi
Engineer, Building Products

Reviewed by:

Jodie

Jodie Zhou
Technical Leader, Building Products

7 Revision Page

Revision No.	Date	Changes	Author	Reviewer
0	January 19, 2013	First issue	Star Shi	Jodie Zhou

END OF DOCUMENT

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