



सी एस आई आर - राष्ट्रीय भौतिक प्रयोगशाला
CSIR - NATIONAL PHYSICAL LABORATORY

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
(Council of Scientific and Industrial Research)

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परीक्षण रिपोर्ट
TEST REPORT

Sound Transmission Loss

दिनांक/Date	परीक्षण रिपोर्ट संख्या/Test Report No.	पृष्ठ / Page	पृष्ठों की संख्या / No. of Pages
27-12-2016	16120893/D1.07/A/T-037	1	2

1. Tested for : M/s. Fusion Building Materials Private Limited,
606, Road No. 33,
Jubilee Hills,
Hyderabad - 500 033
Customer Ref. No.: Nil
dated 29/11/2016
2. Description and Identification of Items : 150 mm thick AAC Block of density 550-650 Kg/m³
(Sample size - 93 cm x 63 cm)
3. Environmental Conditions : Room Temperature: 22.0 °C
Relative Humidity: 59.0 %RH
4. Standards used and Associated Uncertainty : Working Standard Microphone,
± 0.2 dB
5. Traceability of Standard Used : The standards used for testing are traceable to
National Standards
6. Principle/Methodology of Testing and Test Procedure No. : IS:9901 (Part III)-1981, DIN:52210 Part VI-1989
ISO: 140 (Part III) - 1995,
"Measurement of Sound Insulation in Building
and of Building Elements"
Part III: Laboratory Measurements of Airborne
Sound Insulation in Building and of Building
Elements
Sub-Div # 5.07/A/Doc. 3/ TP # 15
7. Results:

As requested by the party, the acoustical material was tested for its airborne sound insulation by using two reverberation chambers under existing environmental conditions. The sample was fixed in the common opening between the two chambers. The volume of the source room was 257 m³ and that of the receiver room was 271 m³. Adequate diffusion existed in both the chambers.

परीक्षणकर्ता:
Tested by:

(Dr. Kirti Soni)

जाँचकर्ता:
Checked by:

(Dr. Mahavir Singh)

प्रभारी वैज्ञानिक:
Scientist-in-charge:

(Dr. Mahavir Singh)

जारीकर्ता:
Issued by:



डॉ. वी. के. गुम्बर
Dr. V. K. Gumber



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Using filtered noise in 1/3-octave band, the airborne sound insulation index was evaluated by measuring the average sound pressure levels generated in the source room and the receiver room and by measuring the equivalent absorption in the receiver room. The results are given below:

1/3-Octave Band Center Frequency (Hz)	Airborne Sound Insulation Index (dB)
100	33
125	31
160	30
200	29
250	32
315	35
400	40
500	43
630	39
800	43
1000	47
1250	50
1600	50
2000	50
2500	52
3150	58
4000	54

Using the standard reference curve, the sound transmission class (STC) was found to be 44.

The evaluated uncertainty in measurement is ± 1.0 dB which is at a coverage factor $k = 2$ and which corresponds to a coverage probability of approximately 95% for normal distribution.

8. Date of Testing : 23-12-2016

9. Remarks : Nil

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