

SOUND ABSORPTION TESTING RESULTS NRC

Sample No. S3 - Airlite Nonwovens- Quiet Batt Denim

TEST SUMMARY

Kolano and Saha Engineers, Inc. conducted Random Incidence Sound Absorption Coefficient tests in a small reverberation room using the SAE J2883 MAR2020 standard.

Below are the results for Sample No. S3, a 75 mm 186 gsf denim cotton fiber pad.

Sample Description:

- Material: Denim cotton fiberpad
- Nominal Thickness: 75 mm (Measured: 77 mm)
- Surface Density: 2.10 kg/m²
- Mounting Configuration: ASTM E795-16 Type “A” (no air gap, edges framed to minimize edge effects)

Testing Conditions:

- Temperature: 20°C
- Relative Humidity: 59%
- Barometric Pressure: 973 hPa

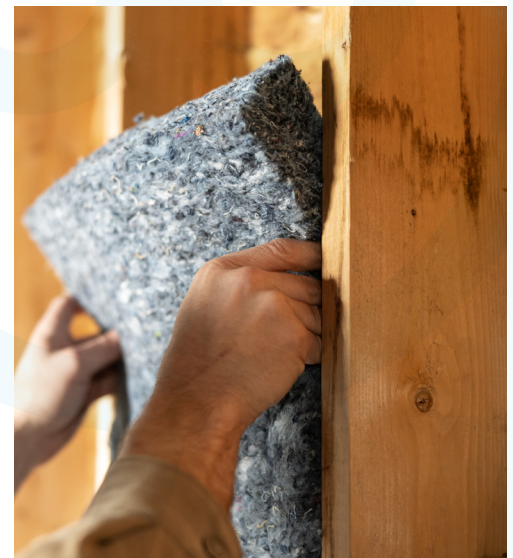
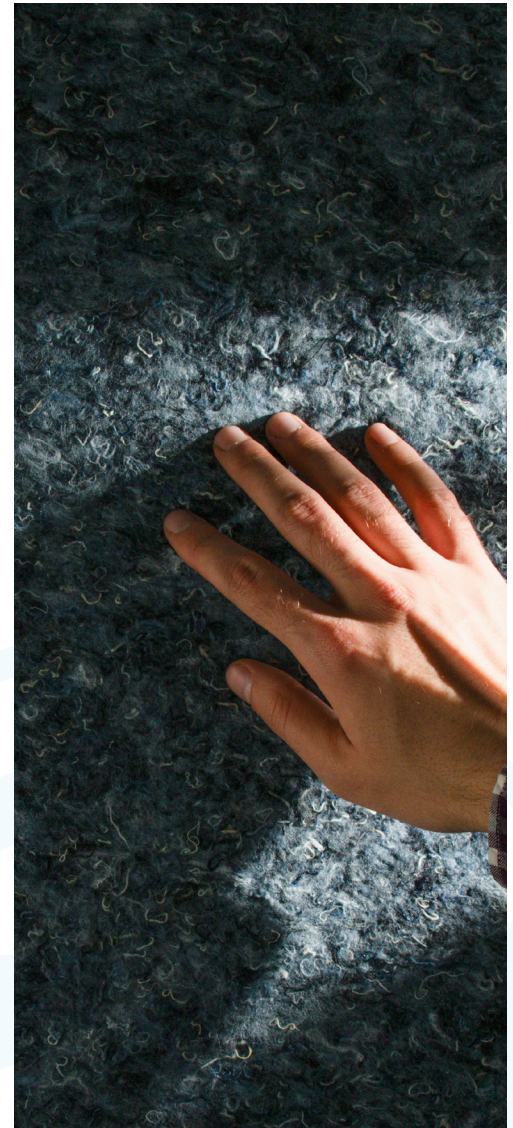
Performance Results (Random Incidence Sound Absorption Coefficients):

1/3 Octave Band Center Frequency (Hz)	Coefficient
250	0.80
500	1.37
1000	1.05
2000	0.99
4000	1.04
8000	0.99
10000	1.03

NRC Rating for S3:

The Noise Reduction Coefficient (NRC) is a single-number rating calculated as the average of the absorption coefficients at the octave band center frequencies of 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz, rounded to the nearest 0.05.

The NRC rating for Sample No. S3 is 1.0525, indicating excellent sound absorption across the tested frequency range.



Key Insights for S3:

- **Peak Performance:** The highest absorption coefficient of 1.44 was recorded at 315 Hz, indicating excellent low-frequency absorption.
- **Consistency:** Maintains coefficients above 0.99 across a broad frequency range (2500 Hz - 10000 Hz).
- **Overall Suitability:** Effective for applications requiring broad-spectrum sound absorption.

Contact:

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