ALPHA ACOUSTIKI

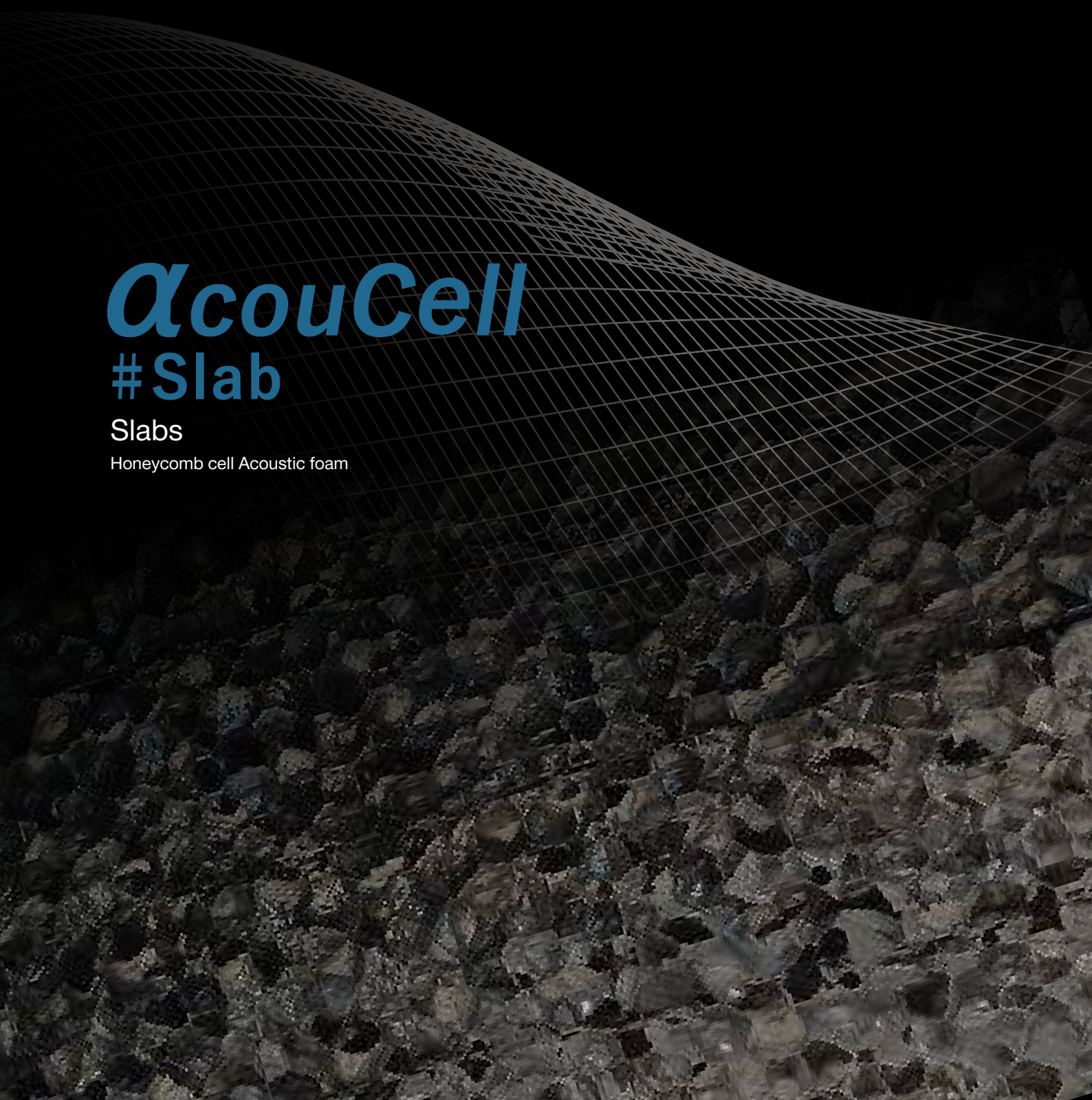
In TUNE with YOUR needs

αcouCell

#Slab

Slabs

Honeycomb cell Acoustic foam



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#Slab

Honeycomb closed cell foam

HIGH SOUND ABSORPTION - SLABS

αcouCell-Slab: An innovative acoustic material for high sound absorption in Slabs

αcouCell-Slab

Description

αcouCell-Slab is a honeycomb foam made of polyethylene foam. It has closed cells that are subsequently opened through partial perforation on both sides, which effectively traps sound and reduces the reverberation time, improving vocal clarity. In black colour its original external appearance resembles, looked at from a distance, as granite relief surface

Please contact us if it is intended for exterior installation.

Main characteristics

High sound absorption especially in the mid frequency (human speech), low weight, fiber free, structurally indedent, moisture resistant, washable surface, fire retardant.
The acoustic energy enters internally the cells stimulating the membranes of each cell converting this energy to heat.
Due to the light weight and its self supporting structure – it is very easy to be cut and installed on site.

Main advantages

Sound absorption: High sound absorption in the mid frequency
Water resistance: Provides unaltered and sustained acoustic performance in wet or humid conditions.
Strong structure: Semi-Rigid, self-supporting structure, easy to cut and easy to install on site.
Light weight: Less than 1.5kg per square metre at 50mm
Fibre free: No fibrous materials, low VOC, zero ODP, does not cause irritations, does not crumble.
Transmission loss: 13dB at 50mm thickness

Dimensions: 120 x 240 cm
Color: Dark grey/ White
Thickness: 50mm standard, 25mm upon request
Fire rating: According to DIN 4102:B1, EN 13501-1 (B, S2 d0)

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Typical applications

αcouCell-Slab can be used to offer sound absorption in a variety of projects such as recording studios, home cinemas, night clubs, restaurants, indoor pools, gyms, car washing tunnels, shooting ranges, sports halls etc. It can also be applied as ceiling vertical baffles, high speed rail/motorway Noise barriers, internal air-ducts lining, ventilation and air conditioning – sound attenuators/ silencers specially where there is high humidity, etc.
Moreover, it can be installed as self-supporting panels with mechanical support (expandable anchors with suitable washers) or liquid or spray magnetic adhesive. It is very easy to cut with a blade or a suitable saw.

Bellow you are some panel combination examples on a typical wall:

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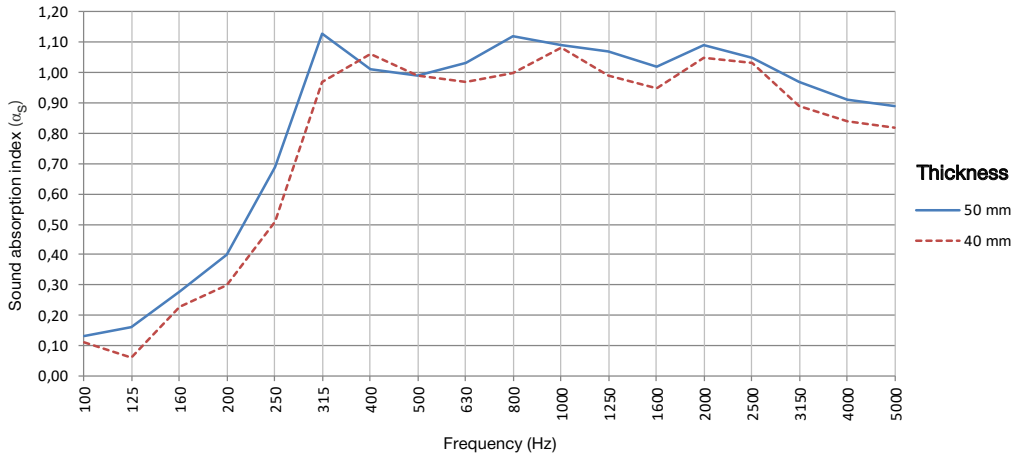
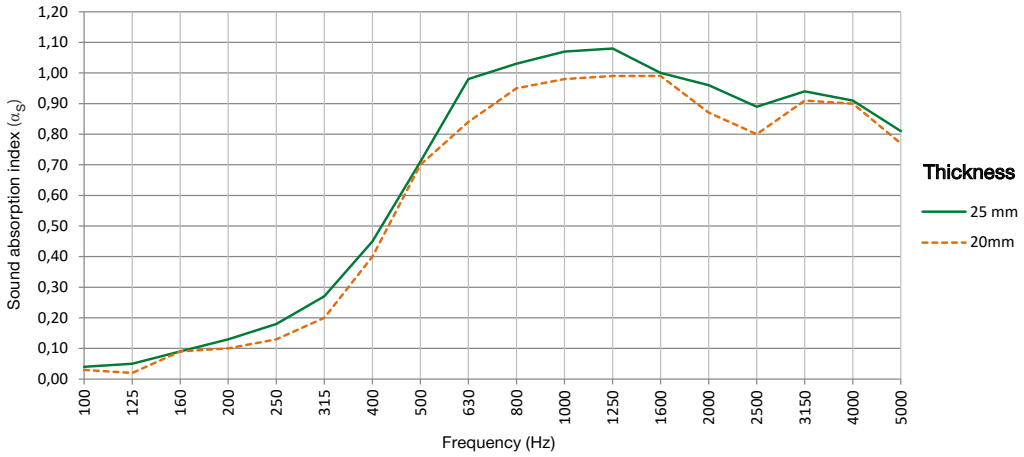
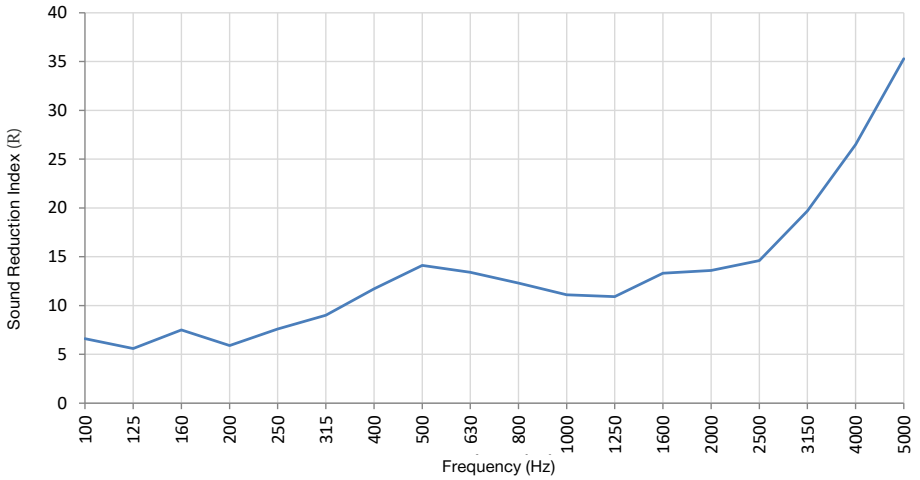
Acoustic characteristics

Lab measurements in reverberation room according to EN ISO 354





Transmission loss according to EN ISO 140 & ISO 717.1



Rw=13 dB

for 50 mm thickness

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Technical specifications

Physical Properties	Test Method	Unit	Typical Physical Properties
Nominal Density	ASTM D3575-08 Suffix W ISO 845:2006	Kg/m^3	25
Compressive Strength Vertical @ 25%	ASTM D3575-08 Suffix D ISO 7214:2007	KPa	7 12
Compressive Strength 25% (4th compression) 50% (4th compression) 70% (4th compression) (100mm/min compression speed)	ISO 3386 1986 part 1 DIN 53577	KPa	3 7 25
Compression Set	ASTM D3575-08 Suffix B (50% Compression) ISO 1856:2000 (25% compression)	%	< 30 < 20
Cell Size	BS 4443/1 Met.4	Cells/25mm	< 10
Fire-test-response Characteristics (1) Transportation Automotive Building & Construction	TS EN 45545-2 NF F 16-101 DIN 54837 FMVSS 302 DIN 4102 EN 13501-1	Class Class - Class Class	HL2 for flooring. HL1 for ceiling and wall. F1 S3, SR2, ST2 Pass B1
Water Pick Up by Diffusion (RH > 95% - after 28 days)	UNI EN 12088	Kg/m2	< 3
Water Pick Up by Diffusion (RH > 95% - after 28 days)	UNI EN 12088	Volume %	< 5
Thermal Conductivity @ 23°C @ -5°C	ASTM D3575-08 Suffix V ISO 8301	W/mK	0.104 0.082
Thermal stability (24hrs at 70°C)	ASTM D3575-08 Suffix S ISO 2796	%	< 3
Tensile Strength @ Peak	ASTM D3575 Suffix T ISO1798	KPa	130
Tensile Elongation	ASTM D3575 Suffix T ISO1798	%	60
VOC Emissions	AFNOR NF EN ISO 16000-9	Class	A+

(1) These numerical laboratory fire-test-response characteristics are not intended to reflect hazards presented by this material under actual fire conditions.

ALPHA ACOUSTIKI S.A. combines technical experience and scientific knowledge with its Engineering team, specialized in the field of room acoustics since 1980.

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Our technical department *(tech@alphacoustic.com)* would be happy to help you find the best acoustic solution for your project.

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ALPHA ACOUSTIKI

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