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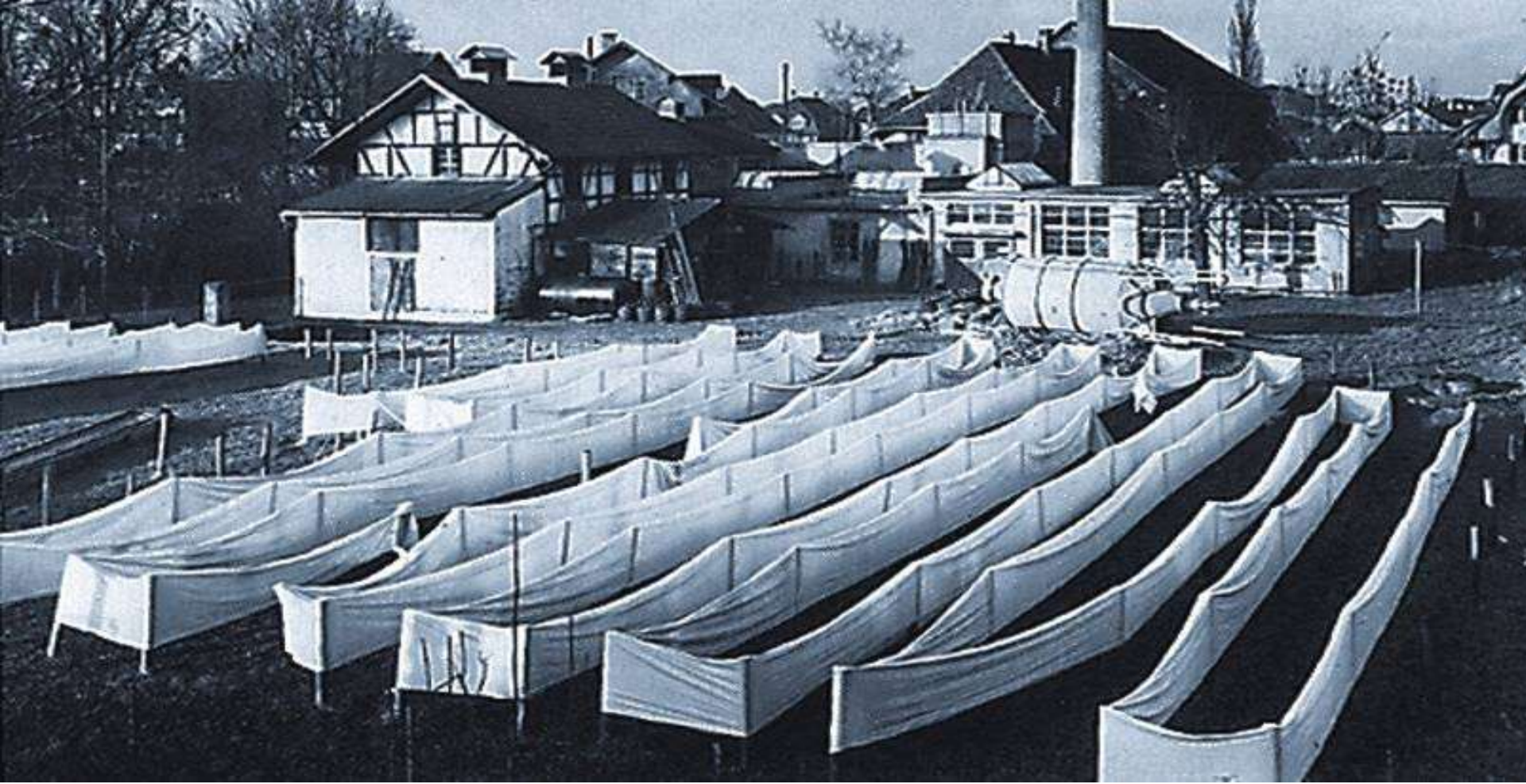
OUR VISION

Our fabric solutions contribute to improving well-being in public and private spaces.

We are the most innovative supplier of interior fabric solutions. Our thoughts and actions are geared towards consumer requirements.



DEVELOPMENT PROCESS

«From the first idea to the finished fabric, everything under one roof, which is the basis for our textile success»


CANADA
UNITED STATES
RUSSIA
CHINA
INDIA
BRAZIL
AUSTRALIA
Antarctica


GESTAPELTE
RÄUME


CRÉATION BAUMANN | OFFICE


KUNSTBAU

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FABRICS FOR ACOUSTICS – EFFECT AND USE

AGENDA

1. Acoustics: Starting point
2. Control the Acoustic textiles

3. Basics of Acoustics
4. Sound absorbing textiles
5. Measurement protocol / certificates
6. Room acoustic calculator
7. References / use

8. Acoustic Divider Vario
9. Acoustic Textiles Création Baumann

ACOUSTICS: STARTING POINT

- Noise pollution is becoming increasingly prevalent in many areas of our everyday lives.
- Good room acoustics ensure speech intelligibility and well-being in the room, in the private and in the contract market.
- The acoustic quality of a room, or rather its acoustic suitability for its particular use, is determined by the sum of all equipment and materials in the rooms.
- DIN 18041 audibility in rooms gives recommendations for reverberation values.
- Studies show the relevance of good room acoustics.

















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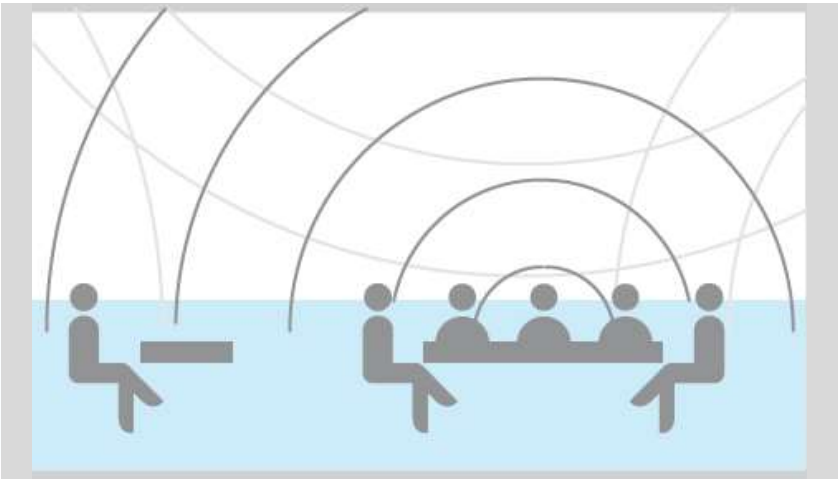
CONTROL SOUND WITH TEXTILES

- Good room acoustics increase the well-being.

- High flexibility with textile solutions.
- Easy implementation in assembly with high acoustic efficiency.
- Control of the acoustic room effect by sound absorption and sound insulation.

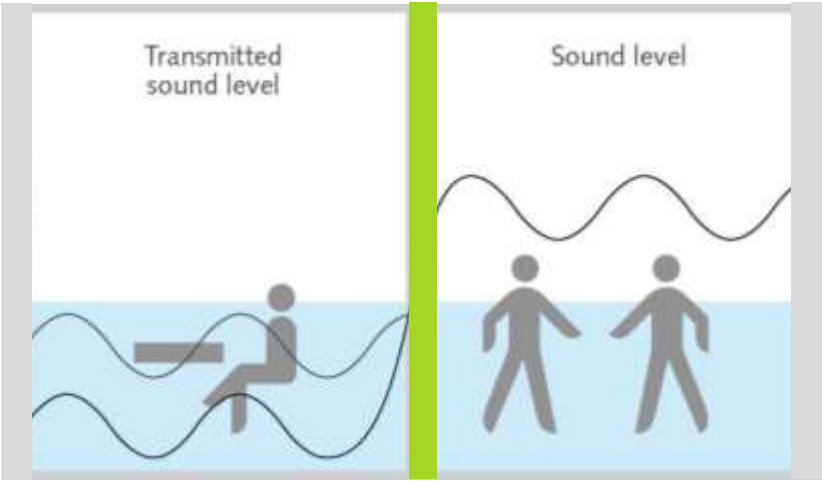
- Création Baumann offers a comprehensive range of acoustically effective textiles.
- Création Baumann is a pioneer and competence partner in the field of Acoustics.
- Measurement reports according to ISO 354, ISO 11654 and DIN EN 29053 are available on the website.

ROOM ACOUSTICS



Room acoustics sound absorption:
Audibility (Acoustic quality) within a room

Background noise level



Room acoustics sound insulation:
Sound transmission in a room

Background noise level

Curtain

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ROOM ACOUSTICS: SOUND ABSORPTION & SOUND INSULATION

SOUND ABSORPTION

- Sound absorption describes the ability of materials and surfaces to absorb sound.
- Sound absorption is the effect of sound absorbers.

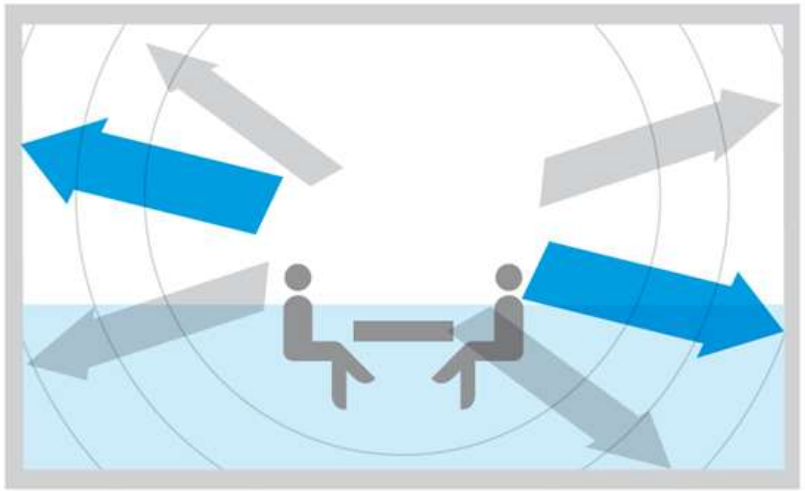
SOUND INSULATION

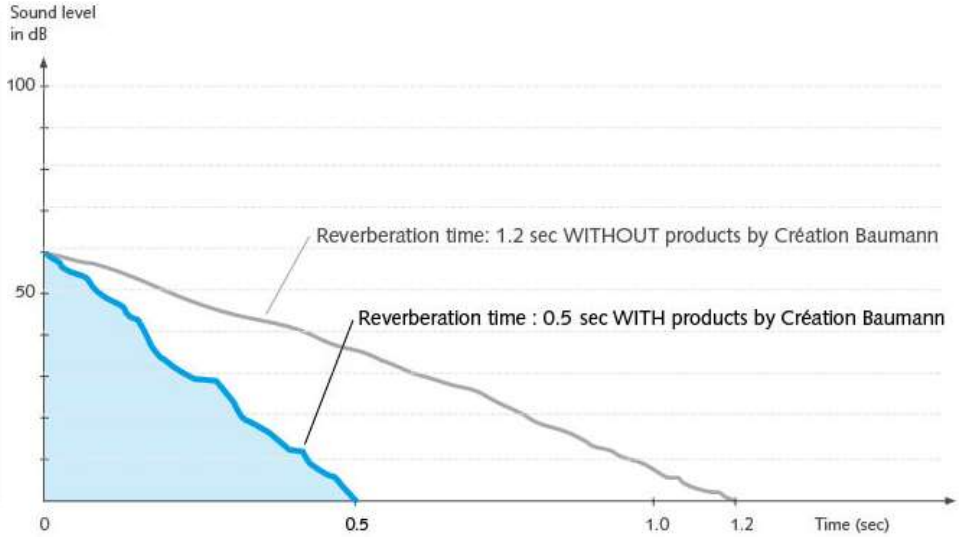
- The ability of components - walls, ceilings, doors, windows - to keep the sound transmission between two rooms as low as possible.
- High sound insulation is achieved by massive, heavy components that prevent the sound from spreading.
- Sound insulation is the effect of mass, weight and density of a material.

REQUIREMENTS FOR THE REVERBERATION

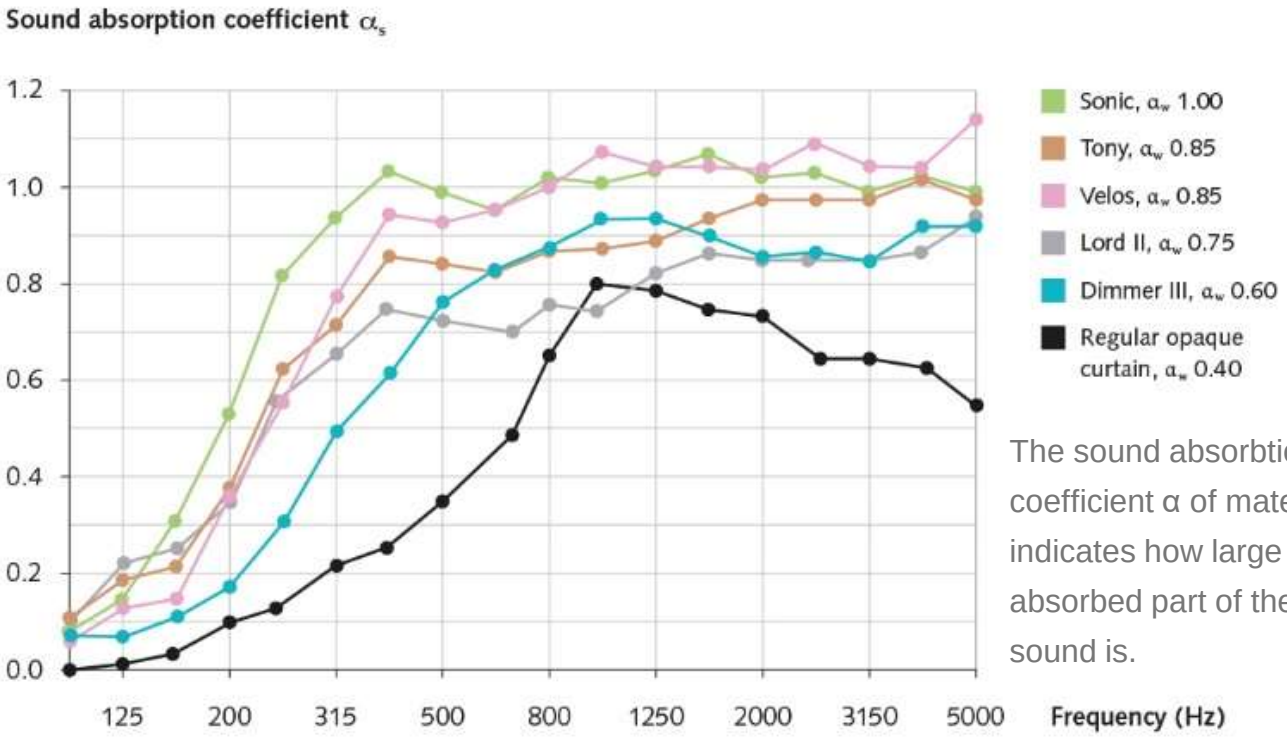
- teaching office 0.5 seconds
- theatre 1 second
- symphony concert 2 seconds
- organ 3 seconds
- church 4-8 seconds

REVERBERATION & REVERBERATION TIME WITH TEXTILE ABSORBERS





SOUND ABSORPTION COEFFICIENT



The sound absorbtion coefficient α of material indicates how large the absorbed part of the total sound is.

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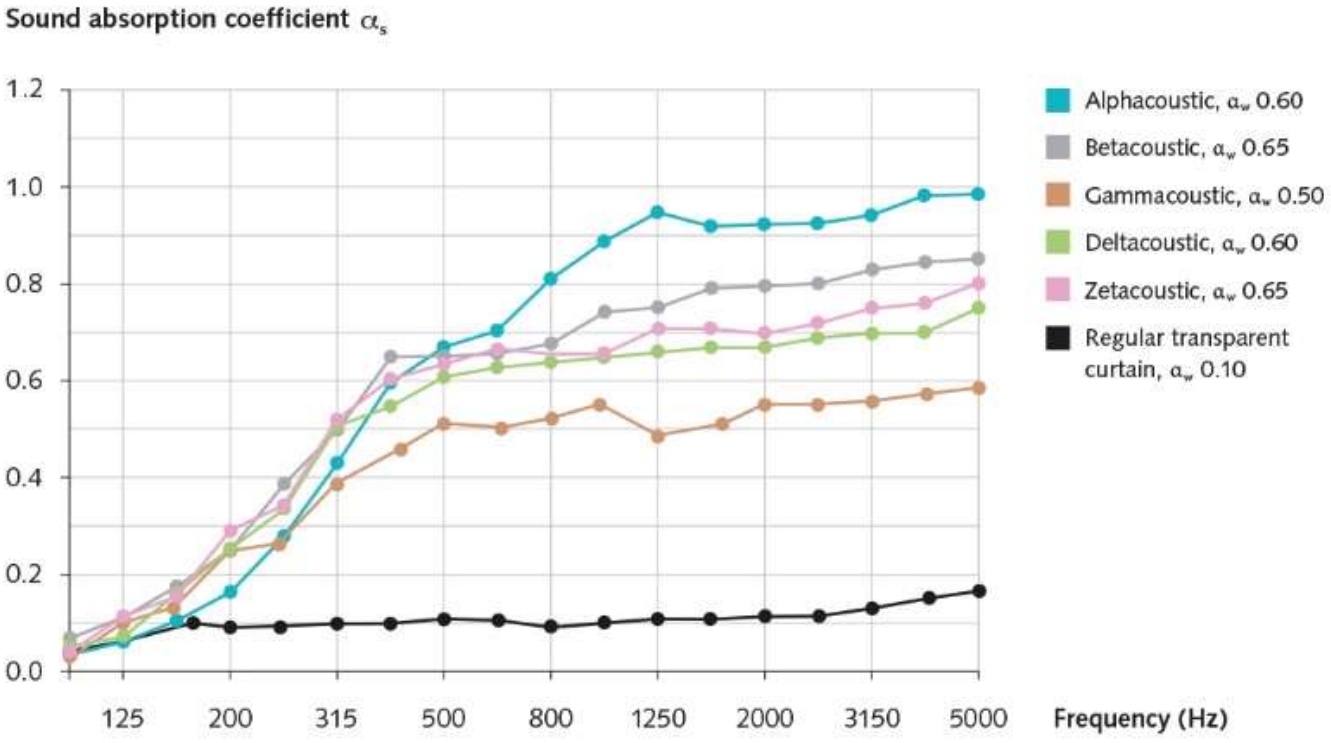
SOUND ABSORPTION COEFFICIENT TRANSPARENT TEXTILES



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REVERBERATION TIME MEASUREMENT IN REVERBERATION ROOM

Figure B.1. Flat arrangement, test object mounted in the reverberation room.

Figure B.2. Folded arrangement, test object mounted in the reverberation room.

CERTIFICATE OF SOUND ABSORPTION IN REVERBERATION ROOM

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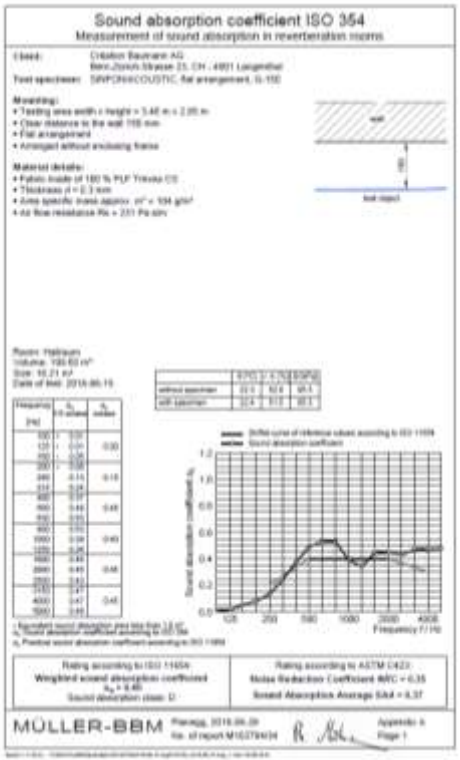
Fabric SINFONIACOUSTIC

Measurement of sound absorption according to EN ISO 354

Test Report No. M152704/34

Client:	Création Baumann AG Bern-Zürich-Straße 23 4901 Langenthal Switzerland
Consultant:	Dipl.-Ing. (FH) Dominik Ruf
Date of report:	2016-06-29
Delivery date of test objects:	2016-05-10
Date of measurement:	2016-06-15
Total number of pages:	in total 13 pages, thereof 6 pages text, 3 pages Appendix A, 1 page Appendix B, and 4 pages Appendix C



Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG

Bern-Zürich-Strasse 23, CH - 4901 Langenthal

Test specimen: SINFONIACOUSTIC, flat arrangement, G 110

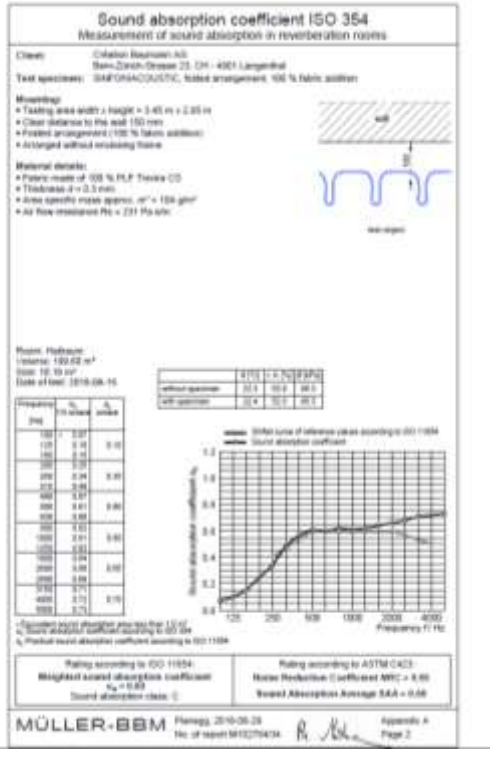
Mounting:
- Testing area width x height = 3.45 m x 2.05 m
- Clear distance to the wall 150 mm
- Flat arrangement
- Arranged without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.3 mm
- Area specific mass approx. m' = 104 g/m²
- Air flow resistance Rs = 231 Pa s/m

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.45
Sound absorption class: D

Rating according to ASTM C423:
Noise Reduction Coefficient NRC = 0.35
Sound Absorption Average SAA = 0.37

MÜLLER-BBM



Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG

Bern-Zürich-Strasse 23, CH - 4901 Langenthal

Test specimen: SINFONIACOUSTIC, folded arrangement, 100 % fabric addition

Mounting:
- Testing area width x height = 3.45 m x 2.05 m
- Clear distance to the wall 150 mm
- Folded arrangement (100 % fabric addition)
- Arranged without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.3 mm
- Area specific mass approx. m' = 104 g/m²
- Air flow resistance Rs = 231 Pa s/m

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.60
Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient NRC = 0.60
Sound Absorption Average SAA = 0.68

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CERTIFICATE OF SOUND ABSORPTION IN REVERBERATION ROOM

Sound absorption coefficient ISO 354

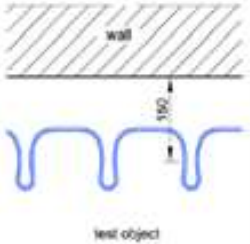
Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG
Bern-Zürich-Strasse 23, CH - 4901 Langenthal

Test specimen: SINFONIACOUSTIC, folded arrangement, 100 % fabric addition

Mounting:
- Testing area width x height = 3.45 m x 2.95 m
- Clear distance to the wall 150 mm
- Folded arrangement (100 % fabric addition)
- Arranged without enclosing frame

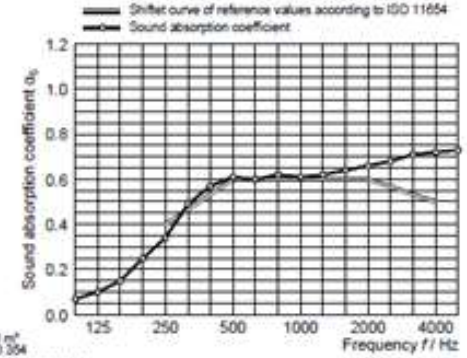
Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.3 mm
- Area specific mass approx. m'' = 104 g/m²
- Air flow resistance Rs = 231 Pa s/m



Room: Hallraum
Volume: 199.60 m³
Size: 10.18 m³
Date of test: 2018-06-15

	θ [°C]	r.h. [%]	B [kPa]
without specimen	22.3	52.9	96.3
with specimen	22.4	52.3	96.3

Frequency [Hz]	α_s 1/3 octave	α_s octave	α_p octave
100	* 0.07		
125	0.10	0.10	0.10
160	0.15		
200	0.25		
250	0.34	0.35	0.35
315	0.49		
400	0.57		
500	0.61	0.60	0.60
630	0.60		
800	0.62		
1000	0.61	0.60	0.60
1250	0.62		
1600	0.64		
2000	0.66	0.65	0.65
2500	0.68		
3150	0.71		
4000	0.72	0.70	0.70
5000	0.73		



* Equivalent sound absorption area less than 1.0 m².
α_s Sound absorption coefficient according to ISO 354
α_p Practical sound absorption coefficient according to ISO 11654

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.60
Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient *NRC* = 0.55
Sound Absorption Average *SAA* = 0.56

MÜLLER-BBM Planegg, 2018-06-29
No. of report M102794/34

Appendix A
Page 2

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POSITIONS OF ACOUSTICALLY EFFECTIVE SURFACES

- In the room acoustic planning, both sizes, the volume of the room and the absorption surfaces, should be balanced.
- Use of space and requirement for acoustic effectiveness is central. (e.g. private room, restaurant, music rehearsal room, office, etc.)
- When do you need the acoustical benefit? Day, evening, day curtain transparent, night curtain, etc.
- The spatial form usually plays a minor role.
- Except for very high room acoustic requirements or complex and unusual spatial forms such as slopes, galleries etc.
- The optimal positioning of absorbing surfaces in the room is important in relation to the sound source.
- Sound absorption of textiles, curtains, wall panels depends on the arrangement, material and surface.

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TEXTILE INSPIRATIONS – REFERENCES

TOWNHOUSE, NEW YORK, USA

Artikel: VICTOR (Vorhang), GINGER (Raffvorhang), MAIRA (Kissen)
Funktion: Private Räume
Konzept: Erik Bruce, New York, USA

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PRIVATHAUS, ZÜRICH, SCHWEIZ

Artikel: DIGITAL SEMIDENSE UV
Funktion: Individueller Digitaldruck
Konzept: HLS Architekten, Zürich / Trix Barmettler, Zürich
Photo: Gerry Amstutz, Zürich

création baumann

HAUS DES WINDES UND DES LICHTS, TOKYO, JAPAN

Artikel: OSCULARGO FR, SOPRANO II
Funktion: Private Räume, Akustik
Konzept: Shogo Onodera, Tokyo
Photo:Ichiro Mishima, Mishima.art

PRIVATHAUS, ST.GALLEN, SCHWEIZ

Artikel: ZETACOUSTIC
Funktion: Akustik, Flammhemmend
Konzept: Bechtiger Wohnen, St. Gallen

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PRIVATHAUS UND BÜRO, STARNBERG, DEUTSCHLAND

Artikel: REFLECTACOUSTIC
Funktion: Akustik
Konzept: Andreas Kindler, Starnberg, Deutschland
Photo: Christoph Vohler Photographie, München

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ARCHITEKTURSTUDIO AHRENS & GRABENHORST ARCHITEKTEN UND STADTPLANER BDA, HANNOVER, DEUTSCHLAND

Artikel: ALPHACOUSTIC, TWIST, VELOS II
Funktion: Office
Konzept: Architekturstudio ahrens & grabenhorst architekten und stadtplaner BDA, Hannover
Photo: Roland Halbe Fotografie, Stuttgart

ARCHITEKTURSTUDIO AHRENS & GRABENHORST ARCHITEKTEN UND STADTPLANER BDA, HANNOVER, DEUTSCHLAND

Artikel: ALPHACOUSTIC, TWIST, VELOS II
Funktion: Office
Konzept: Architekturstudio ahrens & grabenhorst architekten und stadtplaner BDA, Hannover
Photo: Roland Halbe Fotografie, Stuttgart

TREUVISION AG, ZÜRICH, SCHWEIZ

Artikel: UMBRIA IV
Funktion: Office, Akustik, Flammhemmend
Konzept: Studio Gessaga, www.gessaga.ch, Zürich, Schweiz
Photo: Pierre Kellenberger, Zürich, Schweiz

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WELLE 7, BERN, SCHWEIZ

Artikel: PONTE
Funktion: Office / Akustik / Flammhemmend
Konzept: Das Konzept, Thun
Photo: Rolf Frei, Weil am Rhein

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WELLE 7, BERN, SCHWEIZ

Artikel: PONTE
Funktion: Office / Akustik / Flammhemmend
Konzept: Das Konzept, Thun
Photo: Rolf Frei, Weil am Rhein

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KABELWERK BRUGG AG, BRUGG, SCHWEIZ

Artikel: SONIC
Funktion: Akustik, Flammhemmend
Konzept: Tschudin & Urech AG, Brugg / Witzig, Baden / Gerriets GmbH, Umkirch / Imhof Akustik AG, Speicher

EY (ERNST & YOUNG), BERN, SCHWEIZ

Artikel: ALPHACOUSTIC, SPORT, TONY
Funktion: Office, Akustik
Konzept: Achitekten Itten+Brechbühl AG, Bern / daskonzept ag, Thun http://www.ittenbrechbuehl.ch/de/projekte/ernst-young-ey-bern
Photo: Philipp Zinniker, Bern

EY (ERNST & YOUNG), BERN, SCHWEIZ

Artikel: ALPHACOUSTIC, SPORT, TONY
Funktion: Office, Akustik
Konzept: Achitekten Itten+Brechbühl AG, Bern / daskonzept ag, Thun
http://www.ittenbrechbuehl.ch/de/projekte/ernst-young-ey-bern
Photo: Philipp Zinniker, Bern

FECO – FEEDERLE GMBH, KARLSRUHE, DEUTSCHLAND

Artikel: GAMMACOUSTIC
Funktion: Office, Akustik
Konzept: LRO Lederer Ragnarsdottir Oei GmbH & Co. KG, Stuttgart | Interior Designer Susanne Wermund and Angela Socha, Feederle GmbH, Karlsruhe
Photo: Nikolay Kazakov, Karlsruhe

Artikel:
Funktion:
Konzept:
Photo:

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BECTON DICKINSON ROWA GERMANY, FRANKFURT AM MAIN, DEUTSCHLAND

Artikel: ALPHACOUSTIC
Funktion: Office, Akustik
Konzept: VRAI interior architecture, Frankfurt am Main, Deutschland | Spielmanns Office House, Frankfurt am Main, Deutschland

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PESTALOZZISCHULHAUS, AARAU, SCHWEIZ

Artikel: DIGITAL DENSE ACOUSTIC T
Funktion: Digitaldruck / Akustik
Konzept: B.E.R.G. Architekten GmbH, Zürich, Schweiz I Künstlerin Vreni Spieser, Zürich, Schweiz
Photo: Reinhard Zimmermann, Baar, Schweiz

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NEST DER EMPA UND EAWAG, DÜBENDORF, SCHWEIZ

Artikel: ALEX, BETACOUSTIC
Funktion: Akustik
Konzept: Meet2Create, Hochschule Luzern – Technik & Architektur, Horw, Schweiz
Photo: Weissert, Basel, Schweiz

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RIVER POINT CONFERENCE CENTER, CHICAGO, USA

Artikel: PONTE III
Funktion: Akustik
Konzept: Eastlake Studio, Chicago, USA
Photo: Hedrich Blessing Photographers, Chicago

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BEAUTIFUL CURTAIN #1, FRAC NORD-PAS DE CALAIS, DUNKERQUE, FRANKREICH

Artikel: PHANTOM PLUS
Funktion: Culture / Museum / Akustik / Flammhemmend / Verdunkelung
Konzept: Lang/Baumann, Künstler, Burgdorf / Steffen Raumkonzepte AG, Herzogenbuchsee
Photo: Christopher Lovi

création baumann

BANK EKI, INTERLAKEN, SCHWEIZ

Artikel: PRINTACOUSTIC MOUNTAIN
Funktion: Office, Akustik
Konzept: L2A Architekten AG, Unterseen, Schweiz Lichtplannung Sommerlatte&Sommerlatte AG, Zürich, Schweiz
Photo: Marcel Abegglen, L2A Architekten AG, Unterseen

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“FREIRAUM” BUSINESS CAMPUS GARCHING, MÜNCHEN, DEUTSCHLAND

Artikel: LORD III
Funktion: Akustik
Konzept: CBA Clemens Bachmann Architekten, München | Gewerbeplan GmbH, München
Photo: Ducke Bernd, Ottobrunn, www.berndducke.de

création baumann

SENSAI SELECT SPA / KANEBO COSMETICS INC IM HOTEL VICTORIA JUNGFRAU, INTERLAKEN, SCHWEIZ

Artikel: JASPIS, PONTE II
Funktion: Hospitality / Akustik / Flammhemmend / Schadstoffgeprüft
Konzept: Remi Tessier, Paris

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APARTHOTEL, ROTKREUZ, SCHWEIZ

Artikel: CALMA, CAVALLO, GALA, MYSTERY, PONTE II, SPRINT
Funktion: Hospitality / Akustik / Flammhemmend / Verdunkelung
Konzept: MMJS Jauch-Stolz Architekten mit Casa Tessuti Luzern

ALTERSHEIM RUGGACKER, DIETIKON, SCHWEIZ

Artikel: SINFONIA CS, MYSTERY, BASIC PLUS III UN
Funktion: Health Care / Akustik / Flammhemmend / Verdunkelung
Konzept: Niedermann Sigg Schwendener Architekten AG, Zürich / Wohnidee Wechsler GmbH, Luzern
Photo: Roger Frei, Zürich

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HIRSLANDEN, ZÜRICH, SCHWEIZ

Artikel: LERIDA IV, SERENO
Funktion: Health Care / Akustik / Flammhemmend
Konzept: Frensdorff, Zürich

création baumann

ZENTRALBIBLIOTHEK ZÜRICH, ZÜRICH, SCHWEIZ

Artikel: JAMES, LORD II
Funktion: Flammenhemmend / Akustik
Konzept: gasser, derungs Innenarchitekturen GmbH, Zürich, Schweiz
Photo: Ralph Feiner, Zürich, Schweiz

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MUSIKSCHULE KONSERVATORIUM, BERN, SCHWEIZ

Artikel: PONTE II, UMBRIA III
Funktion: Education / Akustik / Flammhemmend / Schadstoffgeprüft
Konzept: 3B Architekten AG, Bern / Teo Jakob AG, Bern / Gartenmann Engineering AG, Bern
Photo: Architekturfotografie Gempeler, Bern

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AUDITORIUM IM ZENTRUM PAUL KLEE, BERN, SCHWEIZ

Artikel: Rollos mit eigens weiterentwickeltem Stoff, im Digitaldruck-Verfahren bedruckt
Funktion: Culture / Museum / Akustik
Konzept: Renzo Piano, Italien
Photo: Roland Halbe Fotografie, Stuttgart

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MUSIKTHEATER, GELSENKIRCHEN, DEUTSCHLAND

Artikel: Rollectro II Spezialfarbe nach RAL, Umbria Spezialfarbe nach RAL
Funktion: Culture / Museum / Akustik, Flammhemmend
Konzept: BOCK.NEUHAUS-PARTNER, Architekten-Ingenieure-Consultants, Coesfeld
Photo: Michael Rasche, Dortmund

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SENZOKU GAKUEN COLLEGE OF MUSIC, KANAGAWA PREFECTURE, JAPAN

Artikel: HENRY
Funktion: flexible Akustik, Flammhemmend
Konzept: Kunihide Oshinomi, k/o design studio, Japan
Photo: Nacasa & Partners / Atsushi Nakamichi, Tokyo, Japan

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SENZOKU GAKUEN COLLEGE OF MUSIC, KANAGAWA PREFECTURE, JAPAN

Artikel: HENRY
Funktion: flexible Akustik, Flammhemmend
Konzept: Kunihide Oshinomi, k/o design studio, Japan
Photo: Nacasa & Partners / Atsushi Nakamichi, Tokyo, Japan

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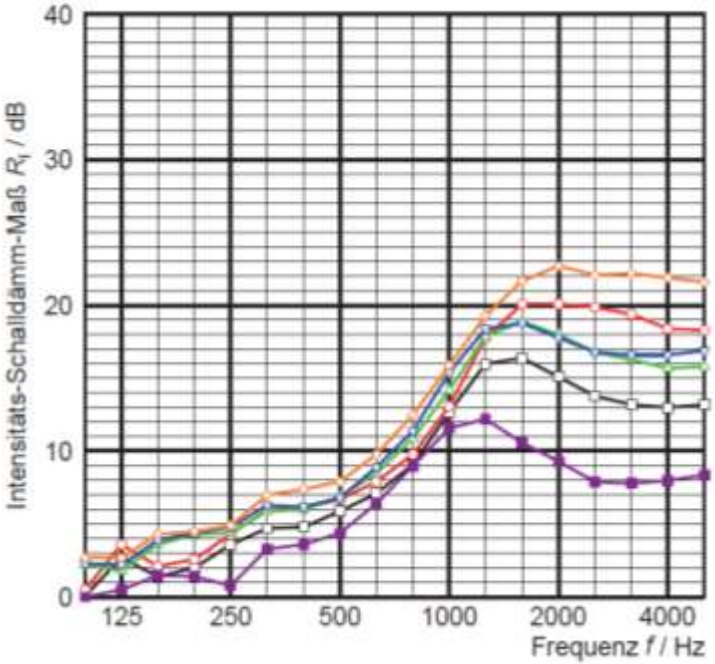
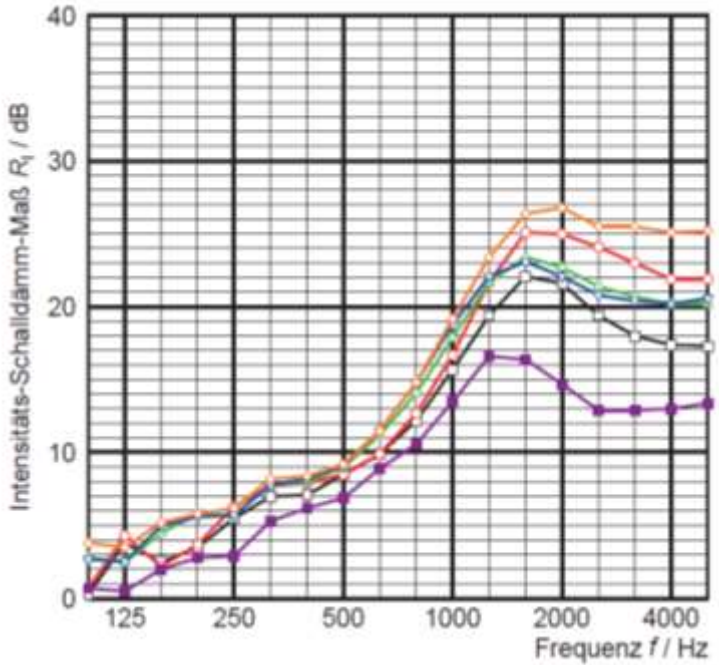
ACOUSTIC DIVIDER VARIO – SOUND INSULATION

INITIAL SITUATION

INNOVATION

MEASUREMENTS: DECIBEL REDUCTION





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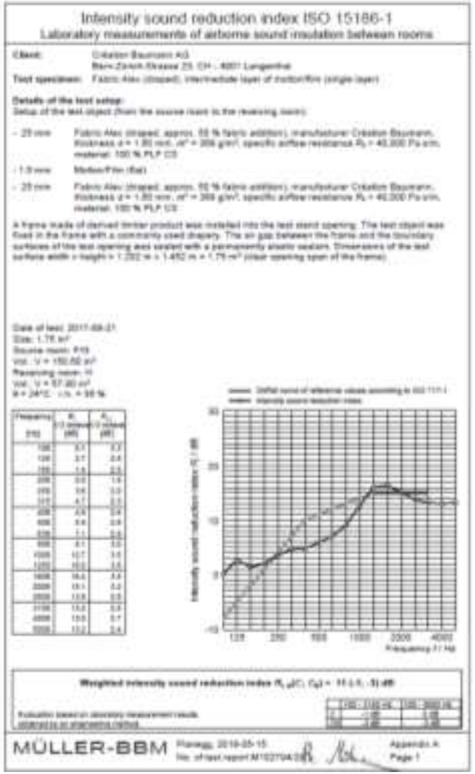
MEASUREMENT OF SOUND INSULATION LEVEL ISO 15186-1



Intensity sound reduction index ISO 15186-1

Laboratory measurements of airborne sound insulation between rooms

MÜLLER-BBM

Intensity sound reduction index ISO 15186-1

Laboratory measurements of airborne sound insulation between rooms

MÜLLER-BBM

ACOUSTIC DIVIDER VARIO

Angebot ☐ Bestellung ☐

SCHWEIZ Création Baumann AG
Tel. 062 919 62 67 | Fax 062 919 62 69

DEUTSCHLAND Création Baumann GmbH
Tel. 08074 3167-20 | Fax 08074 3167-11

ÖSTERREICH Leopold Edlbrunn
Tel. 0732 7382 20 | Fax 0732 7382 256

Objekt / Kommission	Kunde	Lieferung direkt an Montage durch	Lieferhorizont Versandart	Bestätiger Unterschrift Datum	ACOUSTIC DIVIDER VARIO ist ein auf Mass individuell gefertigtes Produkt. Kein Umtausch. Damit die akustischen Werte erreicht werden, ist eine fachgerechte Installation erforderlich.
Acoustic Divider	Divider Beton ☐ Holz ☐ Gips ☐ Sonstiges _____	Fläche / Gewicht m² x Gewicht Profil Mezzo* Profil Grande* *siehe Belastungstabelle	Masse UK Divider Boden Profil Mezzo Abzug - 29.7 mm Profil Grande Abzug - 34.0 mm Scheme in Divider integrieren ☐ Divider hängend Abzug - 45.0 mm Divider aufstehend Zugabe + 40.00 mm Fertige Höhe	Kombination Divider Falten flach ca. 10 % ☐ Falten gestaffelt ca. 40 % ☐ Boden hängend ☐ Boden aufstehend ☐ Seitenabschluss Standard ☐ Seitenabschluss Finder ☐	Dimension Befestigung oben ca. 160 mm Befestigung unten ca. 300 mm Faltentiefe ca. 1/3 der Anlagenhöhe
Stoffauswahl	Akustikstoff Vorderseite: col. Akustikstoff Rückseite: col.	Seitenabschluss Finder aus Umfang schwarz col 118 ☐ grau col. 117 ☐ hellgrau col. 201 ☐ gelb col.210 ☐ Sonderfarben auf Anfrage	Cellfilzeinlage schwarz 1 Stück ☐ 2 Stück ☐ 3 Stück ☐	Noise/Glasvlies 1-lagig 340 g/m² ☐ Ab 100 St. 2-lagig 680 g/m² ☐ Ab 100 St. 3-lagig 1020 g/m² ☐ Ab 100 St. diverse Lagen ☐ _____ Kombination Noise/Glasvlies bedeutet	Generell sind alle Akustikstoffe möglich. Bitte beachten Sie jedoch bei der Stoffauswahl - Schallabsorptionswert .aw - für perfekte Nachhallzeit - Gewicht (g/m² Gewicht x Lagen ca. 2000g) - Transparenz Dekorstoff
Technik	Schlaudertrag Monotrac Mezzo ☐ Monotrac Grande ☐ Kombination ☐ Elektrotrag Monotrac Mezzo Power ☐ Monotrac Grande Power ☐ Kombination ☐	Profilmass 29.7 mm ☐ 33 mm ☐ Profilfarbe weiss RAL 9016 ☐ grau RAL 9006 ☐ schwarz RAL 9005 ☐ Sonderfarbe RAL ☐	Form Schiene gerade ☐ gebogen* ☐ Kombination ☐ *Zeichnung / Skizze	Montagezubehör Spanner ☐ Profilverbinder ☐ Fussstütze ☐ Ausleuchtungsleiste ☐ Tragseilset ☐ Deckenstütze ☐ Anzahl Länge cm	Bedienung Motor Funkhandsender 16 ☐ 4K ☐ 600K ☐ Funkwandsender 1K ☐ 4K ☐ Bus System 1K ☐ 4K ☐ 600K ☐

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KULTURHAUS KOSMOS, ZÜRICH, SCHWEIZ

Items: CALVARO, UMBRIA IV, ALEX
Function: Acoustics / flame retardant
Concept: Burkhard & Lüthi, Architektur GmbH, Zürich, Schweiz
Photo: Weisswert, Basel

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KULTURHAUS KOSMOS, ZÜRICH, SCHWEIZ

Items: CALVARO, UMBRIA IV, ALEX
Function: Acoustics / flame retardant
Concept: Burkhard & Lüthi, Architektur GmbH, Zürich, Schweiz
Photo: Weisswert, Basel

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SHOPLAB, OBERENTFELDEN, SCHWEIZ

Items: TONY, ADV
Function: Acoustics
Concept: Umdasch Shopfitting AG, Oberentfelden, Schweiz
Photo: Weisswert, Basel, Schweiz

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STAPFERHAUS, LENZBURG, SCHWEIZ

Items: ALEX, SECRET
Function: Divider, Akustik
Concept :Pool Architekten, Zürich, Schweiz / Schlegel & Co AG, Basel, Schweiz
Photos : WEISSWERT, Basel

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STAPFERHAUS, LENZBURG, SCHWEIZ

Items: ALEX, SECRET
Function: Divider, Akustik
Concept :Pool Architekten, Zürich, Schweiz / Schlegel & Co AG, Basel, Schweiz
Photos : WEISSWERT, Basel

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STAPFERHAUS, LENZBURG, SCHWEIZ

Items: ALEX, SECRET
Function: Divider, Akustik
Concept :Pool Architekten, Zürich, Schweiz / Schlegel & Co AG, Basel, Schweiz
Photos : WEISSWERT, Basel

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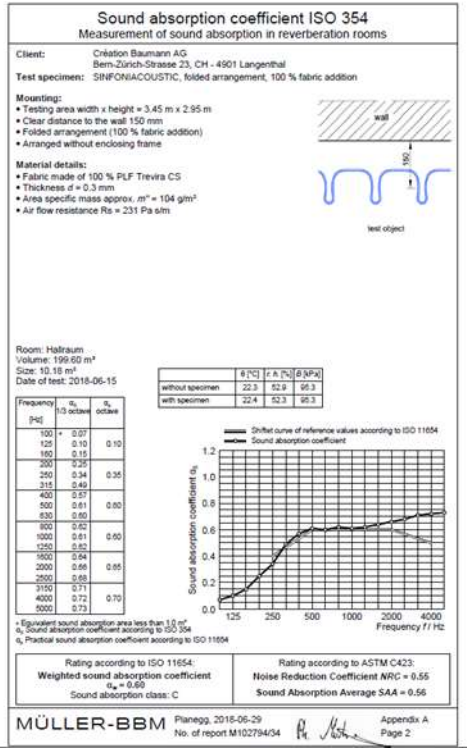
INNOVATIVE DEVELOPMENTS ACOUSTICS


ICO 2
NIC 0
AWA 1
RDS 8
INNOVATIVE
INTERIOR
best of best

SINFONIACOUSTIC



Sound absorption coefficient ISO 354
Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG
Bern-Zürich-Strasse 23, CH - 4901 Langenthal
Test specimen: SINFONIACOUSTIC, folded arrangement, 100 % fabric addition

Mounting:
- Testing area width x height = 3.45 m x 2.95 m
- Clear distance to the wall 150 mm
- Folded arrangement (100 % fabric addition)
- Arranged without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.3 mm
- Area specific mass approx. m' = 104 g/m²
- Air flow resistance Rs = 231 Pa s/m

wall
150
test object

Room: Hallraum
Volume: 199.60 m³
Size: 10.18 m²
Date of test: 2018-06-15

	θ [°C]	r A [%]	p [hPa]
without specimen	22.3	52.9	95.3
with specimen	22.4	52.3	95.3

Frequency [Hz]	α_s 1/3 octave	α_s octave
100	0.07	
125	0.10	0.10
160	0.15	
200	0.25	
250	0.34	0.35
315	0.49	
400	0.57	
500	0.61	0.60
630	0.60	
800	0.62	
1000	0.61	0.60
1250	0.62	
1600	0.64	
2000	0.66	0.65
2500	0.68	
3150	0.71	
4000	0.72	0.70
5000	0.73	

Shifted curve of reference values according to ISO 11654
Sound absorption coefficient
Sound absorption coefficient α_s
Frequency f / Hz

< Equivalent sound absorption area less than 1.0 m²
α_w Sound absorption coefficient according to ISO 354
α_s Practical sound absorption coefficient according to ISO 11654

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.60
Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient *NRC* = 0.55
Sound Absorption Average *SAA* = 0.56

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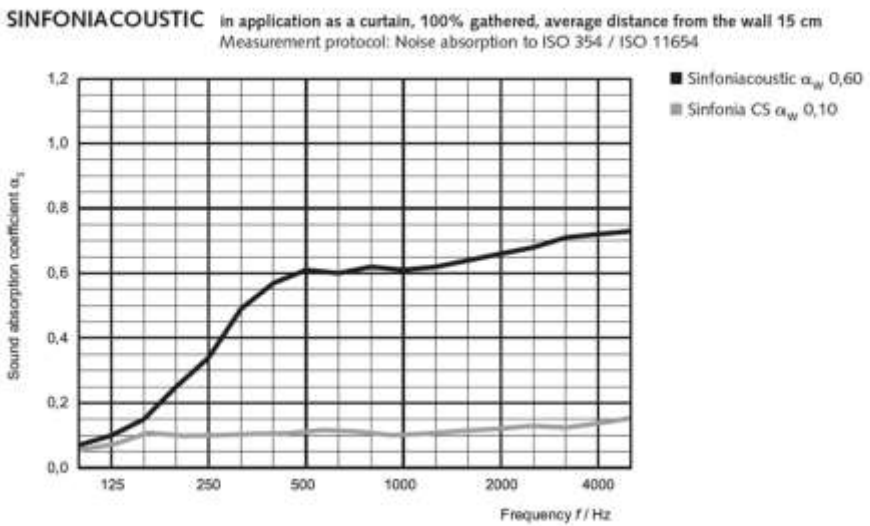
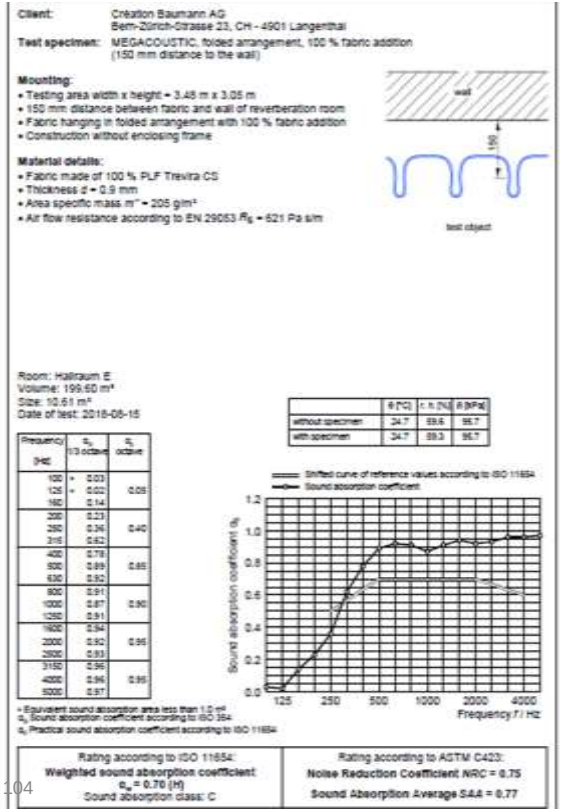


création baumann

MEGACOUSTIC



Client: Création Baumann AG
Bern-Zürich-Strasse 23, CH - 4901 Langenthal

Test specimen: MEGACOUSTIC, folded arrangement, 100 % fabric addition (150 mm distance to the wall)

Mounting:
- Testing area width x height = 3.48 m x 3.05 m
- 150 mm distance between fabric and wall of reverberation room
- Fabric hanging in folded arrangement with 100 % fabric addition
- Construction without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 2.9 mm
- Area specific mass m'' = 205 g/m²
- Air flow resistance according to EN 29053 R_s = 621 Pa s/m

wall
150
test object

Room: Hallraum E
Volume: 199.60 m³
Size: 10.51 m²
Date of test: 2018-08-15

	θ [°C]	r. h. [%]	R [kPa]
without specimen	24.7	59.6	96.7
with specimen	24.7	59.3	96.7

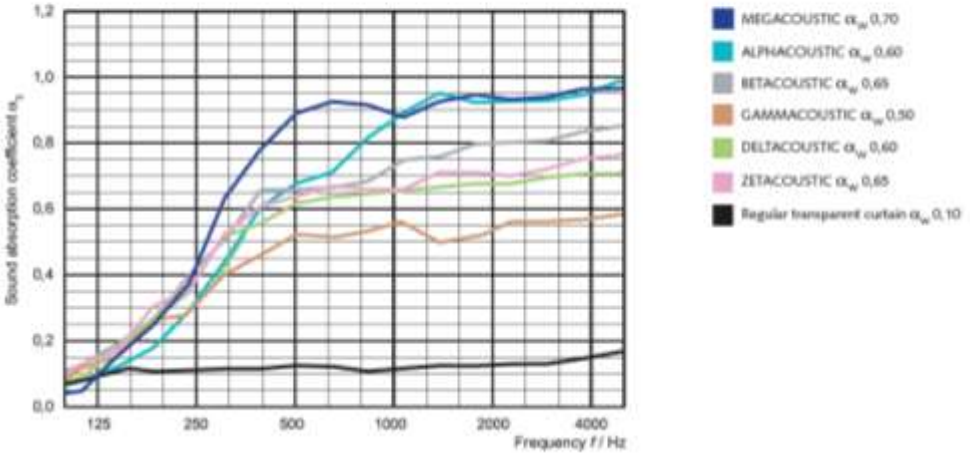
Frequency [Hz]	α_s 1/3 octave	α_s octave
100	0.03	
125	0.02	0.05
160	0.14	
200	0.23	
250	0.34	0.40
315	0.62	
400	0.78	
500	0.89	0.85
630	0.92	
800	0.91	
1000	0.87	0.90
1250	0.91	
1600	0.94	
2000	0.92	0.95
2500	0.93	
3150	0.96	
4000	0.96	0.95
5000	0.97	

Shifted curve of reference values according to ISO 11654
Sound absorption coefficient
Sound absorption coefficient α_s
Frequency f / Hz

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.70 (H)
Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient NRC = 0.75
Sound Absorption Average SAA = 0.77

MEGACOUSTIC in application as a **curtain, 100% gathered, average distance from the wall 15 cm**
Measurement protocol: Noise absorption to ISO 354 / ISO 1165



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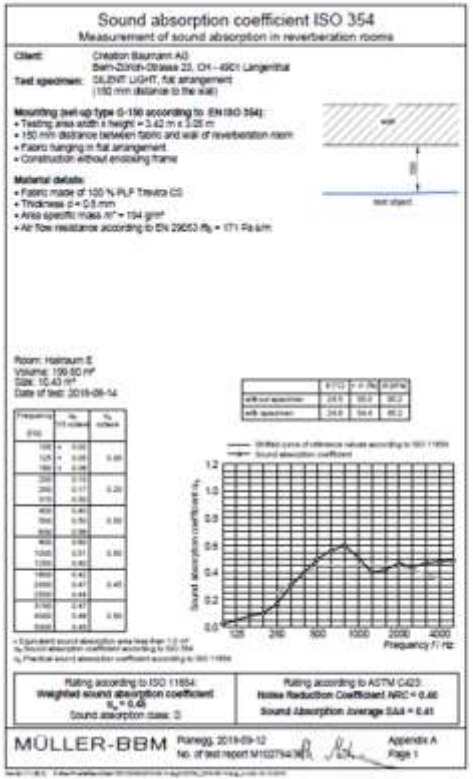
SILENT LIGHT



Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG
Bern-Zürich-Strasse 23, CH – 4901 Langenthal

Test specimen: SILENT LIGHT, flat arrangement
(150 mm distance to the wall)

Mounting (ref-up type G-150 according to EN ISO 354):
- Testing area width x height = 3.42 m x 3.05 m
- 150 mm distance between fabric and wall of reverberation room
- Fabric hanging in flat arrangement
- Construction without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.5 mm
- Area specific mass m'' = 194 g/m²
- Air flow resistance according to EN 29053 R_s = 171 Pa s/m

Room: Hallraum E
Volume: 199.50 m³
Size: 10.43 m²
Date of test: 2019-08-14

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.45
Sound absorption class: D

Rating according to ASTM C423:
Noise Reduction Coefficient NRC = 0.46
Sound Absorption Average SAA = 0.45

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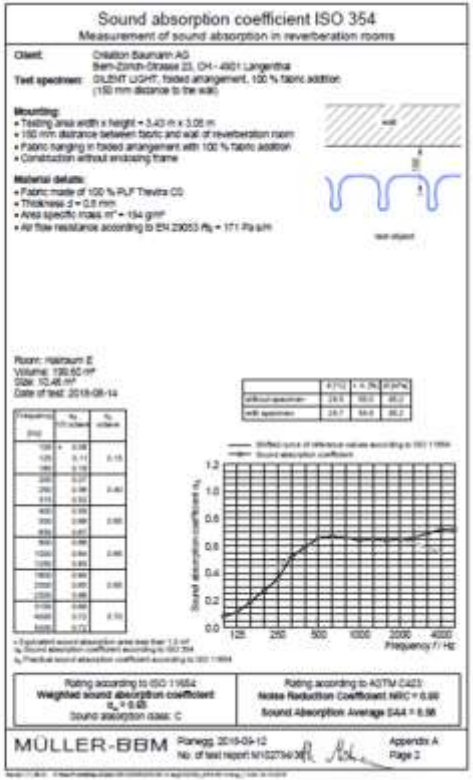

Sound absorption coefficient ISO 354

Measurement of sound absorption in reverberation rooms

Client: Création Baumann AG
Bern-Zürich-Strasse 23, CH – 4901 Langenthal

Test specimen: SILENT LIGHT, folded arrangement, 100 % fabric addition
(150 mm distance to the wall)

Mounting:
- Testing area width x height = 3.43 m x 3.05 m
- 150 mm distance between fabric and wall of reverberation room
- Fabric hanging in folded arrangement with 100 % fabric addition
- Construction without enclosing frame

Material details:
- Fabric made of 100 % PLF Trevira CS
- Thickness d = 0.5 mm
- Area specific mass m'' = 194 g/m²
- Air flow resistance according to EN 29053 R_s = 171 Pa s/m

Room: Hallraum E
Volume: 199.50 m³
Size: 10.46 m²
Date of test: 2019-08-14

Rating according to ISO 11654:
Weighted sound absorption coefficient
α_w = 0.65
Sound absorption class: C

Rating according to ASTM C423:
Noise Reduction Coefficient NRC = 0.69
Sound Absorption Average SAA = 0.66

MÜLLER-BBM Planegg, 2019-09-12 Appendix A
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FACT SHEET ACOUSTICS

- With textile sound absorbers you can positively influence the room acoustics.
- ADV ensures acoustic privacy (sound insulation).

- For complex acoustic calculations, such as for a concert hall, you should consult an acoustician.
- Absorbers with a higher absorber class are not always better.
- Consider the aspect of speech intelligibility in large rooms.
- Good room acoustics reduce stress and reduce period of disruption in the office.
- Well designed and effective sound absorbers increase the well-being and provide a positive room atmosphere.

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THANKS