



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

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)
(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
06-06-2017	17021110/D1.07/T-010	1	2

- Tested for : M/s. Andhra Polymers Pvt. Ltd.,
Plot No. 2, Phase-V,
IDA, Jeedimetla,
Hyderabad - 500 055
Customer Ref. No.: APPL/2016-17
dated 23/01/2017
- Description and Identification of Items : 15 mm thick Calcium Silicate Based Ceiling Tile of
Brand Name 'AEROLITE'
Density: 350 to 375 Kg/m³
Standard Size of Tile: 595 mm x 595 mm
(Sample size - 93 cm x 63 cm),
- Environmental Conditions : Room Temperature: 30.0 °C
Relative Humidity: 44.0 %RH
- Standards used and Associated Uncertainty : Working Standard Microphone,
± 0.2 dB
- Traceability of Standard Used : The standards used for testing are traceable to
National Standards
- Principle/Methodology of Testing and Test Procedure No. : IS:9901 (Part III)-1981, DIN:52210 Part I-1989
ISO: 16283 (Part I) - 2014,
"Measurement of Sound Insulation in Building
and of Building Elements"
Part I: Laboratory Measurements of Airborne
Sound Insulation in Building and of Building
Elements
Sub-Div # 1.07/A/Doc. 3/ TP # 15
- 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)

जारीकर्ता:
Issued by:



डॉ. वी. के. गुम्बर
Dr. V. K. Gumber

प्रभारी वैज्ञानिक:
Scientist-in-charge:

(Dr. Mahavir Singh)



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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	16
125	18
160	22
200	21
250	21
315	23
400	25
500	27
630	29
800	31
1000	32
1250	35
1600	36
2000	37
2500	38
3150	38
4000	37

Using the standard reference curve, the sound transmission class (STC) was found to be 32.

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 : 30-05-2017

9. Remarks : Nil

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(Dr. Kirti Soni)

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