

Case Study

Application: Semi-Exposed Ceilings
Product: Martini Absorb HD Black
Performance: Sound Absorption



Black Acoustic Insulation for Semi-Exposed Ceilings

Application Overview

Commercial buildings often incorporate hard surfaced internal linings such as concrete, glass, steel and timber. These materials are commonly featured in modern architecture and play a key role in achieving interior aesthetic design goals.

Hard surfaced linings however can be problematic when room acoustics aren't managed correctly. Hard surfaced linings reflect sound waves, and when these materials are prominent they can cause excessive noise reverberation

making a space uncomfortable and unappealing. The design of a commercial building needs to go beyond aesthetics and incorporate acoustic engineering to ensure the space feels and sounds comfortable.

Semi-exposed ceiling systems that incorporate Martini Absorb HD Black can provide architects and acoustic engineers with a solution that achieves modern aesthetic design goals and acoustic performance targets.

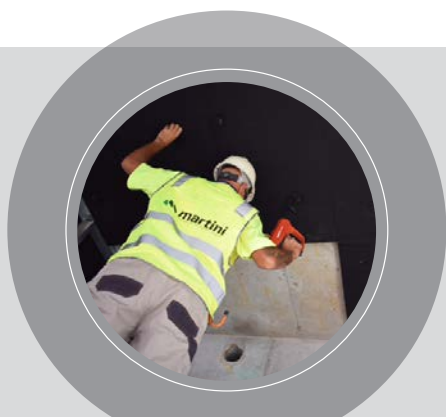


Examples of semi-exposed ceiling systems by Supawood

Supawood's Supaslat MAXI BEAM in SUPALAMI Rustic Oak laminate. Photo JadaArt.

Supawood's Supaslat MAXI BEAM in SUPALAMI Rustic Oak laminate. Photo Steve Brown.

Supawood's WAVE BLADES in Birch Plywood.



Semi-exposed ceiling with black acoustic soffit insulation

The Martini Absorb HD Black can be installed directly to the concrete soffit or installed directly behind the ceiling system.

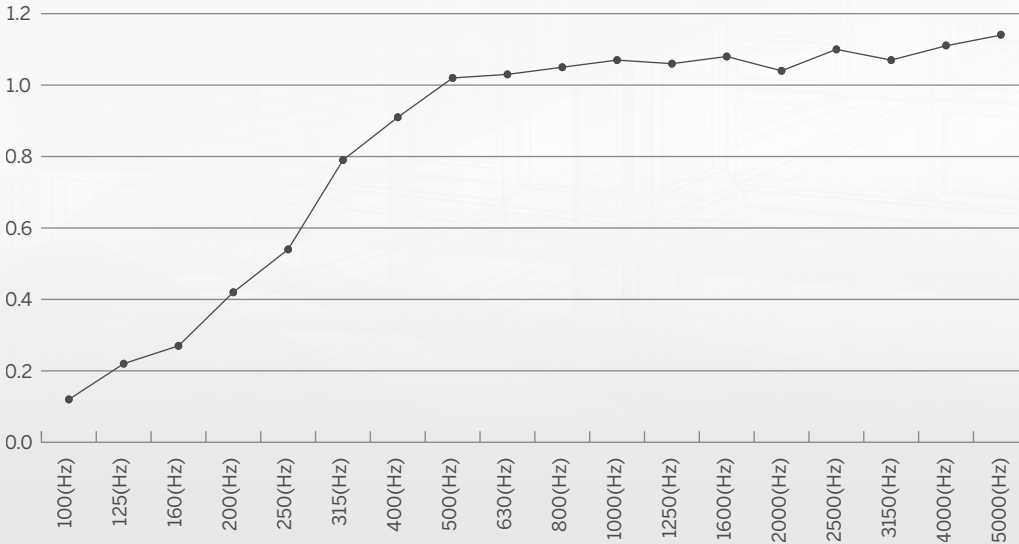
The Martini Absorb HD Black creates a backdrop for the semi-exposed ceiling and achieves high performance sound absorption across a range of frequencies.



Acoustic Performance

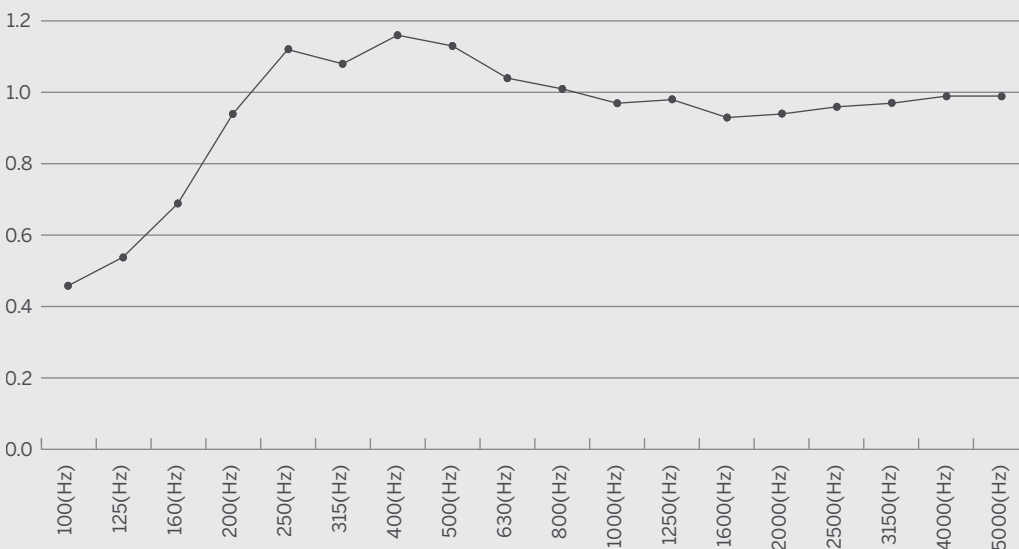
Martini Absorb HD Black is manufactured with a specific blend of very fine low denier fibres. Fibre diameter is significant for acoustic insulation products. Air trapped between fibres reacts with sound energy and is converted to heat. The more fibres per square metre of insulation, the greater the surface area for absorption, which translates into superior acoustic performance.

Martini Absorb HD 50



Frequency (Hz)	Sound Absorption Coefficients (αs)
100(Hz)	0.12
125(Hz)	0.22
160(Hz)	0.27
200(Hz)	0.42
250(Hz)	0.54
315(Hz)	0.79
400(Hz)	0.91
500(Hz)	1.02
630(Hz)	1.03
800(Hz)	1.05
1000(Hz)	1.07
1250(Hz)	1.06
1600(Hz)	1.08
2000(Hz)	1.04
2500(Hz)	1.10
3150(Hz)	1.07
4000(Hz)	1.11
5000(Hz)	1.14
aw	0.90
NRC	0.95

Martini Absorb HD 100



Frequency (Hz)	Sound Absorption Coefficients (αs)
100(Hz)	0.46
125(Hz)	0.54
160(Hz)	0.69
200(Hz)	0.94
250(Hz)	1.12
315(Hz)	1.08
400(Hz)	1.16
500(Hz)	1.13
630(Hz)	1.04
800(Hz)	1.01
1000(Hz)	0.97
1250(Hz)	0.98
1600(Hz)	0.93
2000(Hz)	0.94
2500(Hz)	0.96
3150(Hz)	0.97
4000(Hz)	0.99
5000(Hz)	0.99
aw	1.00
NRC	1.00

Technical Project Support

The DesignSmart team has a wealth of construction experience and utilise industry-leading building science research for acoustic, thermal and fire insulation products. As the experts in building insulation they can assist with:

- > project-specific support
- > value engineering challenges
- > specification documentation
- > system design detailing
- > product installation and certification

Call the DesignSmart team on **1800 354 044** or visit **BradfordDesignSmart.com.au**

