



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

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)

(Council of Scientific and Industrial Research)

राष्ट्रीय मापिकी संस्थान (एनएमआई), सदस्य बीआईपीएम एवं हस्ताक्षरकर्ता सीआईपीएम - एमआरए
(National Metrology Institute (NMI), Member BIPM and Signatory CIPM - MRA)

डॉ. के. एस. कृष्णन मार्ग, नई दिल्ली-110012, भारत

Dr. K. S. Krishnan Marg, New Delhi-110012, INDIA

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परीक्षण रिपोर्ट
TEST REPORT

Sound Transmission Loss

दिनांक /Date	रिपोर्ट संख्या /Report No.	पृष्ठ /Page	पृष्ठों की संख्या /No. of Pages
15-12-2022	22111144/D1.07/T-084	1	2

1. Tested for : M/S Lotus Roofing Ltd,
No. 40/2,3, Sedarapet Industrial Estate,
Sedarapet, Puducherry - 605111
Customer Ref. No.: NIL
Dated 04-11-2022
2. Description and : 8 mm thick transparent Polycarbonate Sheet
Identification of Items (Sample size - 930 mm x 630 mm x 08 mm)
3. Environmental Conditions : Room Temperature: (23.0 ± 5.0) °C
Relative Humidity: (50.0 ± 20.0) %
4. Standards used and : Dual channel Accoustic Analyzer with
Associated Uncertainty Working Standard Microphone
: ±0.4 dB to 0.6 dB
5. Traceability of Standard Used : The standards used for testing are traceable to
National Standards which realize the units of quantities
according to the International System of Units (SI).
6. Principle/Methodology of Testing : IS 9901-3: 2019/ DIN 52210-1: 1984/ ISO 140-3: 1995
Test Procedure No. (AMD2004)/ ISO 140- 4: 1998/ ISO 16283-1: 2014/
ISO 10140-2: 2010/ASTM E90-09
“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 # 1.07/Doc. 3/ TP # 02
7. Results:

As requested by the customer, 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. Chitra Gautam)

जाँचकर्ता:
Checked by :
(Dr. Naveen Garg)

प्रभारी वैज्ञानिक:
Scientist-in-charge:
(Dr. Naveen Garg)

जारीकर्ता:
Issued by:



डॉ० श्रीनिवास राव रागम
Dr. Srinivasa Rao Ragam



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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	10
125	16
160	18
200	16
250	18
315	20
400	21
500	26
630	28
800	30
1000	33
1250	35
1600	36
2000	38
2500	39
3150	40
4000	39

Using the standard reference curve, the sound transmission class (STC) was found to be 30.

The evaluated expanded uncertainty in measurement is ± 1.6 dB in frequency range 100 Hz to 500 Hz and is ± 1.4 dB in frequency range 500 Hz to 4 kHz, 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 : 15-12-2022

9. Remarks : NIL

परीक्षणकर्ता:

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