

[Between us, ideas become reality.]®

SOUNDSCAPES® Shapes
Acoustical Clouds

Armstrong®

Acoustical Performance

Sound Absorption in Sabin

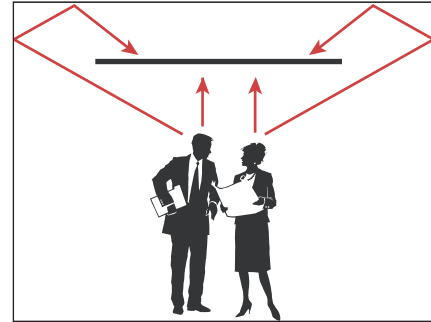
The Sabin is the unit of total sound absorption provided by an object. This is the preferred metric for “space absorbers” such as clouds, canopies or baffles installed within an architectural space.

Total acoustical absorption for a suspended ceiling is calculated by multiplying the exposed surface area by the material NRC while “space absorbers” are directly measured. SoundScapes Acoustical Clouds and Canopies provide greater sound absorption than a continuous ceiling of the same surface area because the sound is absorbed from both the front and back surfaces.

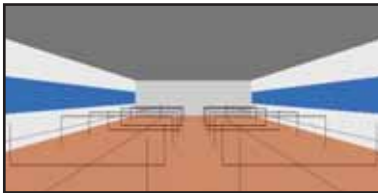
The installation of clouds and canopies in a reverberant space can significantly reduce the background noise and reverberation time, enhancing speech intelligibility.

Factors that may affect the installed acoustical performance relative to the published results are:

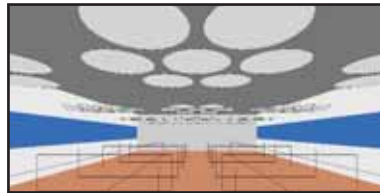
- Size and shape of cloud
- Number of clouds and their layout
- Suspension distance below exposed deck or finished ceiling
- Location and vertical or horizontal layering of clouds
- Material selection (fiberglass clouds or mineral fiber canopies)



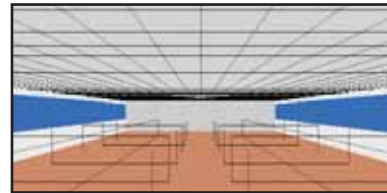
EXPOSED STRUCTURE



SOUNDSCAPES



FULL ULTIMA CEILING



5,000 SF Exposed Structure (50' x 100'), 15' to deck, drywall with windows two sides, commercial carpet

Ceiling	No Ceiling Exposed Structure	SoundScapes (25% of ceiling)		SoundScapes (50% of ceiling)		Full Ultima Ceiling
		52 SoundScapes Canopies*	105 SoundScapes Shapes-Circles	100 SoundScapes Canopies*	217 SoundScapes Shapes-Circles	
Reverberation Time(s)	3.4s	1.6s	1.4s	1.0s	0.9s	0.5s
RT Improvement	ref	+53%	+58%	+70%	+74%	+85%
Background Noise Reduction	ref	-1.6 dB	-2.0 dB	-2.6 dB	-3.0 dB	-5.0 dB
Total Sabin for Coverage Area	none	1248 sf x 1.25 = 1560	1216 sf x 1.49 = 1812	2400 sf x 1.25 = 3000	2515 sf x 1.49 = 3747	5000 sf x 0.70 = 3500

* For product information on SoundScapes Acoustical Canopies, see CS-3691

NOTE: Results based on acoustical testing of white SoundScapes Shapes circles suspended 48" below the deck. The absorption is approximately 10% lower for color panels and 20% lower for direct attachment to drywall.