



TEST REPORT

No. : GZIN2005020881CM

Date : Jul 01, 2020

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GZIN2005020881CM

CUSTOMER NAME: GUANGDONG TIANGE ACOUSTIC TECHNOLOGY CO., LTD.
ADDRESS: 6TH FLOOR, SUNLEAF BUILDING LIHE ROAD, LISHUI TOWN,
NANHAI DISTRICT, FOSHAN CITY, GUANGDONG, CHINA

Sample Name : Polyester fiber acoustic panel
Product Specification : 1220x2420x9mm
Manufacturer : FOSHAN TIANGE ACOUSTIC AND DECOR MATERIAL CO., LTD.
Other Information : Composition: PET

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt : May 14, 2020
Testing Start Date : May 14, 2020
Testing End Date : Jun 05, 2020
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. GZ Branch Testing
Center

Toby Yang
Authorized signatory



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Center

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I. Condition

- 1) Volume of reverberation room: 200m³
- 2) Area of test Specimen: 10.8m²
- 3) specifications: Size 600mm×1200mm
- 4) Temperature: 28°C, Relative humidity: 71%

II. Accordance

Measurement according to "Acoustics Measurement of sound absorption in a reverberation room (ENISO354:2003) equivalent to ISO 354". The equivalent sound absorption area of the test specimen A_T shall be calculated by the following equation

$$A_T = 55.3V \left(\frac{1}{c_2 T_2} - \frac{1}{c_1 T_1} \right) - 4V(m_2 - m_1) \quad (1)$$

V —the volume of the empty reverberation room (m³). c_1 —the propagation speed of sound in air during measurement of T_1 (m/s). c_2 —the propagation speed of sound in air during measurement of T_2 (m/s). T_1 —the reverberation time of empty reverberation room (s). T_2 —the reverberation time of reverberation room after the test specimen has been introduced (s). m_1 —the power attenuation coefficient during measurement of T_1 (m⁻¹). m_2 —the power attenuation coefficient during measurement of T_2 (m⁻¹).

The sound absorption coefficient α_s shall be calculated by the following equation

$$\alpha_s = \frac{A_T}{S} \quad (2)$$

S —the area of the test specimen (m²).

The equivalent sound absorption area of each seat, A_{obj} , in square metres, shall be calculated using the formula

$$A_{obj} = \frac{A_T}{n} \quad (3)$$

n —the number of test seats.

III. Instruments

B&K 2270 Investigation, Power amplifier B&K 2716, Omni directional speaker B&K 4292, Microphone B&K 4189 and accessories.



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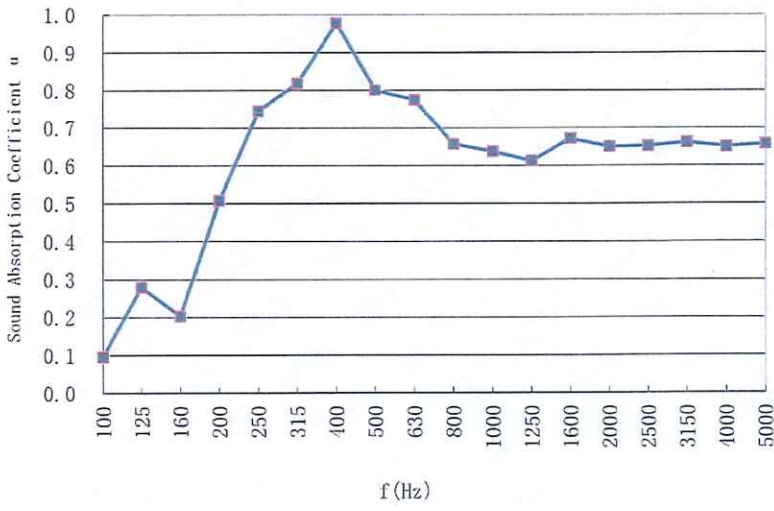
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IV. Test Results

Specifications	Test Specimen mounting type: Polyester fiber acoustic panel are mounted with an airspace (E-200) behind it, which are placed in the middle of the floor of the reverberation room and wrapped with 1mm steel panel.	
Frequency (Hz)	α_s	And the Sound Absorption Coefficients of the tested specimen are plotted as follows
100	0.10	
125	0.28	
160	0.20	
200	0.51	
250	0.74	
315	0.82	
400	0.98	
500	0.80	
630	0.77	
800	0.66	
1000	0.64	
1250	0.61	
1600	0.67	
2000	0.65	
2500	0.65	
3150	0.66	
4000	0.65	
5000	0.66	

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com



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GZCCM 041963

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Guangzhou Branch Testing/Inspection Services Co., Ltd. Material Laboratory

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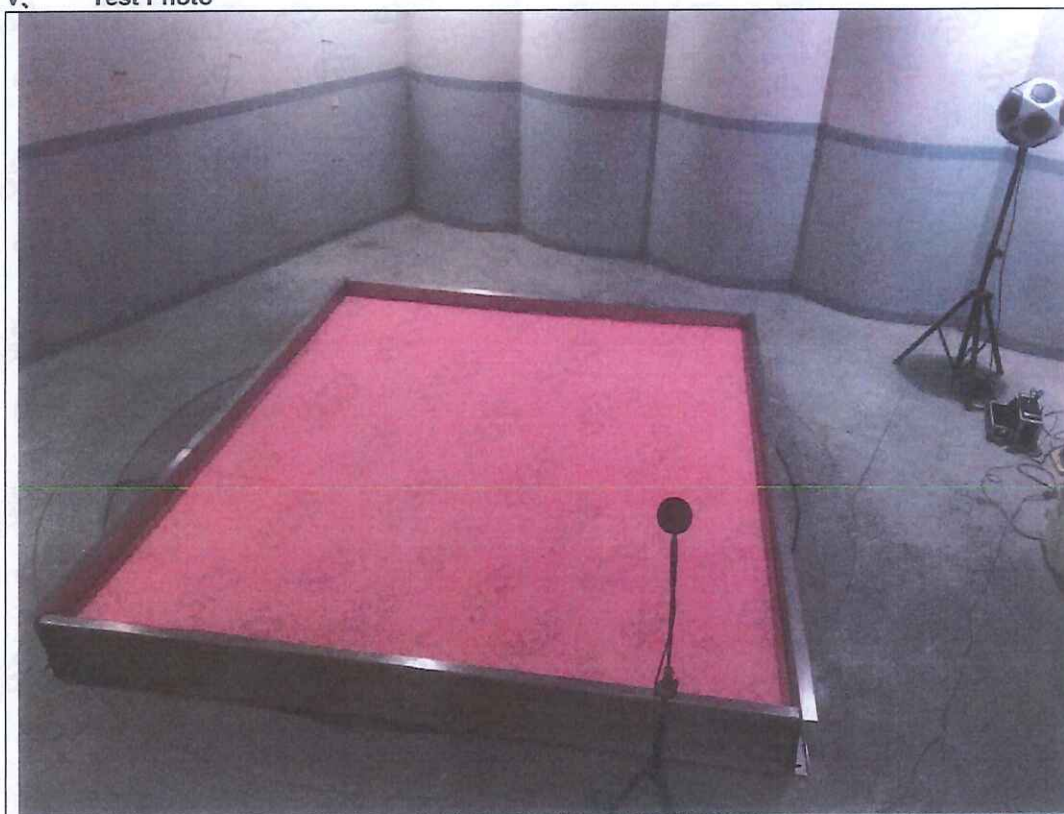
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V. Test Photo



Appendix information: The above test was carried out by Subtropical Architecture Institute South China University of Technology.

***** End of report*****



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Guangzhou Branch

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