

SO ACOUSTIC

THE SOLUTION THAT IMPROVES ACOUSTICS
OF YOUR WALLS AND CEILINGS!



Noise pollution is today recognised as being a source of daily discomfort and stress. It has a significant impact upon health and performance.

There is an increasing number of regulations regarding acoustics. Good acoustics are not random and require the kind of know-how and expertise that Ecophon Clipso® can provide. The coverings of the SO ACOUSTIC range are specially developed and contributes to the good acoustics of your environment; they provide a source of comfort and wellbeing to which you aspire.



Library - UNITED KINGDOM - Acoustic ceiling
Installation: ACOUSTIC GRG



How can you improve the acoustic performance of your premises?

Two aspects can have an impact in this area:

- Acoustic insulation concerning the building: construction materials, partitions, windows, etc.
- The acoustic absorption which applies to different rooms and which influences the propagation of sound in these rooms.

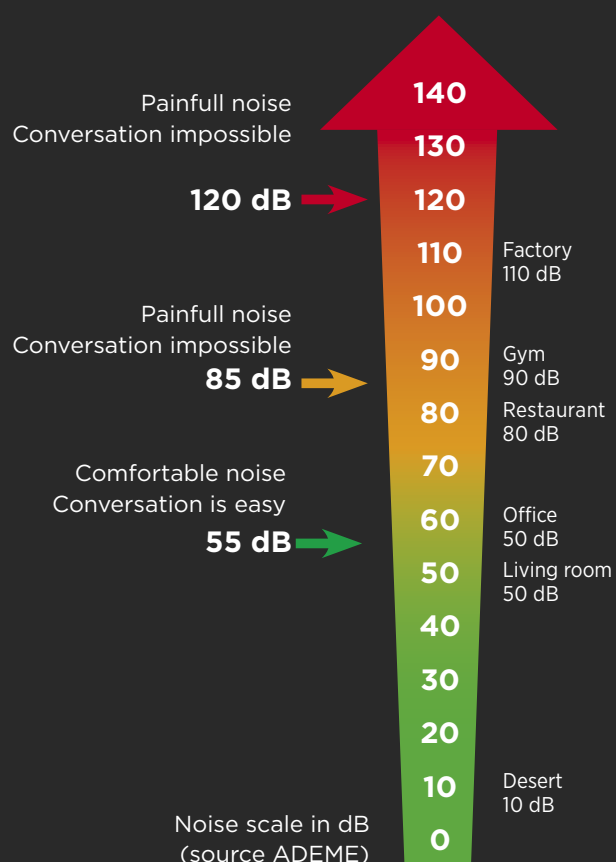
The performances from CLIPSO® coverings 495AC - 495AT - 495D - 495 D AB and 705A are ideal for acoustic absorption, and can be installed either on walls or ceilings.



What are the important parameters in terms of acoustic improvement?

To achieve good results and acoustics, several approaches must be involved:

- The level of sound pressure: the noise level measured in dB (decibels), the best-known concept to the general public
- The reverberation time: the amplitude of a room's echo
- Spoken intelligibility: ease of understanding verbal exchanges
- Acoustic insulation: amount of sound not transmitted from one room to another.











VIP Lounge at Koltsovo Airport - Russia - White acoustic covering and backlit boxes - Installation : CLIPSO UNION

WHEN TREATMENT OF LIGHT AND SOUND TRANSFORMS OUR DAILY LIVES.

Thanks to a totally innovative covering, fruit of Ecophon Clipso® research, the SO ACOUSTIC covering is a major technical achievement, associating top- notch acoustic performance with the possibility to integrate lighting in one and the same covering.

Associated with a sound absorber, the SO ACOUSTIC covering’s performance is excellent (alpha sabine 0.95) and allows you to integrate backlighting that will ensure a perfect result.

The best way to meet requirements, both aesthetic and technical, in spaces with a distinct ambience: universities, companies, museums, restaurants, shops, hotels, airports, cinemas, thalassotherapy centres and spas, etc.

-  Multiple forms
-  Acoustic
-  Translucent
-  Illuminated
-  Colors
-  Printable



MUSEUM OF TOMORROW - RIO - BRAZIL
CEILING AND CRAWLING DRESSINGS IN WHITE ACOUSTIC FABRIC • ARCHITECT: SANTIAGO CALATRAVA • INSTALLATION: DIARCO LTDA.

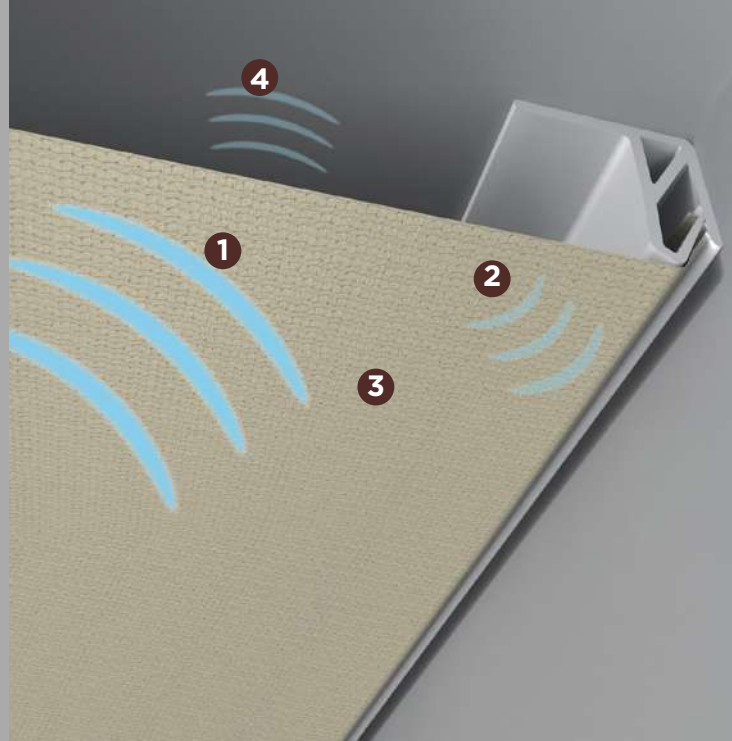
AN OPTIMAL ACOUSTIC ASSET

Ecophon Clipso® coverings together with acoustic insulators provide an excellent performance.

Thus an adapted acoustic absorption makes the space appropriate for its use. This avoids the unpleasant effects like a loss of bearings, poor intelligibility and the 'cocktail party effect'.

- 1 The start of the acoustic wave**
- 2 The sound is partially reflected upon contact with the covering**
- 3 The sound is mostly absorbed by the covering**
- 4 Sound passes through the covering**

AGRG Winchester School of Art - United Kingdom
Photographer: Anthony Greenwood Photography
Design: Absolute - Products Uses - Installation: ACOUSTIC GRG



? What exactly is the acoustic absorption coefficient?

When a sound wave meets a material, energy disperses as follows: part of it is reflected, another part is absorbed into the material and a third part passes through the material.

- The acoustic absorption coefficient results from the ratio of absorbed sound energy to incident sound energy. **It is expressed in α_s (alpha Sabine), with a grade of 1 meaning that all sound is absorbed.**
- Another significant criterion in which the Ecophon Clipso® acoustic coverings provide excellent results: the reverberation time (RT60). This is defined as the time needed for the level of sound pressure to decrease by 60 dB (decibels) after the interruption of the sound source. It is given in seconds, and the lower the time, the greater the acoustic comfort it provides. **Depending on the setting and the frequency, it is possible to gain more than 6 seconds thanks to the SO ACOUSTIC range.**

Five coverings to choose from:

- 705 A (Acoustic)
- 495 D (Acoustic)
- 495 AC (Acoustic Color)
- 495 AT (Acoustic Translucent)
- and 495 D AB (Acoustic Antibacterial).



Shopping Mall "Globus Max" - ISRAEL
Acoustic color 3-D effect ceiling - Installation: Art Cover

SO ACOUSTIC

TECHNICAL CHARACTERISTICS OF THE 495 D AND 495 AC AT COVERING

Polyester knitted fabric coated

with polyurethane (PU)

Openwork mesh, 250 000 holes/m²

Width up to 5.10 m

Thickness: 0.4 mm

Weight: 235 gr/m² (+/- 10 %)

Colours: 3 (495 D) and 29 (495 AC)

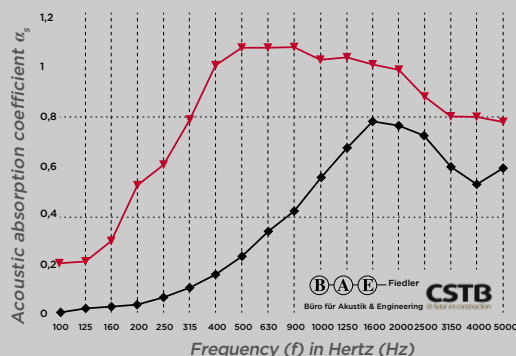
Appearance: mat, smooth and uniform

Fire reaction: Euroclass

Tear strength: CH 5.5 daN/TR 7.5 daN

Light fastness > 8

The 495 D covering offers the same acoustic performance whether printed or not.



495 D / AC covering with insulation
 $\alpha_s = 1$ - Classification: A

Original wall or ceiling

Insulation LA54 (50 mm)

Empty plenum space (55 mm)

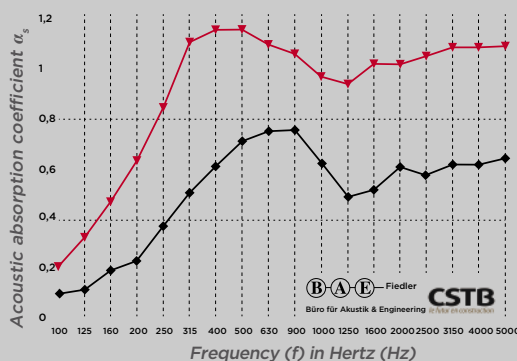
495 D / AC covering (0.4 mm)

495 D / AC covering without insulation
 $\alpha_s = 0,30$ - Classification: D

Original wall or ceiling

Empty plenum space (55 mm)

495 D / AC covering (0.4 mm)



495 D / AC covering with insulation
 $\alpha_s = 0,30$ - Classification: A

Original wall or ceiling

Insulation LA54 (50 mm)

Empty plenum space (155 mm)

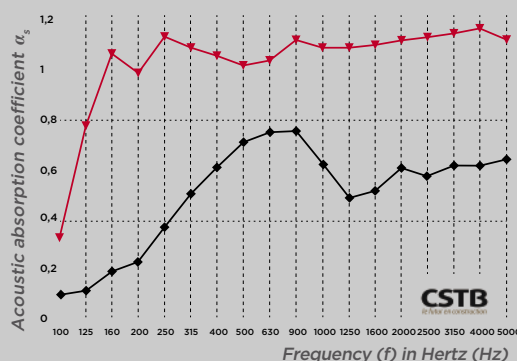
495 D / AC covering (0.4 mm)

495 D / AC covering without insulation
 $\alpha_s = 0,60$ - Classification: C

Original wall or ceiling

Empty plenum space (155 mm)

495 D / AC covering (0.4 mm)



495 D / AC covering with insulation
 $\alpha_s = 1$ - Classification: A

Original wall or ceiling

Insulation LA54 (50 mm)

Empty plenum space (355 mm)

495 D / AC covering (0.4 mm)

495 D / AC covering without insulation
 $\alpha_s = 0,55$ - Classification: D

Original wall or ceiling

Empty plenum space (355 mm)

495 D / AC covering (0.4 mm)

TECHNICAL CHARACTERISTICS OF THE 495 AT COVERING

Polyester knitted fabric coated

with polyurethane (PU)

Openwork mesh, 250 000 holes/m²

Width up to 5.10 m

Thickness: 0.4 mm

Weight: 235 gr/m² (+/- 10%)

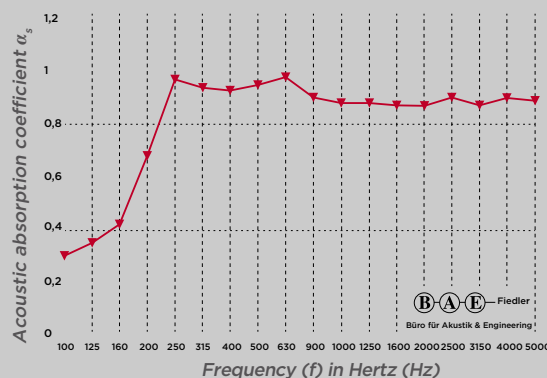
Colour: 1

Appearance: mat, smooth and uniform

Fire reaction: Euroclass

Tear strength: CH 5.5 daN/TR 7.5 daN

Light transmission: 40%



495 AT covering with insulation
 $\alpha_s = 0,95$ - Classification: A

Original wall or ceiling

Insulation LA54 (50 mm)

Empty plenum space (155 mm)

495 AT covering (0.4 mm)

Other acoustic tests are available; please address your request to our sales department:

service.commercial-clipso@saint-gobain.com



SKILLS AT YOUR SERVICE

Ecophon Clipso® strives to support you at all stages of your project; from the sales team to the technical and design teams, we put all our skills and areas of expertise at your service.

Customized being our strength, the design office evaluates the feasibility of your project. If you need technical advice for the realization of a frame, an aluminum structure or a non-standard installation, the design office Ecophon Clipso® works with you to estimate, size and determine the most suitable solution.

The success of your achievement is our requirement.

University of South Carolina - UNITED STATES - Acoustic ceiling
Architect : L3SP - Installation : Warco Constructions Inc.



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