

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Coloured Wool Serge

Fullness: 50%

Cavity from Wall: 100mm

J&C Joel 

the inspiration behind the performance

Data Sheet 17

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

Client: J & C Joel Ltd

Test Date: 30/11/2020

Empty Room: **Temperature:** 16.4 °C **Humidity:** 57 %RH **Pressure:** 1016 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 56 %RH **Pressure:** 1010 mbar

Sample Description: Coloured Wool Serge - Single Layer - 50% Fullness (Approx. Weight 500g/m²) - 100mm Cavity From Wall

Mounting Method: G - 100

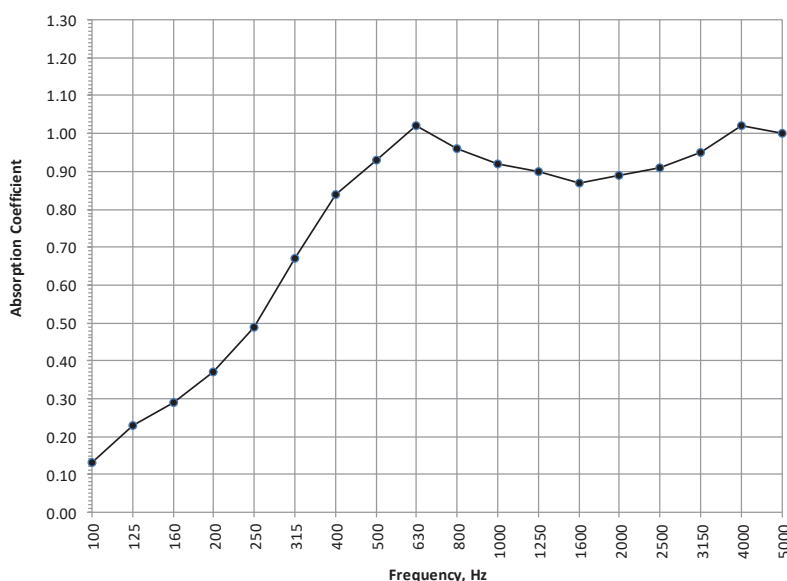
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 17

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	5.21	-0.01	
63*	4.83	5.31	-0.10	n/a
80*	7.33	7.00	0.04	
100	7.42	6.33	0.13	
125	7.17	5.52	0.23	0.20
160	6.75	4.96	0.29	
200	6.77	4.62	0.37	
250	6.80	4.23	0.49	0.50
315	6.65	3.66	0.67	
400	6.46	3.23	0.84	
500	5.63	2.87	0.93	0.95
630	5.00	2.58	1.02	
800	5.22	2.72	0.96	
1000	5.79	2.93	0.92	0.95
1250	5.75	2.94	0.90	
1600	5.33	2.87	0.87	
2000	4.93	2.72	0.89	0.90
2500	4.35	2.50	0.91	
3150	3.55	2.17	0.95	
4000	2.92	1.86	1.02	1.00
5000	2.34	1.60	1.00	
6300*	1.60	1.17	1.14	
8000*	1.30	1.01	1.04	n/a
10000*	0.93	0.74	1.28	

Sound Absorption Coefficient



α_w 0.80(H)

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

v5

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Coloured Wool Serge

Fullness: 50%

Cavity from Wall: 350mm

J&C Joel 

the inspiration behind the performance

Data Sheet 18

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

Client: J & C Joel Ltd

Test Date: 30/11/2020

Empty Room: **Temperature:** 16.4 °C **Humidity:** 57 %RH **Pressure:** 1016 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 56 %RH **Pressure:** 1009 mbar

Sample Description: Coloured Wool Serge - Single Layer - 50% Fullness (Approx. Weight 500g/m²) - 350mm Cavity From Wall

Mounting Method: G - 350

Sample Area: 9 m²

Chamber Volume: 300 m³

Test 18

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	4.78	0.08	
63*	4.83	4.91	-0.02	n/a
80*	7.33	6.13	0.15	
100	7.42	5.95	0.18	
125	7.17	4.91	0.35	0.30
160	6.75	4.40	0.43	
200	6.77	4.32	0.45	
250	6.80	3.83	0.62	0.60
315	6.65	3.52	0.73	
400	6.46	3.25	0.83	
500	5.63	3.10	0.79	0.80
630	5.00	2.83	0.83	
800	5.22	2.83	0.88	
1000	5.79	2.95	0.90	0.90
1250	5.75	2.90	0.93	
1600	5.33	2.73	0.97	
2000	4.93	2.66	0.93	0.95
2500	4.35	2.41	0.99	
3150	3.55	2.12	1.01	
4000	2.92	1.81	1.10	1.00
5000	2.34	1.54	1.14	
6300*	1.60	1.14	1.26	
8000*	1.30	0.98	1.21	n/a
10000*	0.93	0.72	1.49	

α_w 0.85(H)

Class B

Calculated to EN ISO 11654:1997

NRC 0.80

Calculated to ASTM C 423-01

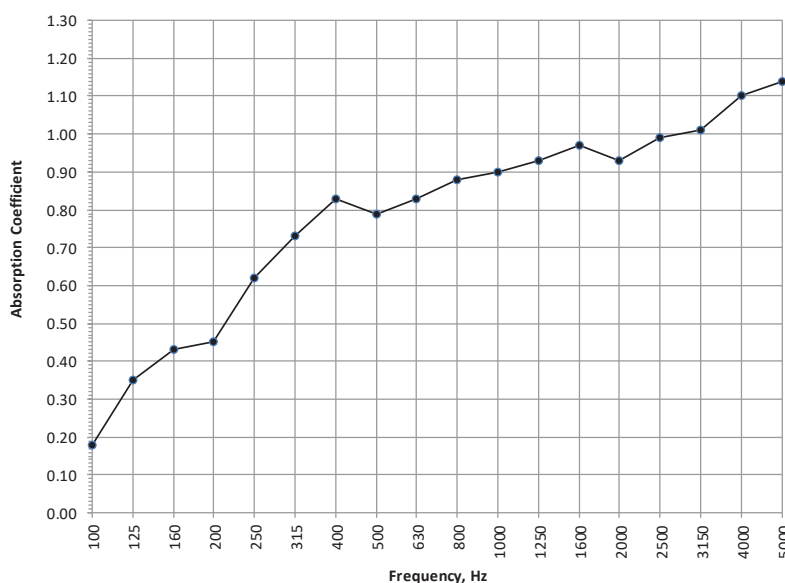
* Denotes frequencies outside the range covered

by BS EN ISO 354:2003

T1, empty room reverberation time

T2, room reverberation time with sample

Sound Absorption Coefficient



Practical absorption coefficient, BS EN ISO 11654:1997

v5

Acoustic Test Report - Absorption

Absorption Class: A

Calculated to EN ISO 11654:1997

Fabric: Coloured Wool Serge

Fullness: 100%

Cavity from Wall: 100mm

J&C Joel 

the inspiration behind the performance

Data Sheet 15

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

Client: J & C Joel Ltd

Test Date: 30/11/2020

Empty Room: **Temperature:** 16.4 °C **Humidity:** 57 %RH **Pressure:** 1016 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 56 %RH **Pressure:** 1011 mbar

Sample Description: Coloured Wool Serge - Single Layer - 100% Fullness (Approx. Weight 500g/m²) - 100mm Cavity From Wall

Mounting Method: G - 100

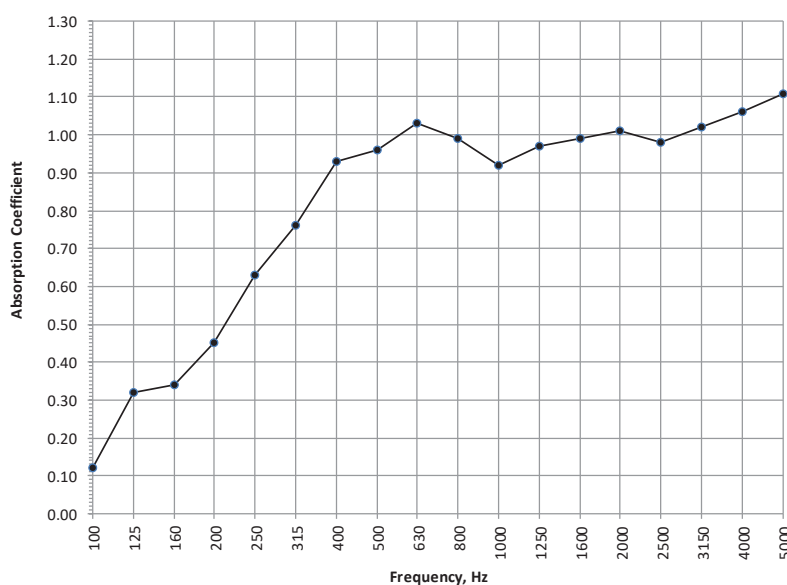
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 15

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	5.05	0.02	
63*	4.83	5.12	-0.06	n/a
80*	7.33	6.97	0.04	
100	7.42	6.36	0.12	
125	7.17	5.03	0.32	0.25
160	6.75	4.74	0.34	
200	6.77	4.35	0.45	
250	6.80	3.81	0.63	0.60
315	6.65	3.44	0.76	
400	6.46	3.07	0.93	
500	5.63	2.83	0.96	0.95
630	5.00	2.57	1.03	
800	5.22	2.68	0.99	
1000	5.79	2.92	0.92	0.95
1250	5.75	2.84	0.97	
1600	5.33	2.70	0.99	
2000	4.93	2.56	1.01	1.00
2500	4.35	2.42	0.98	
3150	3.55	2.11	1.02	
4000	2.92	1.83	1.06	1.00
5000	2.34	1.55	1.11	
6300*	1.60	1.17	1.14	
8000*	1.30	0.99	1.15	n/a
10000*	0.93	0.75	1.19	

Sound Absorption Coefficient



α_w 0.90

Class A

Calculated to EN ISO 11654:1997

NRC 0.90

Calculated to ASTM C423-01

* 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

v5

Acoustic Test Report - Absorption

Absorption Class: A

Calculated to EN ISO 11654:1997

Fabric: Coloured Wool Serge

Fullness: 100%

Cavity from Wall: 350mm

J&C Joel 

the inspiration behind the performance

Data Sheet 16

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

Client: J & C Joel Ltd

Test Date: 30/11/2020

Empty Room: **Temperature:** 16.4 °C **Humidity:** 57 %RH **Pressure:** 1016 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 56 %RH **Pressure:** 1010 mbar

Sample Description: Coloured Wool Serge - Single Layer - 100% Fullness (Approx. Weight 500g/m²) - 350mm Cavity From Wall

Mounting Method: G - 350

Sample Area: 9 m²

Chamber Volume: 300 m³

Test 16

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	4.91	0.05	
63*	4.83	4.95	-0.03	n/a
80*	7.33	6.01	0.16	
100	7.42	5.88	0.19	
125	7.17	4.69	0.40	0.35
160	6.75	4.42	0.42	
200	6.77	4.01	0.55	
250	6.80	3.80	0.63	0.65
315	6.65	3.42	0.77	
400	6.46	3.25	0.83	
500	5.63	3.02	0.83	0.90
630	5.00	2.63	0.98	
800	5.22	2.72	0.96	
1000	5.79	2.87	0.95	1.00
1250	5.75	2.72	1.05	
1600	5.33	2.65	1.03	
2000	4.93	2.55	1.02	1.00
2500	4.35	2.32	1.08	
3150	3.55	2.01	1.15	
4000	2.92	1.73	1.24	1.00
5000	2.34	1.50	1.23	
6300*	1.60	1.14	1.26	
8000*	1.30	0.95	1.38	n/a
10000*	0.93	0.72	1.49	

α_w 0.90

Class A

Calculated to EN ISO 11654:1997

NRC 0.85

Calculated to ASTM C 423-01

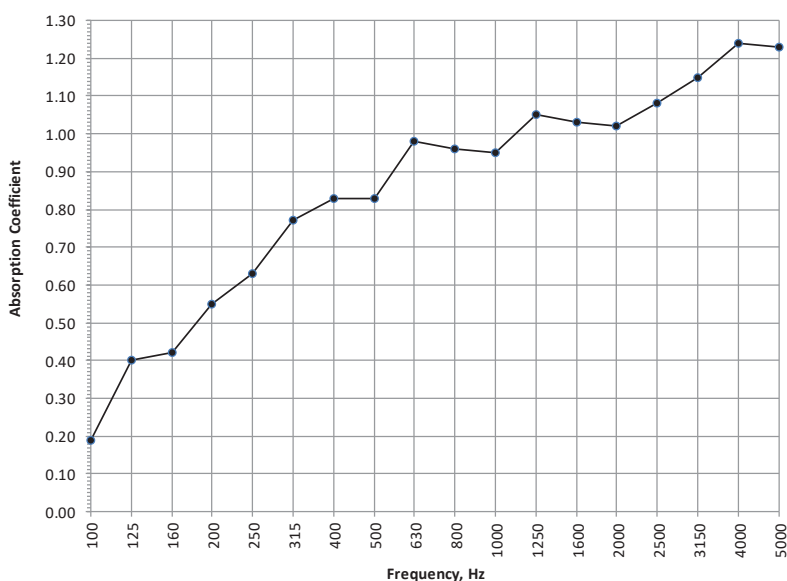
* Denotes frequencies outside the range covered

by BS EN ISO 354:2003

T1, empty room reverberation time

T2, room reverberation time with sample

Sound Absorption Coefficient



Practical absorption coefficient, BS EN ISO 11654:1997

v5