

Acoustic Performance of Sagegreenlife Living Walls

Noise Reduction Coefficient (NRC) and Sound Absorption Average (SAA)

Sagegreenlife living walls provide substantial sound absorption benefits. With NRC coefficients of 0.90 and better, Sagegreenlife living walls deliver a near perfectly absorptive surface that can significantly contribute to reducing ambient noise.

Table 1 lists the measured Noise Reduction Coefficient (NRC) and Sound Absorption Average (SAA) of selected products. In addition, One-third Octave Center Frequency measurements (range 80-5,000 Hz) are available upon request.

TABLE 1

Product	Noise Reduction Coefficient (NRC)	Sound Absorption Average (SAA)
Duet Partition (48 inch model)	1.55*	1.56*
Productivity Partition	0.95	0.93
Flourish Wall (72 inch model)	0.90	0.89
Planted Biotile Only	1.15*	1.13*

**NRC ratings range from 0.00 (perfectly reflective) to 1.00 (perfectly absorptive) and are rounded to the nearest 0.05. While no material is perfectly reflective (0.00) or perfectly absorptive (1.00) NRC ratings greater than 1.00 are possible in cases where the product surface area is multidimensional and not solid – as is the case of the plant foliage of our living walls.*

Calculated Area (Duet, Productivity, Flourish): Structure Frame Area + Foliage Depth

Calculated Area (Planted BioTile Only): Plant Area + Foliage Depth

Test Facility: Testing was conducted in the Steelcase Acoustic Test Laboratory which is accredited by the ANSI-ASQ National Accreditation Board under ISO/IES 17025 for ASTM C 423, *Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method*.

Test Method: All measurements were taken within the Steelcase Acoustic Test Laboratory’s Large Reverberation Room using a calibrated Briel & Kjaer type 4165 microphone and a calibrated Briel & Kjaer PULSE Data Acquisition Unit. An exponential averaging algorithm was employed to measure and calculate reverberation times.

Sound Absorption Average (SAA) and Noise Reduction Coefficient (NRC) testing was conducted in accordance with the requirements of ASTM C 423, *Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method*.