LONGBOARD®
INSPIRING ARCHITECTURE

Acoustical Performance

There are three main areas of interest involving the acoustic performance of interior surfaces: sound absorption, sound transmission and sound reflection/diffusion.

Sound Absorption

Sound absorption is important for reducing the overall noise level in an area and for preventing "echoing" of sound. The common measurement is the Noise Reduction Coefficient (NRC). NRC can be achieved with Longboard systems that utilize openings in various forms like perforations, reveals, or grooves. These openings allow a percentage of sound energy to pass through into the sound absorbing materials (e.g. Soundtex scrim, fiberglass or mineral fiber batt) positioned beyond the openings.

Sound Attenuation (Blocking)

Sound attenuation rates the performance of a ceiling system as a barrier to airborne sound transmission through a common plenum between adjacent closed spaces, such as offices. This property is measured as the Ceiling Articulation Class (CAC), with higher numbers indicating better performance.

Sound Reflection/Diffusion

Acoustical materials may provide a means of reflecting or diffusing sound. The degree of reflection and the amount of diffusion are greatly affected by the type of material, density of the material and surface finish.

Metal Linear Ceilings -Closed Joint Systems	Backer (Insulation)	NRC	SAA
PROVIDED BY LONGBOARD			
2-1/2" Perforated Plank	No Backer	0.05	0.03
6" V-Groove Plank	No Backer	0.15	0.12
6" Perforated Plank	Soundtex®	0.75	0.75
LONGBOARD PLANKS WITH BACKER PROVIDED BY OTHERS			
2-1/2" Perforated Plank	Fiberglass 1" thickness @ 3lbs/ft3	0.70	0.72
6" V-Groove Plank	Fiberglass 1" thickness @ 3lbs/ft3	0.10	0.11
6" Perforated Plank	Fiberglass 1" thickness @ 3lbs/ft3	0.70	0.70
6" Perforated Plank	Fiberglass 2" thickness @ 3lbs/ft3	0.95	0.96

Metal Linear Ceilings -Open Joint Systems	Backer (Insulation)	NRC	SAA
PROVIDED BY LONGBOARD			
6" Link & Lock Baffles	No Backer	0.10	0.12
6" Dauntless Baffles	No Backer	0.05	0.05
LONGBOARD BAFFLES WITH BACKER PROVIDED BY OTHERS			
6" Link & Lock Baffles @ 6" O.C.	Fiberglass 1" thickness @ 3lbs/ft3	0.80	0.81
4" Dauntless Baffles @ 6" O.C.	Fiberglass 1" thickness @ 3lbs/ft3	0.75	0.75
6" Dauntless Baffles @ 6" O.C.	Fiberglass 1" thickness @ 3lbs/ft3	0.79	0.80
6" Dauntless Baffles @ 6" O.C. (with Insulation above rails)	Fiberglass 1" thickness @ 3lbs/ft3	0.65	0.65

The test reported in this document conformed explicitly with ASTM C423-17 "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method."