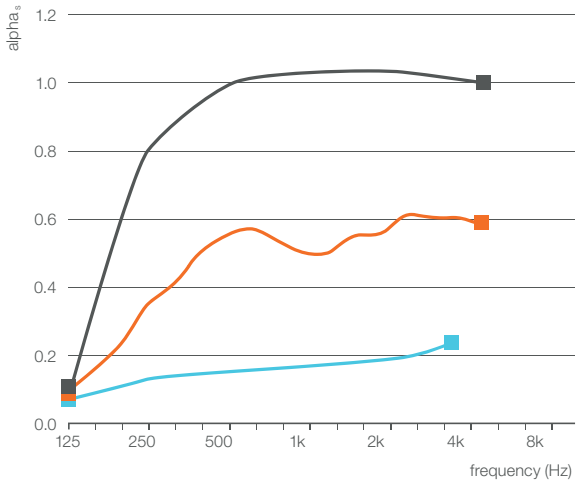
Akustické záclony Marmara

Trasparente | **Transparent** | Transparent
88% Trevira® CS, 12% Pes FR
312 gr/m²
300 cm
α_W 0,50
Classe 1, M1, B1, BS 5867-2
5 - 6

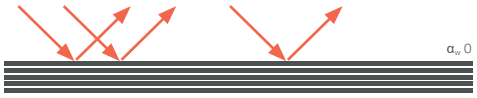


15 cm gap between curtain and window or wall, fully pleated.

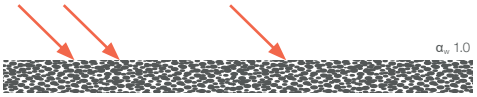
- Light, translucent curtain. α_w 0.15
- Marmara α_w 0.5
- Heavy, opaque curtain. α_w 1.0

restringimento max. 0,4%
max. 0,4% shrinking
max. 0,4% de rétrécissement

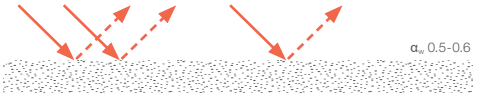
sound reflection vs. sound absorption



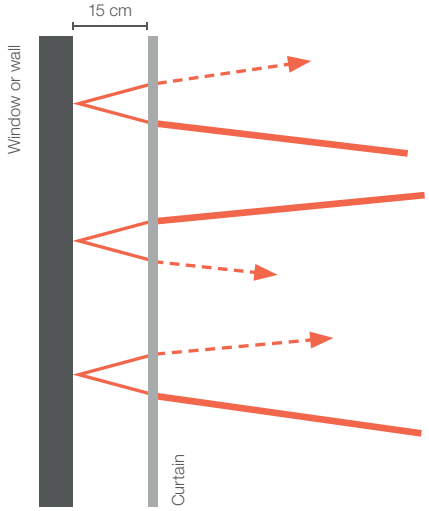
Reflection, no absorption.
Examples include concrete, glass and marble.



Absorption. All sound is absorbed. No reflection.
For example, heavy, opaque curtains.



Partial absorption. Some of the sound is absorbed.



Trasparenza
Transparency
Transparence

Spessore
Thickness
Epaisseur

Protezione termica
Thermal protection
Protection thermique

Proprietà acustiche
Acoustic properties
Propriétés acoustiques

Composizione
Composition
Composition

Larghezza
Width
Largeur

Diversi livelli di trasparenza
Various transparencies levels
Plusieurs dégrés de transparence

Antibatterico
Antibacterial
Antibacterien

Peso
Weight
Poids

Resistenza al fuoco
Flame retardant
Classement au feu

Applicazioni Interne/Esterne
Internal/External applications
Applications Intérieures/Extérieures

Green Building
Green Building
Green Building

Adatto a luoghi umidi
Applicable in humid areas
Applicable aux lieux humides

Resistenza alla luce
Colour fastness
Résistance à la lumière

Ottimizzato per postazioni di lavoro
Optimised for workstation
Préconisé pour les postes de travaille

Adrems s.r.o. Bubenečská 258/9, Praha 6, info@adrems.cz www.adrems.cz
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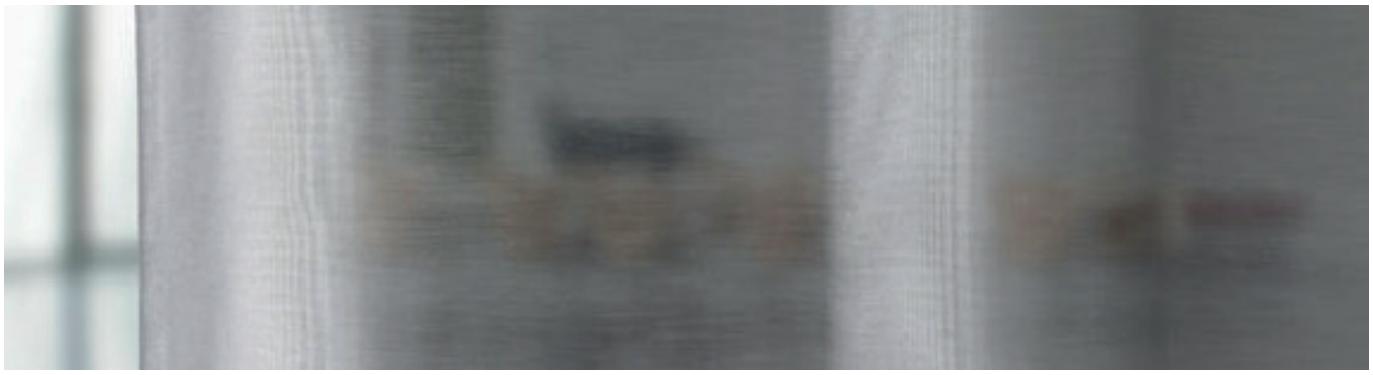
Akustické záclony Marmara



binder
curtain
03
sheer/transparent

description
mat unpatterned fabric with a glossy reverse side; can be used on both sides

composition
100% flame retardant polyester

width
± 300 cm, ± 118 inches

weight
± 312 gr/m¹, ± 10 oz/yd¹ fabrics

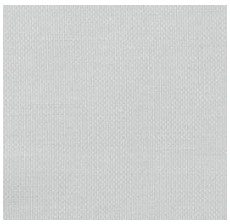
sound absorption
ISO 354
alphaw 0.5

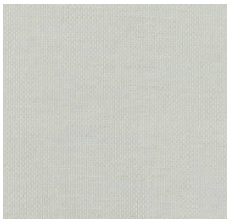
flame retardancy
EN 13773, class 1
BS 5867 – 2, type C
NF P 92 / 503 – 507, M1
DIN 4102, B1
UNI VF 8456 – 8457, classe 1
NFPA 701
IMO 2010 FTP part 7
CAN ULC S109

colorfastness to light
ISO 105 B02
5 (scale 1-8)
AATCC 16.3: 60 hours
5 (scale 1-5)

care
shrinkage: warp -0.4% / weft -0.4%
shrinkage: warp -0.4% / weft -0.8%

colorfastness to crocking
ISO 105 X12
wet 4-5 / dry 4-5 (scale 1-5)
AATCC 8
wet 5 / dry 5 (scale 1-5)


01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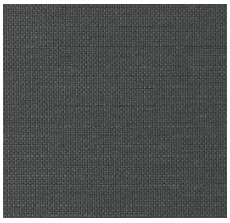
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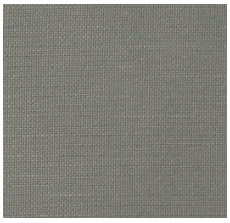
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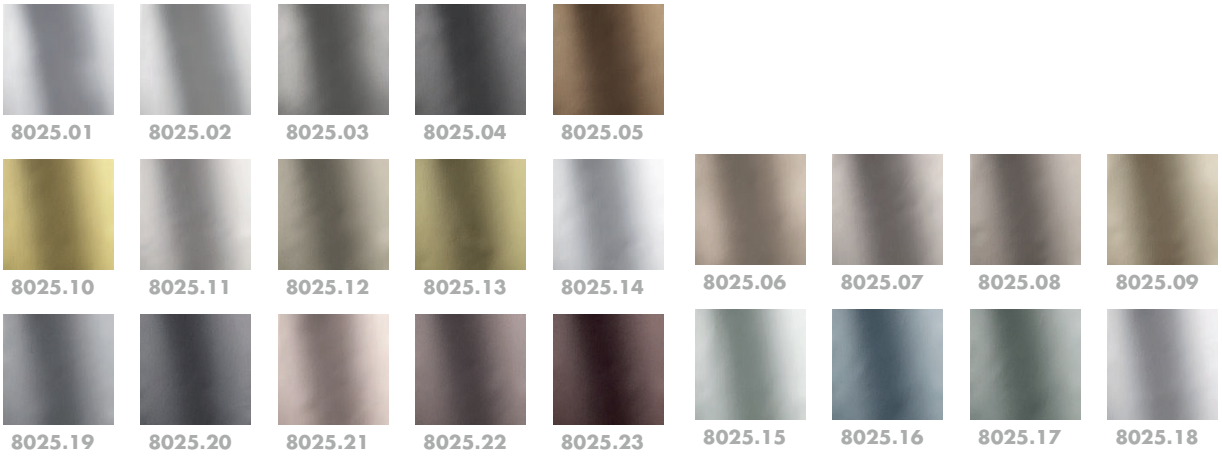

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Materials Science & Technology

Vescom B.V.
Postbus 70
5750 AB Deurne
Holland

Test Report
No. 207872.1.R
int. Nr. 617.5753

Assignment:	**Measurement of the sound absorption coefficient (reverberation room method)** in accordance with Standard EN ISO 354		
Test object:	**Annette Douglas Textiles ACOUSTICS ®, curtain Whisper, 0% fullness, mounting distance 150 mm** (Layout: see sketch, page 2)		
Client Reference:	Vescom B.V.		
Date of assignment:	01.01.2010		
Receipt of test object:	25.02.2011	EMPA reference:	575301
Installation of test object:	28.02.2011	Performed by:	R. Pieren
Execution of test:	28.02.2011	Performed by:	R. Diggelmann
Number of pages:	2		
Attachments:	1: Fundamentals, Calculations 2: Test Facility		

The measurement of the sound absorption of absorbing materials as well as the data analysis and determination of the sound absorption coefficient α_S is described in Standard EN ISO 354 (2003). Details of the measurement procedure, the test layout, installation and dimensions of the test facility (reverberation room), a list of the measurement equipment and the respective calibration dates are to be found in the internal Quality Assurance Document SOP-177-6 (Nr. 1059).

The description of the object and the results are presented on page 2. The numerical data represent the official values. These values are limited to the objects actually measured in the EMPA facility; they cannot necessarily be applied to a series.

The measurement accuracy for α_S is given as the standard deviation as a function of frequency in accordance with previous experience for the equipment employed:
Low frequency range 100 - 250 Hz: +/- 0.1; Middle frequency range 315 - 800 Hz: +/- 0.05;
High frequency range 1000 - 5000 Hz: +/- 0.02.

In the reverberation chamber a test area of 3m x 4m was fixed on a closed frame of height 150 mm.

Reprint of the test report of 21. March 2011

Swiss Federal Laboratories for Materials Testing and Research, Laboratory of Acoustics
Dübendorf, 22. June 2012

Vice Head of Laboratory:
R. Bütikofer

Head of Laboratory:
K. Eggenschwiler

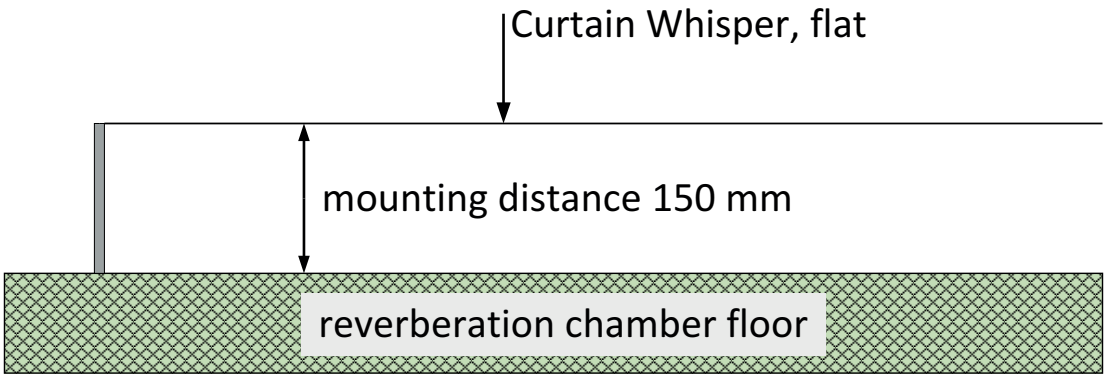
STS 068

Sound Absorption Coefficient (Reverberation room)

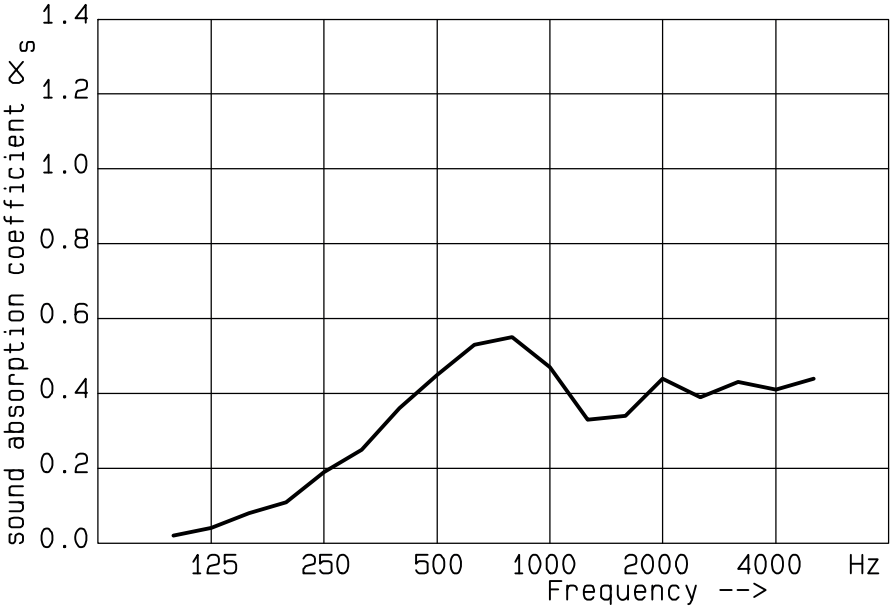
Object: Annette Douglas Textiles ACOUSTICS®, curtain Whisper, 0% fullness, mounting distance 150 mm

Test: Reverberation room EMPA Dübendorf Volume V: 215 m^3 Measurement no. 1
Temperature: 21 °C Relative humidity: 58 % Area S: 12,0 m^2 Date: 28.02.2011

Photograph and schematic vertical cut of the setup in the reverberation chamber



Frequency [Hz]	α_s
100	0.02
125	0.04
160	0.08
200	0.11
250	0.19
315	0.25
400	0.36
500	0.45
630	0.53
800	0.55
1000	0.47
1250	0.33
1600	0.34
2000	0.44
2500	0.39
3150	0.43
4000	0.41
5000	0.44



Averages of α_s:

100 - 315 Hz: 0.11 400 - 1250 Hz: 0.45 1600 - 5000 Hz: 0.41
500 - 2000 Hz: 0.44 125 - 4000 Hz: 0.34 100 - 5000 Hz: 0.32

Evaluation acc. EN ISO 11'654 (1997):

α_p: 250Hz: 0.20 500Hz: 0.45 1000Hz: 0.45 2000Hz: 0.40 4000Hz: 0.45 α_w: **0.45**

Methode of measurement: ISO 354 MLS-based measurement; 1/3 octave filters; T20

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Holland

Test Report
No. 207872.7.R
int. Nr. 617.5753

Assignment:	**Measurement of the sound absorption coefficient (reverberation room method**) in accordance with Standard EN ISO 354
Test object:	**Annette Douglas Textiles ACOUSTICS ®, curtain Whisper, 100% fullness,mean mounting distance 150 mm** (Layout: see sketch, page 2)
Client Reference:	Vescom B.V.
Date of assignment:	01.01.2010
Receipt of test object:	25.02.2011
Installation of test object:	01.03.2011
Execution of test:	01.03.2011
Number of pages:	2
Attachments:	1: Fundamentals, Calculations 2: Test Facility

		EMPA reference:	575307
		Performed by:	R. Pieren
		Performed by:	R. Diggelmann

The measurement of the sound absorption of absorbing materials as well as the data analysis and determination of the sound absorption coefficient α_S is described in Standard EN ISO 354 (2003). Details of the measurement procedure, the test layout, installation and dimensions of the test facility (reverberation room), a list of the measurement equipment and the respective calibration dates are to be found in the internal Quality Assurance Document SOP-177-6 (Nr. 1059).

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The measurement accuracy for α_S is given as the standard deviation as a function of frequency in accordance with previous experience for the equipment employed:
Low frequency range 100 - 250 Hz: +/- 0.1; Middle frequency range 315 - 800 Hz: +/- 0.05;
High frequency range 1000 - 5000 Hz: +/- 0.02.

In the reverberation chamber a test area of 3m x 4m was draped on tensioned wires on a closed frame of height 185 mm.

Reprint of the test report of 21. March 2011

Swiss Federal Laboratories for Materials Testing and Research, Laboratory of Acoustics
Dübendorf, 22. June 2012

Vice Head of Laboratory:
R. Bütikofer

Head of Laboratory:
K. Eggenschwiler

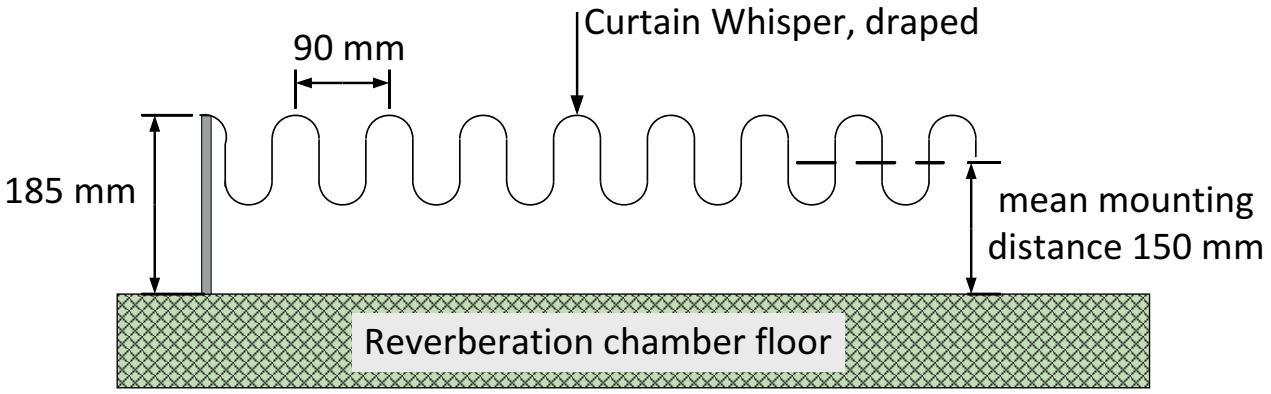
STS 068

Sound Absorption Coefficient (Reverberation room)

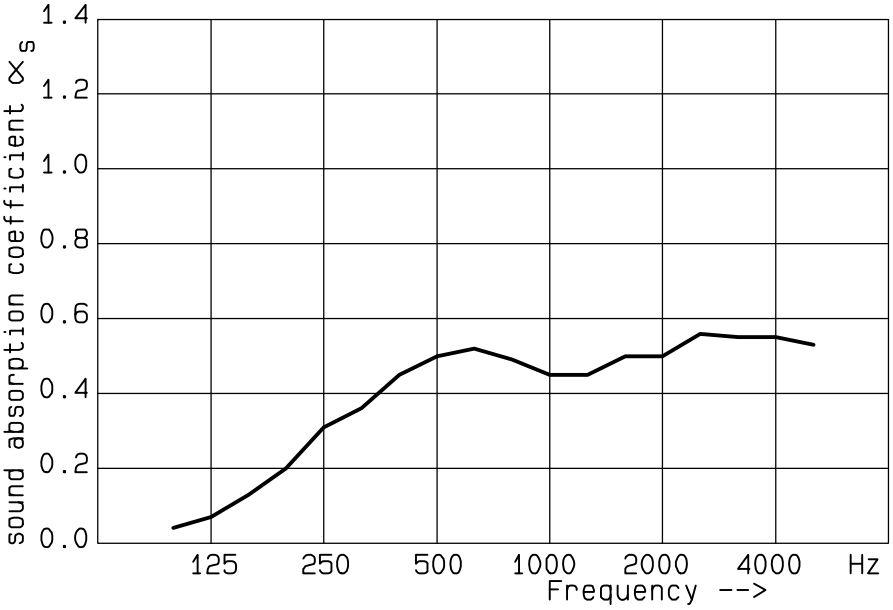
Object: Annette Douglas Textiles ACOUSTICS®, curtain Whisper, 100% fullness, mean mounting distance 150 mm

Test: Reverberation room EMPA Dübendorf Volume V: 215 m^3 Measurement no. 7
Temperature: 21 °C Relative humidity: 59 % Area S: 12,0 m^2 Date: 01.03.2011

Photograph and schematic vertical cut of the setup in the reverberation chamber



Frequency [Hz]	α_s
100	0.04
125	0.07
160	0.13
200	0.20
250	0.31
315	0.36
400	0.45
500	0.50
630	0.52
800	0.49
1000	0.45
1250	0.45
1600	0.50
2000	0.50
2500	0.56
3150	0.55
4000	0.55
5000	0.53



Averages of α_s:

100 - 315 Hz: 0.18 400 - 1250 Hz: 0.48 1600 - 5000 Hz: 0.53
500 - 2000 Hz: 0.49 125 - 4000 Hz: 0.41 100 - 5000 Hz: 0.40

Evaluation acc. EN ISO 11'654 (1997):

α_p: 250Hz: 0.30 500Hz: 0.50 1000Hz: 0.45 2000Hz: 0.50 4000Hz: 0.55 α_w: **0.50**

Methode of measurement: ISO 354 MLS-based measurement; 1/3 octave filters; T20