



**DAZIAN**

Acoustic Fabric Solutions

# Acoustic Fabric Reports

Transmission & Absorption

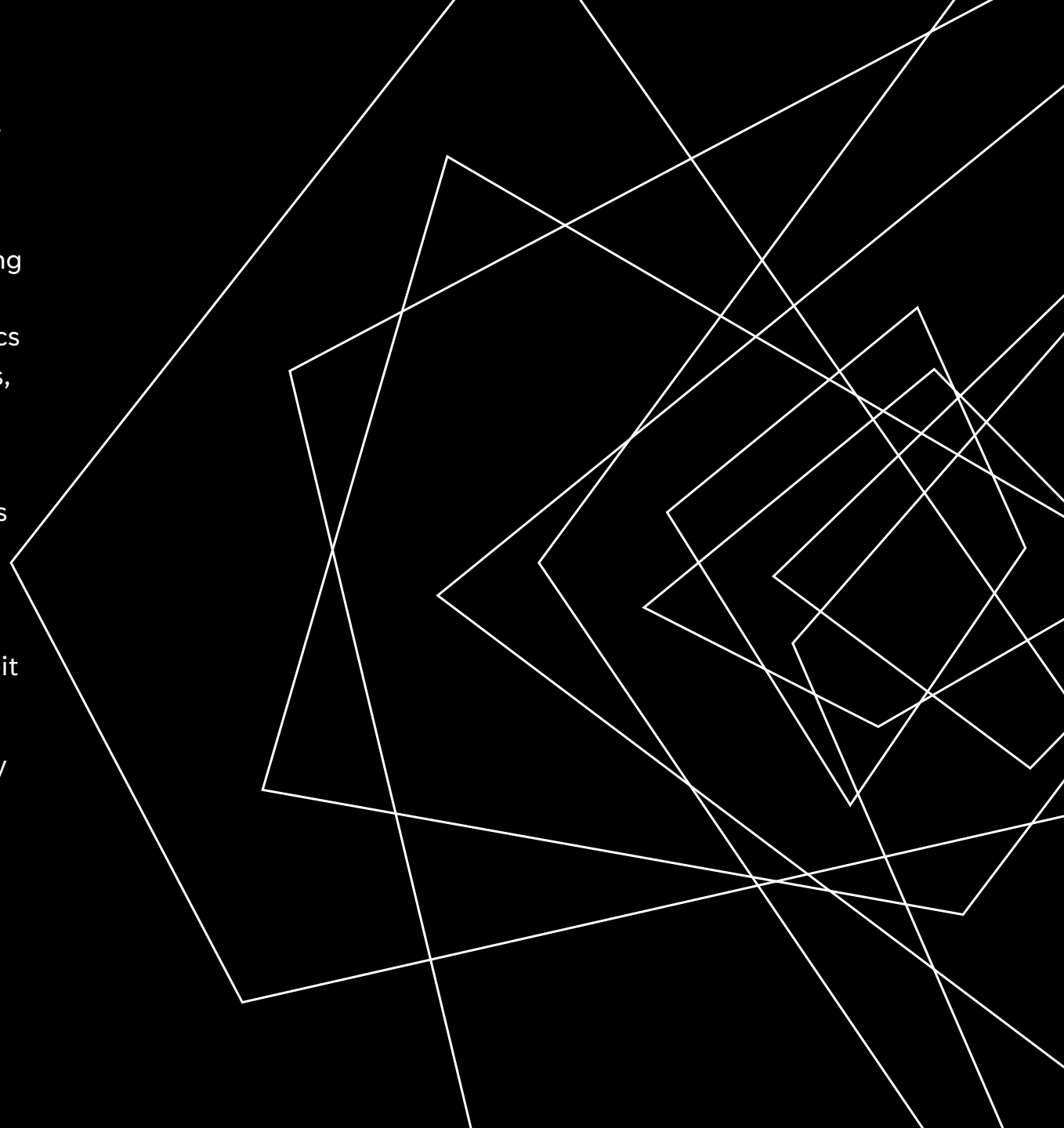
# WHAT WE DO

At Dazian, we are a full-service provider, working with designers, fabricators, engineers, and technicians to deliver the best fabric-based solutions for their finished products or custom projects.

Our flame-retardant acoustic fabrics are used to create everything from sound absorption drapery and panels for Theatres, Arenas, Sound Stages, and Live Events to digitally printed interior graphics using our acoustically transparent fabrics for Retail, Trade Shows, and Commercial spaces.

**We are not just a fabric resource** – Our customers rely on our custom precision sewing, fabric framing, and installation services to deliver turnkey solutions. In 2023 we launched Evoke™ and Revert™, two new exciting sustainable fabric brands that offer a variety of fabric solutions for wall coverings, wide-format graphics, acoustic curtains, projection screens, tension and exhibit structures.

From prototyping to production, we are here to support you every step of the way.



# ABSORPTION

When it comes to sound control, we have the fabrics, hardware, and custom fabrication capabilities to support any project no matter the size. Our fabrics are engineered to provide optimal sound wave absorption, meeting both technical and safety requirements for most venues and applications.

Sound Control is critical in any space design. Sound-absorbing fabrics help reduce echoing/reverberation and outside interference that can negatively impact audio capture and the overall experience and performance of the room.

Our fabrics are used in Stage Productions, Recording Studios, Museums, Trade Shows, Sporting Arenas, Offices, Theatres, and Live Events.

Acoustic Drapery | Space Dividers | Wall Coverings | Masking Curtains  
Ceiling Baffles | Sound Barriers | Acoustic Panels

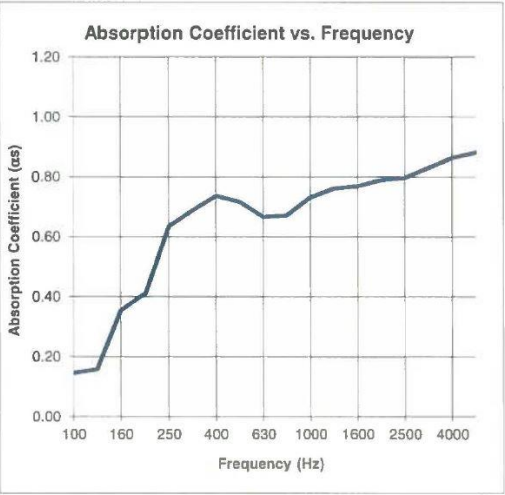
# ABSORPTION | FREQUENCY

CONSTRUCTION DETAILS: 50% FULLNESS WITH BOX PLEATS  
SINGLE-SIDED – NO LINING.

## Milano® Velvet Plus 16oz.

Noise Reduction Coefficient	NRC:	0.70
Sound Absorption Average	SAA:	0.70

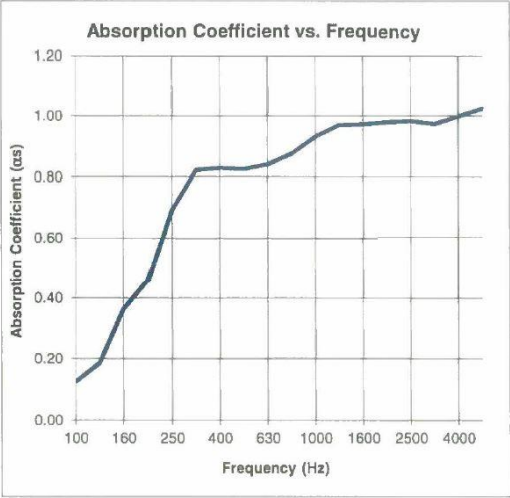
Frequency [Hz]	Absorption Coefficients $\alpha_a$
100	0.15
125	0.16
160	0.35
200	0.41
250	0.64
315	0.69
400	0.74
500	0.72
630	0.67
800	0.67
1000	0.73
1250	0.76
1600	0.77
2000	0.79
2500	0.80
3150	0.83
4000	0.86
5000	0.88



## Carbonight® Plus 16oz.

Noise Reduction Coefficient	NRC:	0.85
Sound Absorption Average	SAA:	0.85

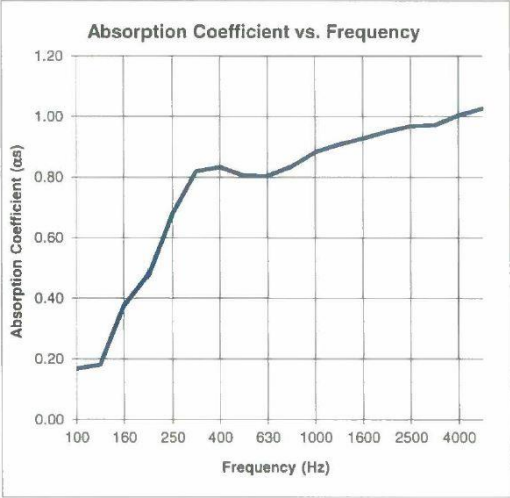
Frequency [Hz]	Absorption Coefficients $\alpha_a$
100	0.12
125	0.19
160	0.36
200	0.46
250	0.69
315	0.82
400	0.83
500	0.83
630	0.84
800	0.88
1000	0.93
1250	0.97
1600	0.97
2000	0.98
2500	0.98
3150	0.97
4000	1.00
5000	1.02



## Carbonight® 22oz.

Noise Reduction Coefficient	NRC:	0.85
Sound Absorption Average	SAA:	0.82

Frequency [Hz]	Absorption Coefficients $\alpha_a$
100	0.17
125	0.18
160	0.38
200	0.48
250	0.68
315	0.82
400	0.83
500	0.80
630	0.80
800	0.84
1000	0.88
1250	0.91
1600	0.93
2000	0.95
2500	0.97
3150	0.97
4000	1.00
5000	1.03



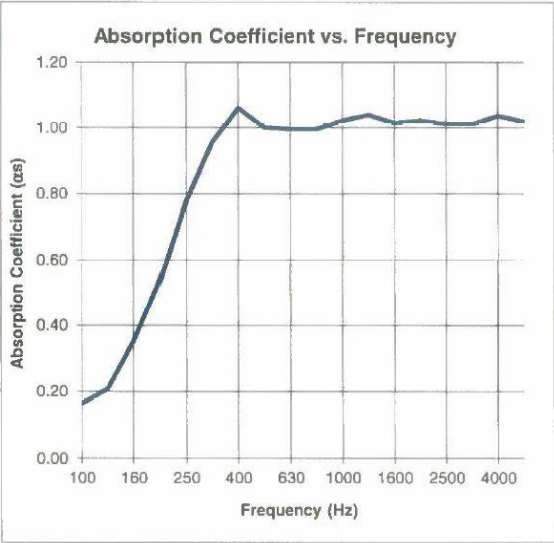
# Absorption | Frequency

CONSTRUCTION DETAILS: 50% FULLNESS WITH BOX PLEATS  
SINGLE-SIDED – NO LINING.

## Carbonight® 25oz.

Noise Reduction Coefficient NRC: 0.95  
Sound Absorption Average SAA: 0.95

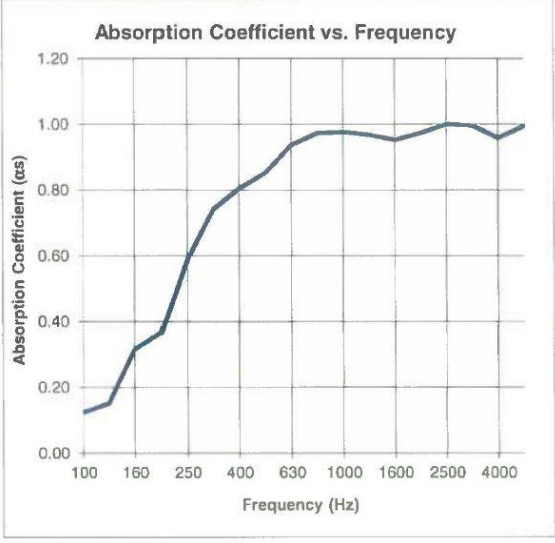
Frequency [Hz]	Absorption Coefficients $\alpha_n$
100	0.16
125	0.21
160	0.35
200	0.54
250	0.78
315	0.96
400	1.06
500	1.00
630	1.00
800	1.00
1000	1.02
1250	1.04
1600	1.02
2000	1.02
2500	1.01
3150	1.01
4000	1.04
5000	1.02



## Angelo 25oz.

Noise Reduction Coefficient NRC: 0.85  
Sound Absorption Average SAA: 0.84

Frequency [Hz]	Absorption Coefficients $\alpha_n$
100	0.12
125	0.15
160	0.32
200	0.37
250	0.59
315	0.74
400	0.80
500	0.85
630	0.94
800	0.97
1000	0.98
1250	0.97
1600	0.95
2000	0.97
2500	1.00
3150	1.00
4000	0.96
5000	0.99



# ABSORPTION | FABRIC SPECIFICATIONS

Fabric Name	Fabric Content	Width	Weight	Fire Spec	Fire Rating	NRC Rating	SAA Rating
Milano® Velvet Plus	100% Polyester	62”	16oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	0.70	0.70
Carbonight® Plus	100% Polyester	62”	16oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	0.85	0.85
Carbonight® 22	100% Polyester	60”-62”	22oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	0.85	0.82
Carbonight® 25	100% Polyester	60”-62”	25oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	0.95	0.95
Angelo	100% Polyester	54”	25oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19)	0.85	0.84

*All data was collected in compliance with ASTM C 423-17/E795-16. Panels were installed with Type-G100 Mounting. Laboratory tests are available upon request.*

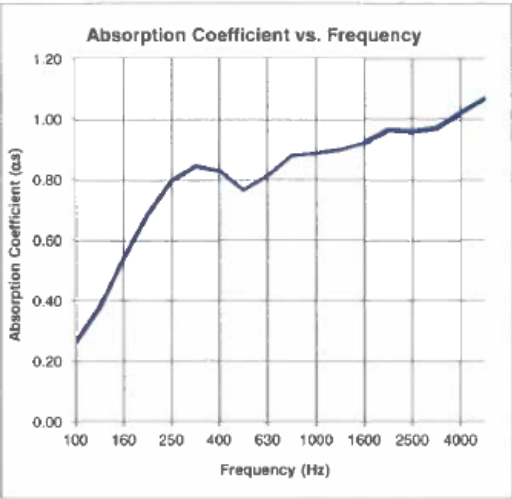
# Absorption | Frequency

CONSTRUCTION DETAILS: **DOUBLE-SIDED** WITH 50% FULLNESS AND BOX PLEATS.

## Milano® Velvet Plus 16oz.

Noise Reduction Coefficient NRC:	0.85
Sound Absorption Average SAA:	0.86

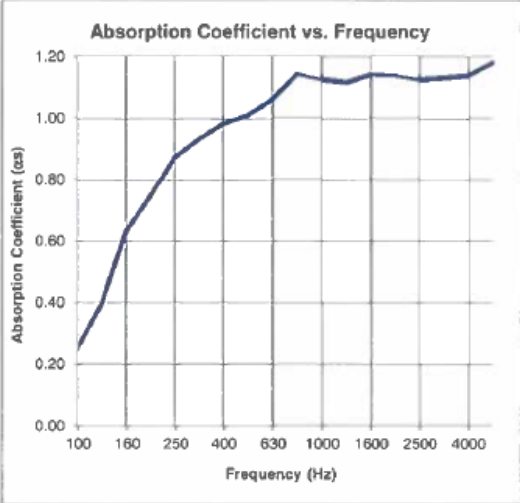
Frequency [Hz]	Absorption Coefficients $\alpha_w$
100	0.26
125	0.38
160	0.54
200	0.69
250	0.80
315	0.85
400	0.83
500	0.77
630	0.81
800	0.88
1000	0.89
1250	0.90
1600	0.92
2000	0.96
2500	0.96
3150	0.97
4000	1.02
5000	1.07



## Carbonight® Plus 16oz.

Noise Reduction Coefficient NRC:	1.05
Sound Absorption Average SAA:	1.03

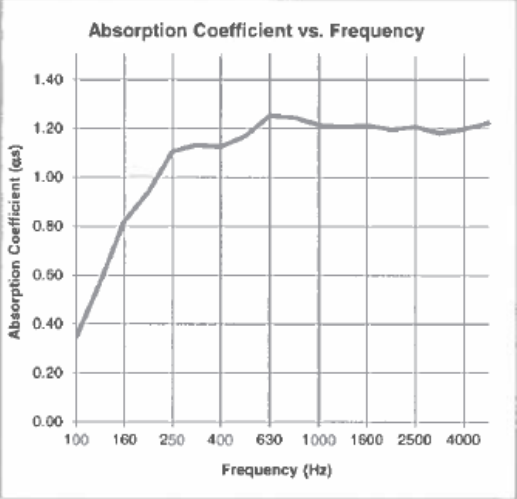
Frequency [Hz]	Absorption Coefficients $\alpha_w$
100	0.25
125	0.39
160	0.63
200	0.75
250	0.88
315	0.93
400	0.98
500	1.01
630	1.06
800	1.14
1000	1.13
1250	1.12
1600	1.14
2000	1.14
2500	1.13
3150	1.13
4000	1.14
5000	1.18



## Carbonight® 22oz.

Noise Reduction Coefficient NRC:	1.15
Sound Absorption Average SAA:	1.17

Frequency [Hz]	Absorption Coefficients $\alpha_w$
100	0.34
125	0.57
160	0.82
200	0.94
250	1.11
315	1.13
400	1.13
500	1.17
630	1.25
800	1.24
1000	1.21
1250	1.21
1600	1.21
2000	1.20
2500	1.21
3150	1.18
4000	1.20
5000	1.22

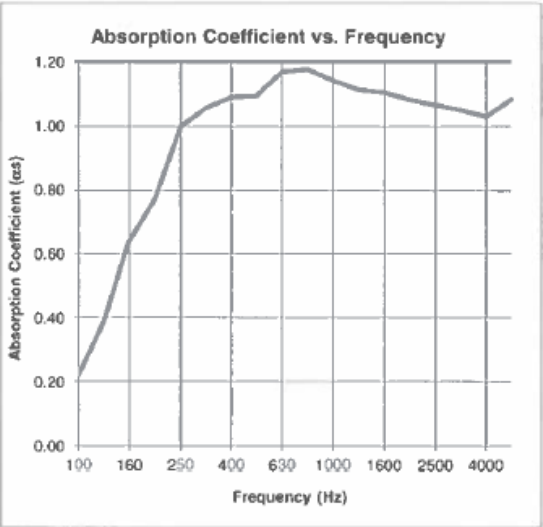


# ABSORPTION | FREQUENCY

## Carbonight® 25oz.

Noise Reduction Coefficient NRC:	1.10
Sound Absorption Average SAA:	1.07

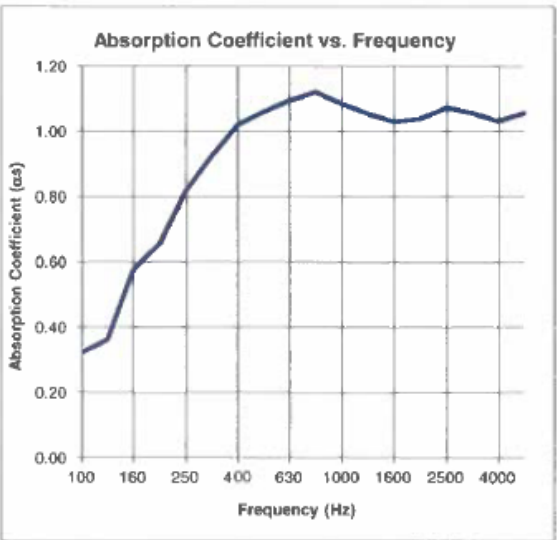
Frequency [Hz]	Absorption Coefficients $\alpha_s$
100	0.22
125	0.39
160	0.64
200	0.78
250	1.00
315	1.06
400	1.09
500	1.09
630	1.17
800	1.18
1000	1.14
1250	1.11
1600	1.11
2000	1.08
2500	1.07
3150	1.05
4000	1.03
5000	1.09



## Angelo 25oz.

Noise Reduction Coefficient NRC:	1.00
Sound Absorption Average SAA:	1.00

Frequency [Hz]	Absorption Coefficients $\alpha_s$
100	0.32
125	0.36
160	0.58
200	0.66
250	0.82
315	0.92
400	1.02
500	1.06
630	1.09
800	1.12
1000	1.08
1250	1.05
1600	1.03
2000	1.04
2500	1.07
3150	1.06
4000	1.03
5000	1.06





# ABSORPTION | FABRIC SPECIFICATIONS

Fabric Name	Fabric Content	Width	Weight	Fire Spec	Fire Rating	NRC Rating	SAA Rating
Milano® Velvet Plus	100% Polyester	62”	16oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	0.85	0.86
Carbonight® Plus	100% Polyester	62”	16oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	1.05	1.03
Carbonight® 22	100% Polyester	60”-62”	22oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	1.15	1.17
Carbonight® 25	100% Polyester	60”-62”	25oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19) CAN/ULC S109-03	1.10	1.07
Angelo	100% Polyester	54”	25oz.	IFR	NFPA 701 Small Scale CA 1237Sm (CA Title 19)	1.00	1.00

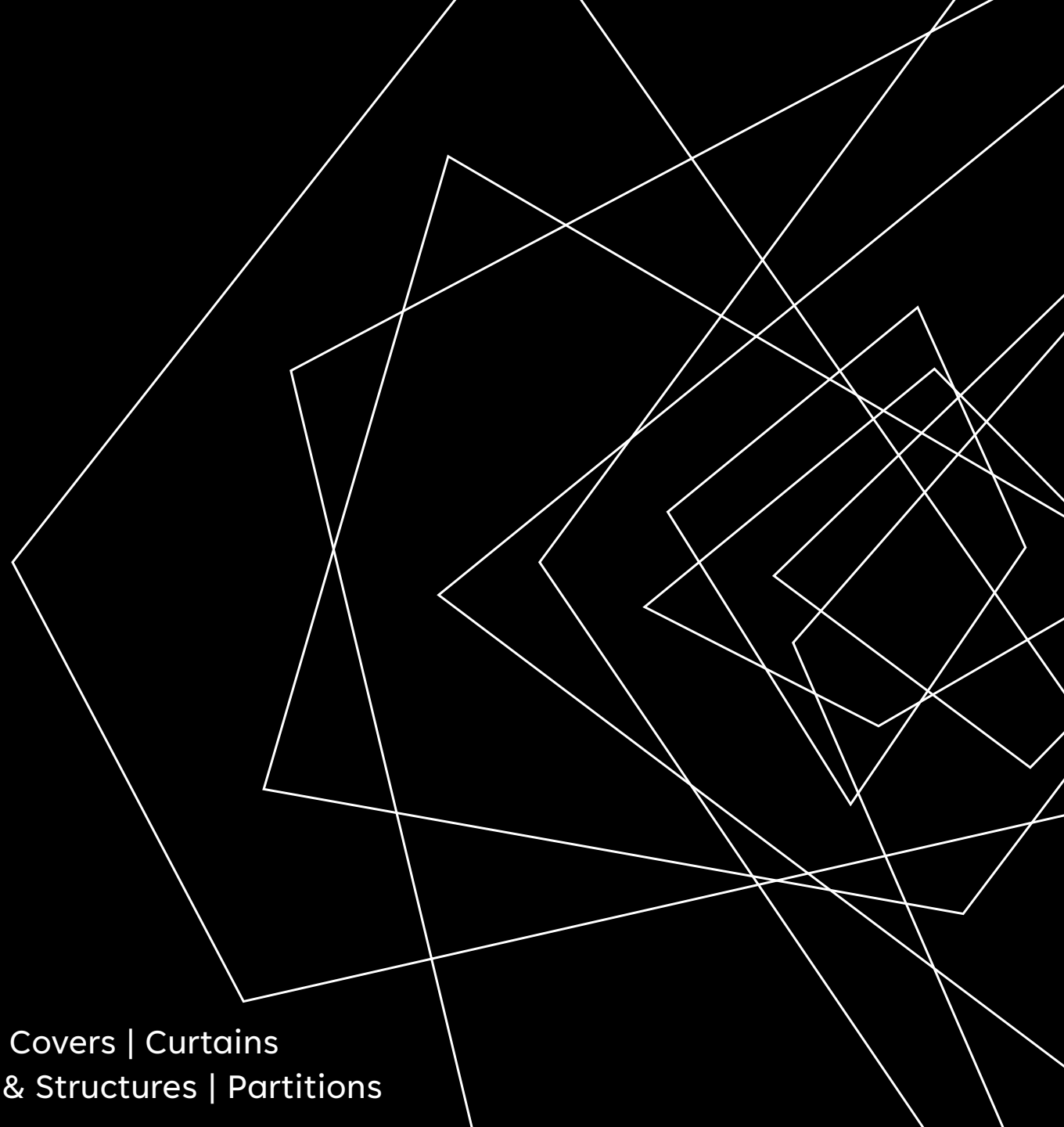
*All data was collected in compliance with ASTM C 423-17/E795-16. Panels were installed with Type-G100 Mounting. Laboratory tests are available upon request.*

# TRANSPARENT

Our acoustically transparent fabrics are utilized in projects when both interior and sound design play an intricate role in the overall environment.

To help create your perfect space, we offer a wide variety of printable acoustically transparent fabrics that meet both technical and safety requirements for most venues and applications. From blackout, to stretch and masking, these fabrics are developed to integrate into existing or temporary spaces.

Our fabrics are used in Theatres, Concert Halls, Sporting Arenas, Trade Shows, Exhibitions, Retail, and Commercial Spaces.



Graphic Wall Coverings | Acoustic Panels | Speaker Covers | Curtains

Projection Screens | Trade Show Booths | Tension Frames & Structures | Partitions

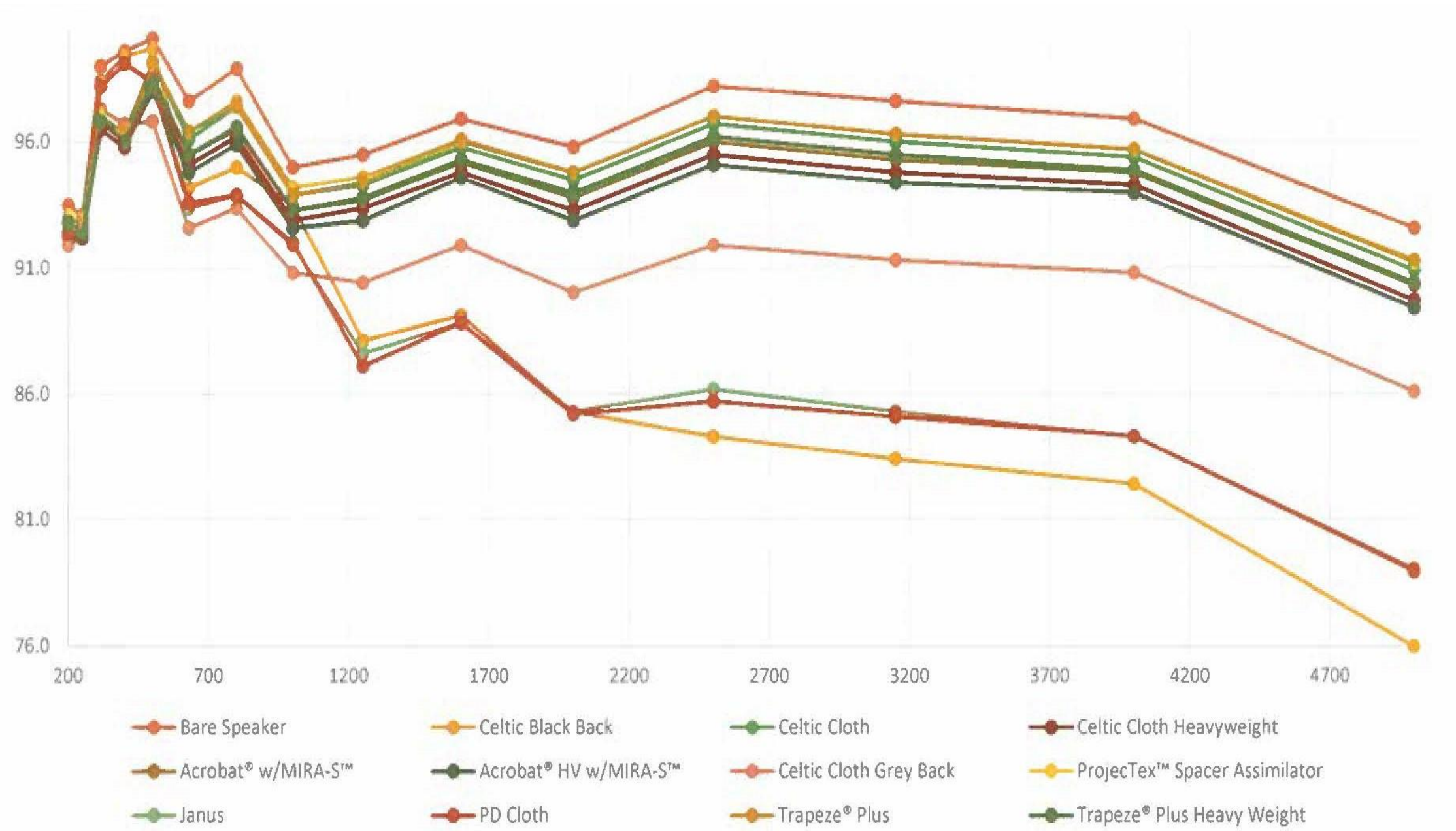
# TRANSPARENT

Fabric	Print Method	Width	Weight kg/M2 (PSF)	Thickness mm (in.)	Fire Spec	Fire Rating	Available in Sustainable
Celtic Black Back	Dye Sublimation Transfer Dye Sublimation Direct UV Latex	126"   199"	4.10 (0.84)	0.46 (0.02)	FR	NFPA 701 Small Scale CA 12375m (CA Title 19) CAN/ULC-S109 B1	NO
Celtic Cloth	Dye Sublimation Transfer	126"	2.93 (0.60)	0.52 (0.02)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19) CAN/ULC-S109	YES
Celtic Cloth HW	Dye Sublimation Transfer	126"	4.30 (0.88)	0.75 (0.03)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19) CAN/ULC-S109	YES
Celtic Cloth Grey Back BW	Dye Sublimation Transfer	126"	5.08 (1.04)	0.71 (0.03)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19)	YES
Acrobat® w/MIRA-S™	Dye Sublimation Transfer	120"	3.22 (0.66)	0.53 (0.02)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19)	NO
Acrobat® HV w/MIRA-S™	Dye Sublimation Transfer	120"	4.30 (0.88)	0.67 (0.03)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19)	NO
Trapeze® Plus	Dye Sublimation Transfer	122"	3.03 (0.62)	0.61 (0.02)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19)	YES
Trapeze® Plus HW	Dye Sublimation Transfer	122"	4.39 (0.90)	0.72 (0.03)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19)	YES
ProjectTex™ Spacer Assimilator	Dye Sublimation Transfer	120"	7.42 (1.52)	2.35 (0.09)	NFR	N/A	NO
Janus	N/A	72"   126"	4.39 (0.90)	0.50 (0.02)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19) ASTM E 84 CAN/ULC-S109 NTC 44	NO
PD Cloth	N/A	72"   126"	4.39 (0.90)	0.48 (0.02)	IFR	NFPA 701 Small Scale CA 12375m (CA Title 19) ASTM E 84 CAN/ULC-S109	NO

*Preconditioning: Fabrics were conditioned at 25°C and 55% humidity for a minimum of 24 hours.*

TRANSMISSION   FREQUENCY												
Hz	Bare Speaker	Celtic Cloth Black Back	Celtic Cloth	Celtic Cloth HW	Celtic Cloth Grey Back BW	Acrobat® w/MIRA-S™	Acrobat® HV w/MIRA-S™	Trapeze® Plus	Trapeze® Plus HW	ProjecTex™ Spacer Assimilator	Janus	PD Cloth
200	93.5	92.2	92.8	92.3	91.9	92.5	92.3	92.9	92.8	93.1	92.5	92.4
250	93.1	92.5	92.3	92.2	92.3	92.7	92.5	92.9	92.3	93.0	92.8	92.6
315	99.0	98.4	96.9	96.5	97.3	97.1	97.0	96.8	96.8	97.1	98.2	98.2
400	99.6	99.4	96.1	95.8	96.7	96.3	96.2	96.3	96.0	96.3	99.1	99.1
500	100.1	99.7	99.2	98.0	96.8	98.6	98.0	99.1	98.3	99.2	98.3	98.4
630	97.6	94.2	96.1	95.1	92.6	95.5	94.8	96.4	95.5	96.4	93.4	93.6
800	98.9	95.0	97.4	96.2	93.4	96.6	95.9	97.4	96.5	97.6	93.9	93.9
1000	95.0	93.5	93.9	92.9	90.8	93.3	92.6	93.9	93.3	94.2	91.9	92.0
1250	95.5	88.1	94.3	93.4	90.4	93.7	92.9	94.4	93.8	94.6	87.6	87.1
1600	96.9	89.1	95.8	94.8	91.9	95.2	94.6	96.0	95.3	96.1	88.8	88.8
2000	95.8	85.3	94.5	93.3	90.0	93.8	92.9	94.8	94.0	94.8	85.3	85.2
2500	98.2	84.3	96.7	95.5	91.9	96.0	95.1	97.0	96.2	97.0	86.2	85.7
3150	97.6	84.3	96.0	94.8	91.3	95.3	94.4	96.3	95.5	96.3	85.3	85.1
4000	96.9	82.4	95.4	94.3	90.8	94.8	94.0	95.7	94.9	95.7	84.3	84.3
5000	92.6	76.0	90.9	89.7	86.1	90.3	89.4	91.3	90.4	91.2	78.9	79.0

# TRANSMISSION | PERFORMANCE COMPARISON



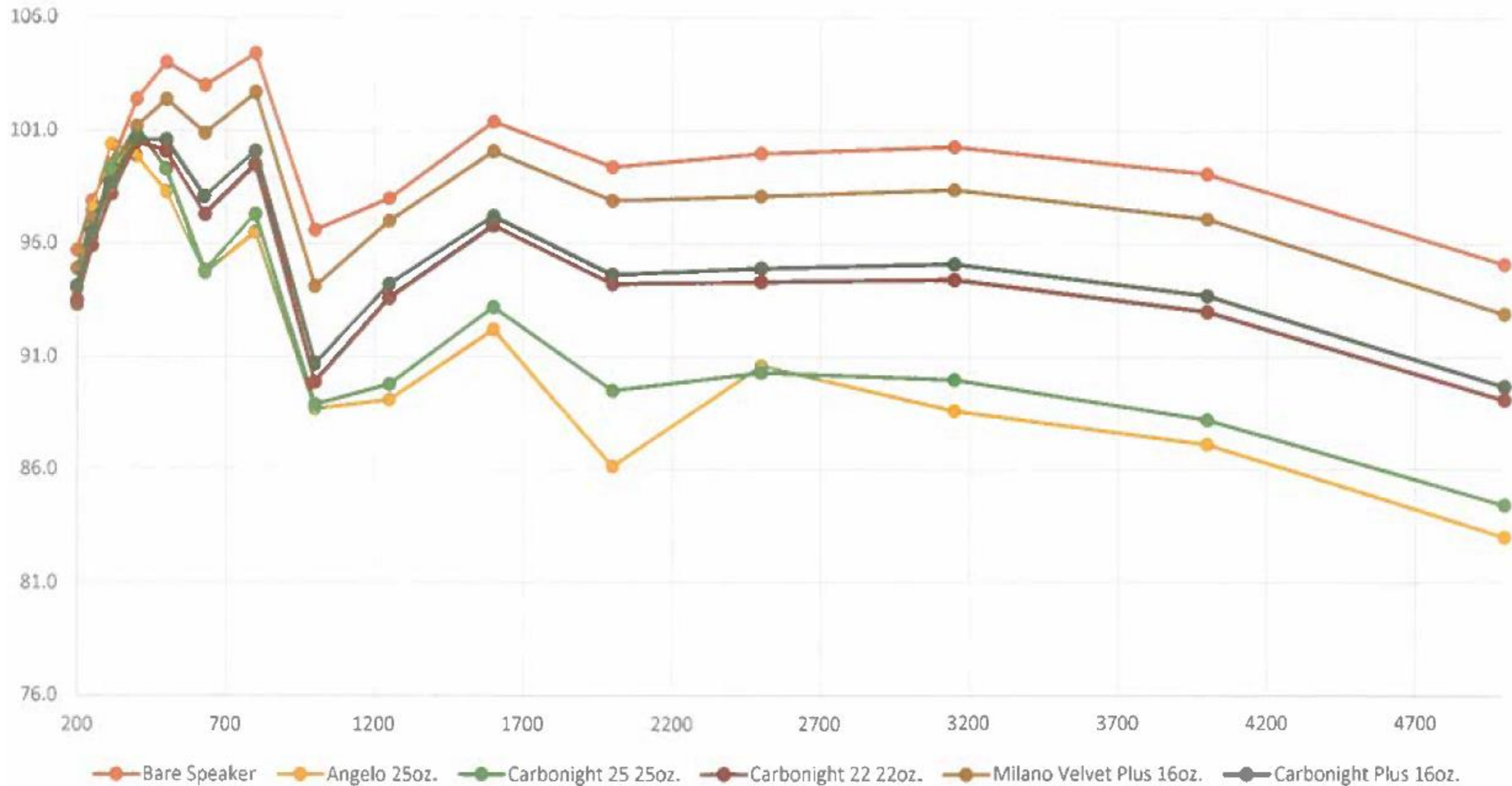
# TRANSPARENT | IFR VELVETS & VELOURS – FABRIC SPECIFICATIONS

Fabric	Fabric Content	Width	Weight: kg/M2 (PSF)	Thickness mm (in.)	Fire Spec	Fire Rating	Available in Sustainable
Milano® Velvet Plus	100% Polyester	62”	2.04 (0.42)	1.35 (0.05)	IFR	NFPA 701Small Scale CA 1237Sm (Title 19) CAN/ULC S109-03	YES
Carbonight® Plus	100% Polyester	62”	2.01 (0.41)	1.02 (0.04)	IFR	NFPA 701Small Scale CA 1237Sm (Title 19) CAN/ULC S109-03	YES
Carbonight® 22	100% Polyester	62”	2.28 (0.57)	1.78 (0.07)	IFR	NFPA 701Small Scale CA 1237Sm (Title 19) CAN/ULC S109-03	YES
Carbonight® 25	100% Polyester	62”	3.13 (0.64)	1.78 (0.07)	IFR	NFPA 701Small Scale CA 1237Sm (Title 19) CAN/ULC S109-03	YES
Angelo Velvet	100% Polyester	54”	2.47 (0.51)	3.30 (0.13)	IFR	NFPA 701 Small Scale CA 1237Sm (Title 19)	NO

*Preconditioning: Fabrics were conditioned at 25°C and 55% humidity for a minimum of 24 hours.*

TRANSMISSION   FREQUENCY						
Hz	Bare Speaker	Milano™ Velvet Plus	Carbonight® Plus	Carbonight® 22	Carbonight® 25	Angelo
200	95.7	94.9	94.1	93.5	93.3	94.0
250	97.9	97.1	96.5	95.9	96.3	97.5
315	99.5	98.6	98.7	98.2	99.3	100.4
400	102.4	101.2	100.6	100.5	101.2	99.9
500	104.0	102.4	100.6	100.1	99.3	98.3
630	103.0	100.9	98.1	97.3	94.8	94.7
800	104.4	102.7	100.1	99.5	97.3	96.5
1000	96.6	94.1	90.7	89.9	88.9	88.7
1250	98.0	97.0	94.2	93.6	89.8	89.1
1600	101.4	100.1	97.2	96.8	93.2	92.2
2000	99.4	97.9	94.6	94.2	89.5	86.1
2500	100.0	98.1	94.9	94.3	90.3	90.6
3150	100.3	98.4	95.1	94.4	90.0	88.6
4000	99.1	97.1	93.7	93.0	88.2	87.1
5000	95.1	92.9	89.7	89.1	84.4	83.0

# TRANSMISSION | PERFORMANCE COMPARISON





A series of white, overlapping geometric lines and polygons on a black background, located on the left side of the image.

FOR COMPLETE LAB REPORTS ON  
ALL OF OUR ACOUSTICAL FABRICS  
PLEASE CONTACT YOUR LOCAL  
DAZIAN OFFICE.

CA | 818.287.3800

NJ | 201.549.1000

FL | 407.367.7616

[www.dazian.com](http://www.dazian.com)

[info@dazian.com](mailto:info@dazian.com)

