



Foscusan Alfa
designed by Comersan



Foscusan *α*
acoustic & light absorption

[What is Foscusan Alfa?]

■ A fire resistant, black out and acoustic absorbing fabric

This material is used to fit out premises, and venues, acoustically speaking, due to the fact that it avoids sound reflections and distortions that can damage the premises acoustics.

Foscusan Alfa is a new product developed by Comersan. A construction solution meant to fulfil the HR Basic Document requirements of the Technical Building Code.

Foscusan Alfa limits the environmental sound level, improves the sound quality and makes communication between people clearer.

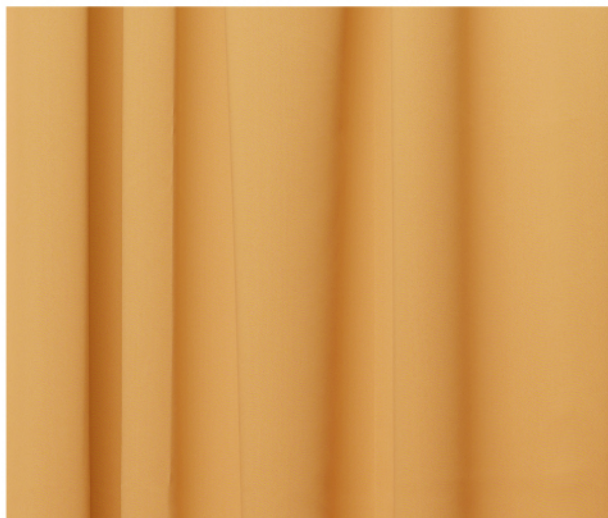
■ A fabric that improves our quality of life

At present there are many places where a big number of people gather every day, places like airports, auditoriums, restaurants, offices, theatres, or conference halls.

In all these places, the sound emitted produces an excess of reverberation, makes word intelligibility deteriorate and music quality clearly decreases.

An improved sound quality results in a better communication among people, a fact that helps focus on the conversation and avoid stress and tiredness symptoms.

Foscusan Alfa fit out the rooms to make them more habitable, healthy and efficient.

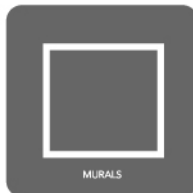
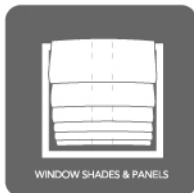


Foscusan alfa
fabric for the
acoustic comfort



Communication, relaxation and health for people

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Foscusan alfa fabric for the acoustic comfort



Communication, relaxation and health for people

How does it work?

Quality of life

Foscusan Alfa improves our quality of life, at home as well as at work, in a restaurant as well as at the cinema. It reduces problems such as:

- Reverberation excess
- Lack of intelligibility of words
- Musical quality deficiency

Main advantages

Foscusan Alfa owns several technical features that make it one of the most complete fabric, and with most technical properties.

- Fire resistant
- Black out
- Acoustic absorbing

Its technical use combines perfectly with the decoration. Thanks to its versatility, it can work either for curtains, window shades or panels.

Other Foscusan Alfa advantages:

- Easy installation, no building works required
- Cheap material
- It fulfils the European and International rules
- Takes care of the environment (Oko Tex fabric)
- Recommended as building component, included in the building element catalogue of the Valencian Building Institute.
- It can be produced as per the customer's request: especial printed designs, dying or customised panels with the customer's design, etc.

■ Foscusan Alfa colour chart



[Technical features]

■ Fabric technical value

TECHNICAL FEATURES SHEET

COMPOSITION	100% PES
WEIGHT	230 gr/m ²
WIDTH	3,00 m
ABRASION RESISTANCE	30.000 cycles (UNE-EN ISO 12947)
PILLING RESISTANCE	4-5 grades (UNE-EN ISO 12945)
COLOUR FASTNESS TO LIGHT	4-5 grades (UNE-EN ISO 105-B02)
COLOUR FASTNESS TO WASHING	4-5 grades (UNE-EN ISO 105-C06)
FIRE RESISTANT	C1 (UNE-EN ISO 13773:2003)
BLACK OUT PROPERTIES	99,5%
ACOUSTIC ABSORPTION	0,6 (DB-HR) FOR PLENUM 8,5 - 14,5 AND FULL WIDTH 100% - 150%

These are the fabric average values, for special colours you must check the technical specifications.



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REVERBERATION CHAMBER TESTS RESULTS

FOCUSAN					
PLENUM* (cm)	FULL WIDTH	ALFA (DB-HR)	ALFA W-CLASS (ISO 11654)		NRC (ASTM C-423)
14,5	Mural - W.shades	0,60	0,45	D	0,50
8,5-14,5	100%-150%	0,60	0,45	D	0,50

Focusan Alfa combined with other Comersan fabrics increases and improves the acoustic absorbing capacity.

FOCUSAN + COMERSAN FIRE RETARDANT FABRIC C1					
PLENUM* (cm)	FULL WIDTH	ALFA (DB-HR)	ALFA W-CLASS (ISO 11654)		NRC (ASTM C-423)
8,5-20,5	150%	0,83	0,70	C	0,75

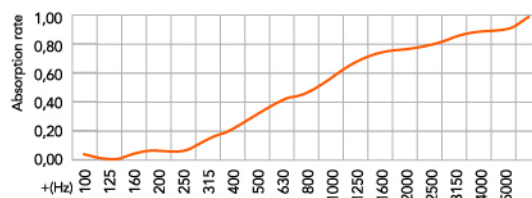
* Plenum: Air Chamber. Distance or existing space between the textile application and the wall on the one that is located.

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Acoustic function

■ F.Alfa - Technical specifications Plenum 14.5cm. Full width 100%

UNE EN ISO 354:2004



ACOUSTIC ABSORPTION RATE TABLE

f (Hz)	Alfa UNE EN ISO 354:2004	DB-HR
125	0,04	
250	0,14	
500	0,40	0,40
1000	0,67	0,65
2000	0,81	0,80
4000	0,94	

COMPLEMENTARY INFORMATION

ISO 11654	α_w	0,40
	CLASE	D
ASTM C-423	NRC	0,50
DB-HR	α_{half}	0,62

Tests carried out in the reverberating chamber at the Polytechnic school in Gandia (EPSG) of the Polytechnic University in Valencia (UPV), where the real conditions of the curtains have been reproduced. All the resulting values are ideal for curtain use as sound absorbing for the excessive reverberating sound created in the DB-HR.

■ Complete results table

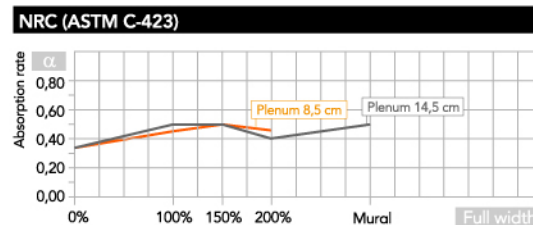
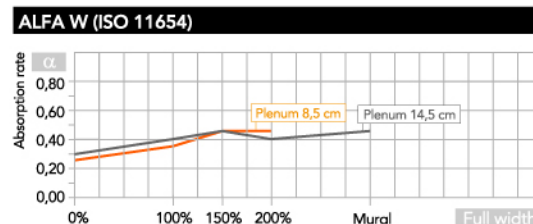
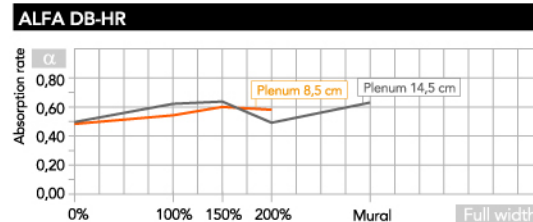
FOSCUSAN ALFA					
PLENUM* (cm)	FULL WIDTH	ALFA (DB-HR)	ALFA W-CLASS (ISO 11654)		NRC (ASTM C-423)
8,5	0%	0,47	0,25	E	0,35
14,5	0%	0,48	0,30	D	0,35
8,5	100%	0,57	0,35	D	0,45
14,5	100%	0,62	0,40	D	0,50
8,5	150%	0,60	0,45	D	0,50
14,5	150%	0,63	0,45	D	0,50
8,5	200%	0,58	0,45	D	0,45
14,5	200%	0,48	0,40	D	0,40
14,5	MURAL	0,62	0,45	D	0,50

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FOSCUSAN ALFA + COMERSAN FIRE RETARDANT FABRIC C1					
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* Plenum: Air Chamber. Distance or existing space between the textile application and the wall on the one that is located.

■ Result graphic documents

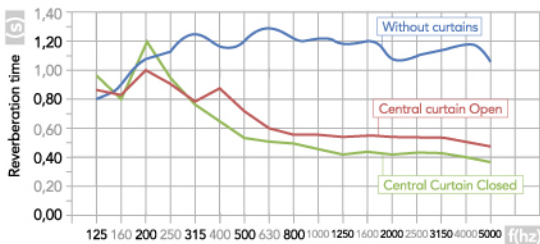


Official Reverberation time measurement

Acoustic fitting-out example of Comersan meeting hall

Evaluation of the real situation before and after FocuSan Alfa acoustic treatment in the meeting hall. The hall has been fitted out with curtains made of FocuSan Alfa.

COMPARATIVE GRAPH



IMAGES OF THE THREE MEASUREMENTS

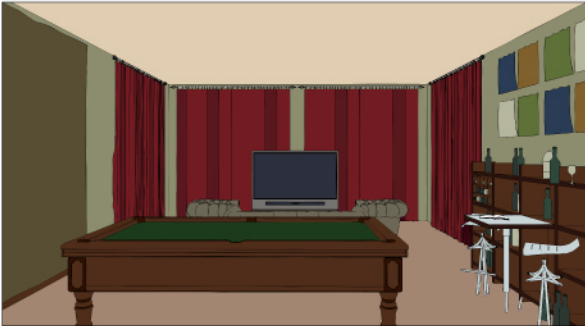


Summing up

Taking the Technical Building Code DB-HR criterion into account, **the hall is well equipped acoustically speaking thanks to the curtains made of FocuSan Alfa.**

The fact that these curtains have been used, **makes the levels of sound pressure be reduced in 3dB approximately, which is equivalent to reducing the sound acoustic energy into half.**

Focusan Alfa application examples



Leisure room application



School dining room and classroom application



Assembly and conference hall application



Meeting room and offices application

[Innovation as the company philosophy]

■ I+D+i recognition

Thanks to our philosophy, many new products have been developed in Comersan in the Technical innovation field, such as Foscusan Alfa, which has been the result of research, testing and redesigning, all of which have always been present in our history as our corporate culture support.



nova^{GS}
Premis de l'empresa valenciana

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[Quality guarantee]

■ A well-known quality product

Foscusan Alfa has passed many tests, which have made it to be recognised as a technical textile, and an ideal material to acoustically fit out any kind of area.

Recommended as building component, included in the building element catalogue of the Valencian Building Institute.



■ Classification and test rules

UNE EN ISO 354:2004

Acoustics. Measurement of acoustic absorption in a reverberating chamber (ISO 354:1985).

UNE EN ISO 11654:1998

Acoustic absorbing material to be used in buildings. Acoustic absorbing evaluation (ISO 11654: 1997).

DB-HR OF THE BUILDING TECHNICAL CODE

Basic Document for sound protection to be obligatory fulfilled in any new buildings, extension works, modification, refurbishing, restoration carried out in existing buildings.

SOUND REDUCTION RATE NRC (ASTM C-423)



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