

Wool Serge 420

Perfect For: Masking • Decorative/Scenic • Film & TV • Stage • Acoustics



J&C Joel 

the inspiration behind the performance

Contents

Composition & Care

150 cm 3

Fire Certificate

BS5867 Part 2 Type B 4

Acoustic Test Report

Flat 6

50% Fullness 8

100% Fullness 10

TECHNICAL



NDFR

Non Durably Flame Retardant

chemically treated with a water solution and if wetted in any way should be retreated



DFR

Durably Flame Retardant

chemically treated to withstand a number of cleanings



IFR

Inherently Flame Retardant

woven from fibres with a high flame retardancy



FR

Flame Retardant

chemically treated to an individual specification



NOT FR

Not Flame Retardant no flame retardant treatment



Confirmation that the fabric meets one or more flame retardant standards

BS5867 BS5867 Pt2 B is the British Standard for flame retardant fabrics used for curtains and drapes

BS5852 BS5852 Pt1 is the British Standard for flammability of upholstered composites for seating

BS4790 BS4790: 1987 Determination of the effects of a small source of ignition on textile floor coverings hot metal nut method (method 1, loose laid)

EN13773: 2003 Meets European fire safety standards for vertically hung fabrics. Burning behavior, ignitability testing of curtain fabric for use in the contract market.

TL 1080-0002/8 German Military Specification for horizontally tested materials

EN14041 Details the requirement for CE Marking of textiles, laminate and resilient floor coverings

BS7905-1:2001 Lifting equipment for performance, broadcast and similar applications.

ATTRIBUTES



Approx roll length of material in linear metres (m) & feet (ft)



Approx width of material in centimetres (cm) & inches (")



Approx weight in grams per metre squared (g/m²)



Approx thickness in (mm)

M1, M2, M4 Conforms to French Fire Regulations

B1, B2 Conforms to German Fire Regulations DIN 4102

IMO Conforms to International Maritime Organisation regulations

Classe Uno Meets Italian Fire Regulations

BS EN13501-1 Fire Classification of construction, products and building elements. Classification using test data from reaction to fire tests

CFC EN ISO 9239-1 Reaction to fire test. Horizontal surface spread of flame on floor covering system. Determination of the burning behaviour using a retardant heat source

NFPA 701 NFPA 701: (USA) Standard Methods of Fire Tests for Flame Propagation of Textiles and Films

EN9239-1 Reaction to fire tests – horizontal surface spread of flame on floor covering systems

DIN EN1021 Meets European fire safety standards for exposure to different ignition sources, namely a lit cigarette and butane flame. Assessment of the ignitability of upholstered furniture

Datasheet - Fabrics & Flooring

Wool Serge 420



the inspiration behind the performance

To ensure you get the best from the product supplied to you, we advise you follow the care instructions within this datasheet.

Fabric	Flame Retardancy	IFR
	Fire Certification	BS5867 Part 2 Type B
	Brand Name (and Manufacturer)	J&C Joel Ltd.
	Material (Blending Ratio)	95% Wool 5% Nylon & Other Fibres
	Construction of Fabric	Plain Weave • Yarn Count: Heavy • Ends/Picks: Medium Density
	Method of Dying	Fibre Dyed
Chemicals	Brand Name of Flame Retardant Chemicals	N/A
	Chemical name of Flame Retardant Chemicals	N/A
	Process of Flame Retardant Chemicals	N/A
Care	Information	Inherently Flame Retardant to BS5867 Part 2 Type B. This means that the man-made fibres are flame retardant for life and if wet, would not need to be re-flameproofed. Therefore, the cloth will withstand wet cleaning but we would advise and suggest professional dry cleaning only, using the correct chemical process. Notwithstanding the aforementioned, it would be our advice to only dry clean this material periodically. We would suggest that the curtain be soft-brushed on a regular basis and periodically cleaned using a vacuum and drapery attachment. This fabric is not pre-shrunk.
	Laundering Treatment	 Dry Clean Only Do Not Wash Do Not Bleach Do Not Iron Do Not Tumble Dry
Other Finishes		Pressed, Blown Finish
Notes		 Recycled Wool Materials



Fire Rating:
IFR



Approx Roll Length:
57m / 187ft



Width:
150cm / 59"



Weight:
420 g/m²



Fire Certification:
BS5867



Colours
Available



Fabric Thickness:
*1.35mm

*FABRIC THICKNESS Measured in-house with digital callipers, not under laboratory conditions.

For further information please contact our sales team sales@jcjoel.com

UK Europe Middle East Vietnam Macau Hong Kong

Fire Test Certificate – Specimen

Fabric: Wool Serge 420
Type: BS5867 Part 2 Type B

J&C Joel 
the inspiration behind the performance

 **West Yorkshire
Materials Testing Service**

Nepshaw Lane South, Morley, Leeds, LS27 7JQ
Materials Testing Manager: D. J. Brockbank
t: 0113 393 9791
e: dale.brockbank@wyjs.org.uk
www.wyjs.org.uk/materialtesting



TEST REPORT

Client: J & C Joel Limited (UK)
Corporation Mill
Corporation Street
Sowerby Bridge
Halifax
HX6 2QQ

Entry No: 101502

Date received: 24/08/2018

Client's Description: Sample of fabric Quality: WS100 Standard Wool Serge

Test Required: Flammability BS 5867-2: Type B

Pre-treatment: Tested both before and after one water soak in accordance with BS EN 1021-1: 2006, Annex D

Conditioning: A minimum of 24 hours at 65+/-5% Relative Humidity, 20+/-2°C

Date Tests Completed: 30/08/2018

Method of Test: BS EN ISO 15025: 2002 Procedure A (surface ignition)

The results may not apply to situations where there is restricted air supply or prolonged exposure to large sources of intense heat as in a conflagration.

Flame application time 15 seconds using propane gas

As Received

Face of Fabric tested	Fabric length direction			Fabric width direction		
Specimen number	1↑	2↓	3↑	4→	5←	6→
Flame reached an edge (✓ or X)	X	X	✓	X	X	X
Hole reached an edge (✓ or X)	X	X	X	X	X	X
Flaming debris (✓ or X)	X	X	X	X	X	X

Note: If only one specimen fails then the standard requires a re-test of a further 6 specimens.

-----End of Page-----

This is hereby certified to be a correct return of the tests made of the items referred to herein

Dale Brockbank
Materials Testing Manager
07 September 2018

✦ Unless instructed otherwise by the client sample remnants will be disposed of after 28 days.
✦ Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
✦ Uncertainty budgets for test methods contained within this report are available on request.
This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.



1104

Fire Test Certificate – Specimen

Fabric: Wool Serge 420
Type: BS5867 Part 2 Type B

J&C Joel 
the inspiration behind the performance



Client: J & C Joel Limited (UK)

Entry No: 101502



As Received, Re-test

Face of Fabric tested	Fabric length direction			Fabric width direction		
Specimen number	1↑	2↓	3↑	4→	5←	6→
Flame reached an edge (✓ or X)	X	X	X	X	X	X
Hole reached an edge (✓ or X)	X	X	X	X	X	X
Flaming debris (✓ or X)	X	X	X	X	X	X

After Water soak

Face of Fabric tested	Fabric length direction			Fabric width direction		
Specimen number	1↑	2↓	3↑	4→	5←	6→
Flame reached an edge (✓ or X)	X	X	X	X	X	X
Hole reached an edge (✓ or X)	X	X	X	X	X	X
Flaming debris (✓ or X)	X	X	X	X	X	X

Comments

On the basis of the tests carried out this sample of fabric meets the Type B requirements of BS 5867-2: 2008 when tested as received and after one water soak.

-----End of Document-----

Acoustic Test Report - Absorption

Absorption Class: D

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: Flat

Cavity from Wall: 100mm

J&C Joel 

the inspiration behind the performance

Data Sheet 21

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 18.9 °C **Humidity:** 61 %RH **Pressure:** 999 mbar

Sample Description: Wool Serge 420 - Single Layer – Flat (Approx. weight 420g/m²) – 100mm cavity from wall

Mounting Method: G-100

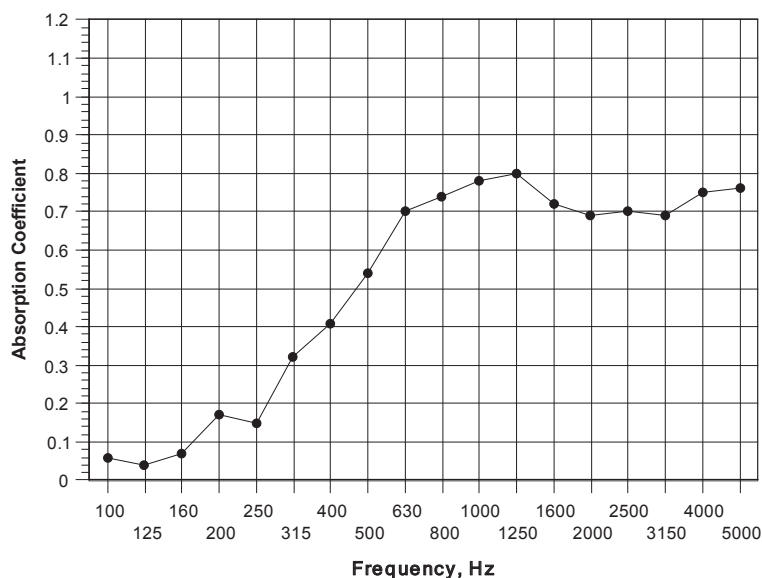
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 23

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	5.07	0.05	
63*	5.40	5.44	-0.01	n/a
80*	6.56	6.54	0.00	
100	7.57	6.94	0.06	
125	7.11	6.72	0.04	0.05
160	6.42	5.94	0.07	
200	7.12	5.83	0.17	
250	7.07	5.89	0.15	0.20
315	6.84	4.88	0.32	
400	6.46	4.32	0.41	
500	5.45	3.53	0.54	0.55
630	4.96	3.02	0.70	
800	5.47	3.13	0.74	
1000	5.91	3.18	0.78	0.75
1250	5.59	3.05	0.80	
1600	5.06	3.01	0.72	
2000	4.75	2.95	0.69	0.70
2500	4.34	2.77	0.70	
3150	3.64	2.48	0.69	
4000	3.09	2.15	0.75	0.75
5000	2.44	1.80	0.76	
6300*	1.79	1.44	0.70	
8000*	1.51	1.23	0.76	n/a
10000*	1.06	0.88	0.96	

Sound Absorption Coefficient



α_w 0.50(MH)

Class D

Calculated to EN ISO 11654:1997

NRC 0.55

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

Acoustic Test Report - Absorption

Absorption Class: C

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: Flat

Cavity from Wall: 350mm

J&C Joel 

the inspiration behind the performance

Data Sheet 22

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 18.9 °C **Humidity:** 61 %RH **Pressure:** 999 mbar

Sample Description: Wool Serge 420 - Single Layer – Flat (Approx. weight 420g/m²) – 350mm cavity from wall

Mounting Method: G-350

Sample Area: 9 m²

Chamber Volume: 300 m³

Test 24

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	5.20	0.03	
63*	5.40	4.60	0.17	n/a
80*	6.56	5.99	0.08	
100	7.57	6.44	0.12	
125	7.11	6.26	0.10	0.15
160	6.42	4.86	0.27	
200	7.12	4.70	0.39	
250	7.07	4.37	0.47	0.45
315	6.84	4.04	0.55	
400	6.46	3.71	0.62	
500	5.45	3.40	0.60	0.60
630	4.96	3.27	0.56	
800	5.47	3.26	0.67	
1000	5.91	3.33	0.71	0.70
1250	5.59	3.26	0.69	
1600	5.06	3.09	0.68	
2000	4.75	2.92	0.71	0.70
2500	4.34	2.72	0.74	
3150	3.64	2.38	0.78	
4000	3.09	2.14	0.76	0.75
5000	2.44	1.79	0.78	
6300*	1.79	1.40	0.81	
8000*	1.51	1.20	0.87	n/a
10000*	1.06	0.89	0.89	

a_w 0.65

Class C

Calculated to EN ISO 11654:1997

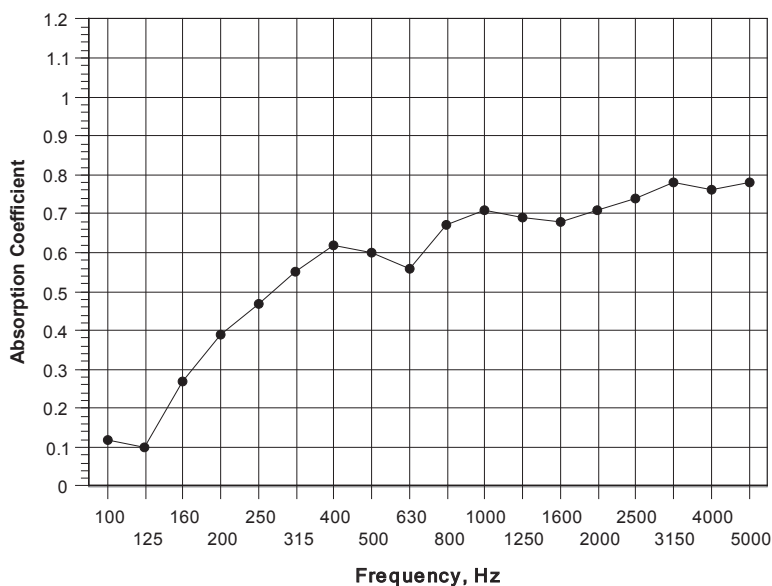
NRC 0.60

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Sound Absorption Coefficient



Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

Acoustic Test Report - Absorption

Absorption Class: C

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: 50%

Cavity from Wall: 100mm

J&C Joel 

the inspiration behind the performance

Data Sheet 24

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 18.9 °C **Humidity:** 61 %RH **Pressure:** 1000 mbar

Sample Description: Wool Serge 420 – Single Layer – 50% fullness (Approx. weight 420g/m²) – 100mm cavity from wall

Mounting Method: G-100

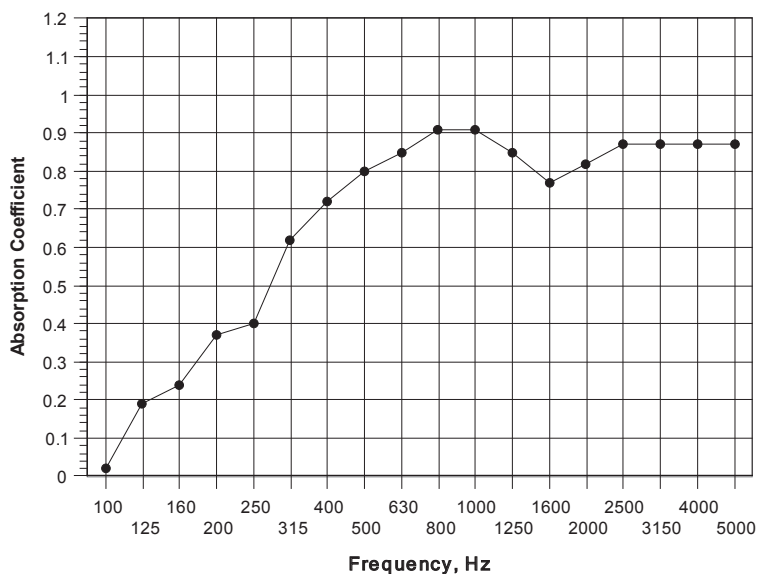
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 26

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	5.23	0.02	
63*	5.40	4.74	0.14	n/a
80*	6.56	5.88	0.09	
100	7.57	7.39	0.02	
125	7.11	5.71	0.19	0.15
160	6.42	4.98	0.24	
200	7.12	4.80	0.37	
250	7.07	4.62	0.40	0.45
315	6.84	3.83	0.62	
400	6.46	3.46	0.72	
500	5.45	3.01	0.80	0.80
630	4.96	2.79	0.85	
800	5.47	2.84	0.91	
1000	5.91	2.96	0.91	0.90
1250	5.59	2.97	0.85	
1600	5.06	2.94	0.77	
2000	4.75	2.75	0.82	0.80
2500	4.34	2.55	0.87	
3150	3.64	2.29	0.87	
4000	3.09	2.05	0.87	0.85
5000	2.44	1.74	0.87	
6300*	1.79	1.37	0.89	
8000*	1.51	1.17	0.98	n/a
10000*	1.06	0.84	1.25	

Sound Absorption Coefficient



α_w 0.75

Class C

Calculated to EN ISO 11654:1997

NRC 0.75

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: 50%

Cavity from Wall: 350mm

J&C Joel 

the inspiration behind the performance

Data Sheet 23

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 18.9 °C **Humidity:** 61 %RH **Pressure:** 999 mbar

Sample Description: Wool Serge 420 – Single Layer – 50% fullness (Approx. weight 420g/m²) – 350mm cavity from wall

Mounting Method: G-350

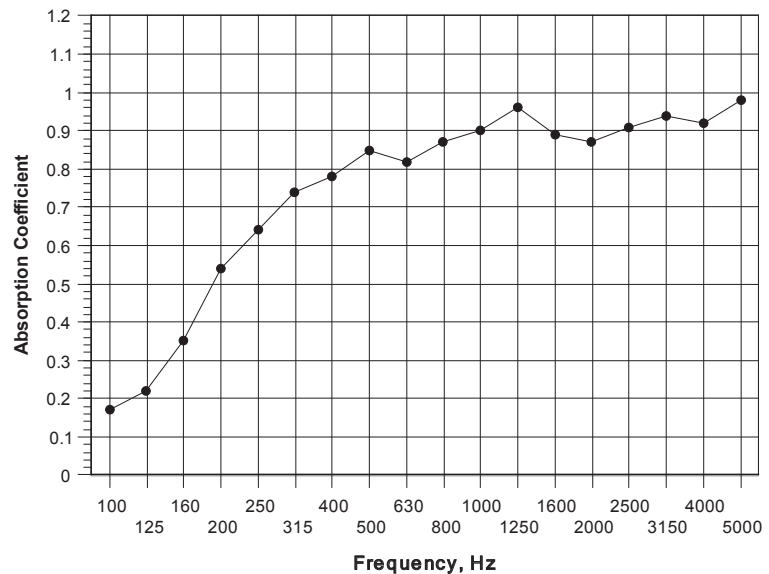
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 25

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	4.39	0.22	
63*	5.40	4.79	0.13	n/a
80*	6.56	5.79	0.11	
100	7.57	6.13	0.17	
125	7.11	5.52	0.22	0.25
160	6.42	4.52	0.35	
200	7.12	4.14	0.54	
250	7.07	3.85	0.64	0.65
315	6.84	3.52	0.74	
400	6.46	3.34	0.78	
500	5.45	2.93	0.85	0.80
630	4.96	2.83	0.82	
800	5.47	2.90	0.87	
1000	5.91	2.97	0.90	0.90
1250	5.59	2.80	0.96	
1600	5.06	2.75	0.89	
2000	4.75	2.68	0.87	0.90
2500	4.34	2.50	0.91	
3150	3.64	2.22	0.94	
4000	3.09	2.01	0.92	0.95
5000	2.44	1.68	0.98	
6300*	1.79	1.34	0.98	
8000*	1.51	1.16	1.02	n/a
10000*	1.06	0.81	1.49	

Sound Absorption Coefficient



α_w 0.85

Class B

Calculated to EN ISO 11654:1997

NRC 0.80

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: 100%

Cavity from Wall: 100mm

J&C Joel 

the inspiration behind the performance

Data Sheet 25

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 19.0 °C **Humidity:** 61 %RH **Pressure:** 1001 mbar

Sample Description: Wool Serge 420 – Single Layer – 100% fullness (Approx. weight 420g/m²) – 100mm cavity from wall

Mounting Method: G-100

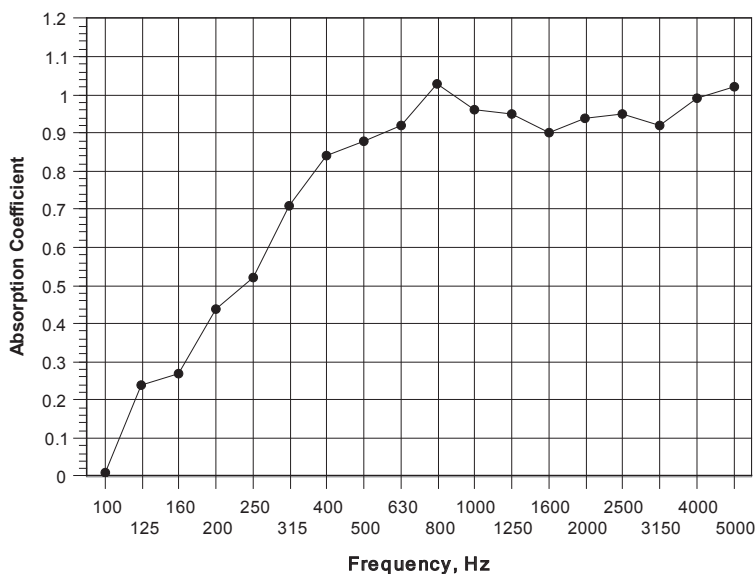
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 27

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	4.43	0.21	
63*	5.40	4.61	0.17	n/a
80*	6.56	5.86	0.10	
100	7.57	7.50	0.01	
125	7.11	5.42	0.24	0.15
160	6.42	4.84	0.27	
200	7.12	4.51	0.44	
250	7.07	4.20	0.52	0.55
315	6.84	3.60	0.71	
400	6.46	3.22	0.84	
500	5.45	2.89	0.88	0.90
630	4.96	2.68	0.92	
800	5.47	2.67	1.03	
1000	5.91	2.88	0.96	1.00
1250	5.59	2.82	0.95	
1600	5.06	2.74	0.90	
2000	4.75	2.60	0.94	0.95
2500	4.34	2.45	0.95	
3150	3.64	2.24	0.92	
4000	3.09	1.96	0.99	1.00
5000	2.44	1.66	1.02	
6300*	1.79	1.35	0.95	
8000*	1.51	1.15	1.08	n/a
10000*	1.06	0.82	1.42	

Sound Absorption Coefficient



α_w 0.85(H)

Class B

Calculated to EN ISO 11654:1997

NRC 0.85

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

Acoustic Test Report - Absorption

Absorption Class: A

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 420

Fullness: 100%

Cavity from Wall: 350mm

J&C Joel 

the inspiration behind the performance

Data Sheet 26

The Laboratory Measurement of Random Incidence Sound Absorption generally to BS EN ISO 354:2003

Client: J&C Joel Ltd

Test Date: 20/05/2014

Empty Room: **Temperature:** 19.0 °C **Humidity:** 62 %RH **Pressure:** 999 mbar

Room with Sample: **Temperature:** 19.0 °C **Humidity:** 60 %RH **Pressure:** 1001 mbar

Sample Description: Wool Serge 420 – Single Layer – 100% fullness (Approx. weight 420g/m²) – 350mm cavity from wall

Mounting Method: G-350

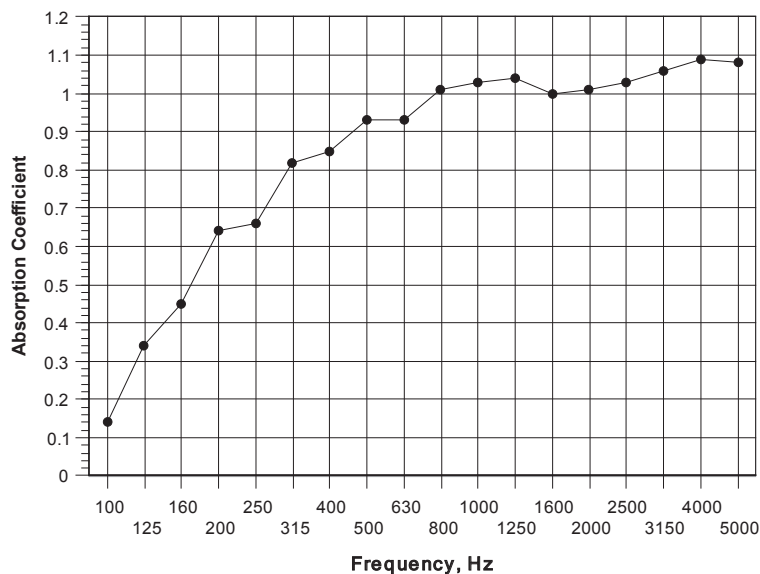
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 28

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	5.33	4.60	0.16	
63*	5.40	4.50	0.20	n/a
80*	6.56	5.35	0.19	
100	7.57	6.30	0.14	
125	7.11	4.92	0.34	0.30
160	6.42	4.18	0.45	
200	7.12	3.86	0.64	
250	7.07	3.78	0.66	0.70
315	6.84	3.35	0.82	
400	6.46	3.19	0.85	
500	5.45	2.81	0.93	0.90
630	4.96	2.67	0.93	
800	5.47	2.70	1.01	
1000	5.91	2.78	1.03	1.00
1250	5.59	2.69	1.04	
1600	5.06	2.61	1.00	
2000	4.75	2.51	1.01	1.00
2500	4.34	2.36	1.03	
3150	3.64	2.11	1.06	
4000	3.09	1.89	1.09	1.00
5000	2.44	1.62	1.08	
6300*	1.79	1.30	1.08	
8000*	1.51	1.11	1.20	n/a
10000*	1.06	0.81	1.44	

Sound Absorption Coefficient



α_w 0.95

Class A

Calculated to EN ISO 11654:1997

NRC 0.90

Calculated to ASTM C 423-01

* Denotes frequencies outside the range covered
by BS EN ISO 354:2003

T1, empty room reverberation time
T2, room reverberation time with sample

Practical absorption coefficient, BS EN ISO 11654:1997

v4.3

J&C Joel

the inspiration behind the performance



J&C Joel United Kingdom - HQ
uksales@jcjoel.com



J&C Joel Europe
eusales@jcjoel.com



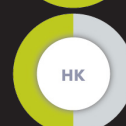
J&C Joel Middle East
uaesales@jcjoel.com



J&C Joel Vietnam
asiasales@jcjoel.com



J&C Joel Macau
asiasales@jcjoel.com



J&C Joel Hong Kong
asiasales@jcjoel.com

www.jcjoel.com