

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: Flat

Cavity from Wall: 100mm



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Data Sheet 10

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:** 15.8 °C **Humidity:** 56 %RH **Pressure:** 1013 mbar

Sample Description: Wool Serge 1000 - Single Layer - Flat (Approx. Weight 1000g/m²) - 100mm Cavity From Wall

Mounting Method: G - 100

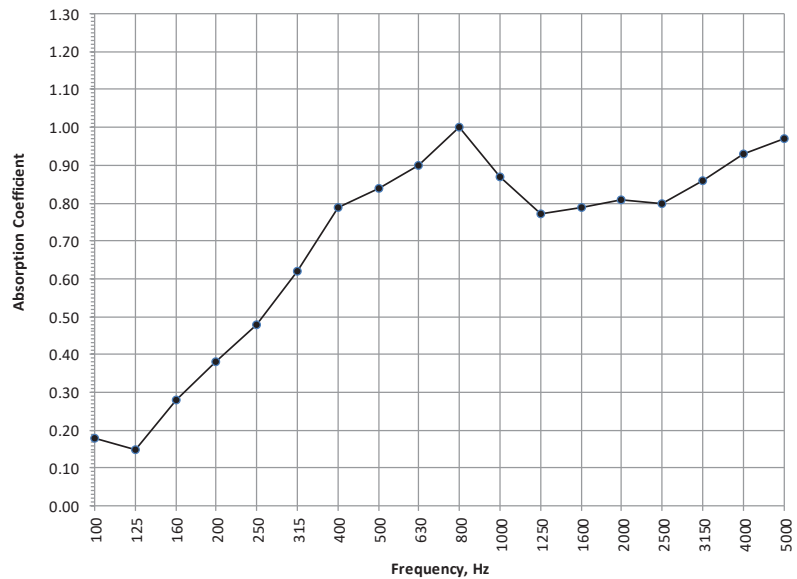
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 10

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	5.30	-0.03	
63*	4.83	5.20	-0.08	n/a
80*	7.33	6.54	0.09	
100	7.42	5.98	0.18	
125	7.17	5.97	0.15	0.20
160	6.75	5.02	0.28	
200	6.77	4.58	0.38	
250	6.80	4.25	0.48	0.50
315	6.65	3.78	0.62	
400	6.46	3.32	0.79	
500	5.63	3.01	0.84	0.85
630	5.00	2.73	0.90	
800	5.22	2.66	1.00	
1000	5.79	3.00	0.87	0.90
1250	5.75	3.16	0.77	
1600	5.33	2.99	0.79	
2000	4.93	2.83	0.81	0.80
2500	4.35	2.63	0.80	
3150	3.55	2.25	0.86	
4000	2.92	1.92	0.93	0.90
5000	2.34	1.62	0.97	
6300*	1.60	1.21	1.00	
8000*	1.30	1.02	1.00	n/a
10000*	0.93	0.77	1.02	

Sound Absorption Coefficient



α_w 0.80

Class B

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

Acoustic Test Report - Absorption

Absorption Class: B

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: Flat

Cavity from Wall: 350mm



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Data Sheet 20

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

Client: J & C Joel Ltd

Test Date: 20/01/2019

Empty Room: **Temperature:** 15.7 °C **Humidity:** 45 %RH **Pressure:** 1007 mbar

Room with Sample: **Temperature:** 15.4 °C **Humidity:** 43 %RH **Pressure:** 1009 mbar

Sample Description: Wool Serge 1000 - Single Layer - flat (Approx. weight 1000g/m²) 350mm cavity from the wall

Mounting Method: G - 350

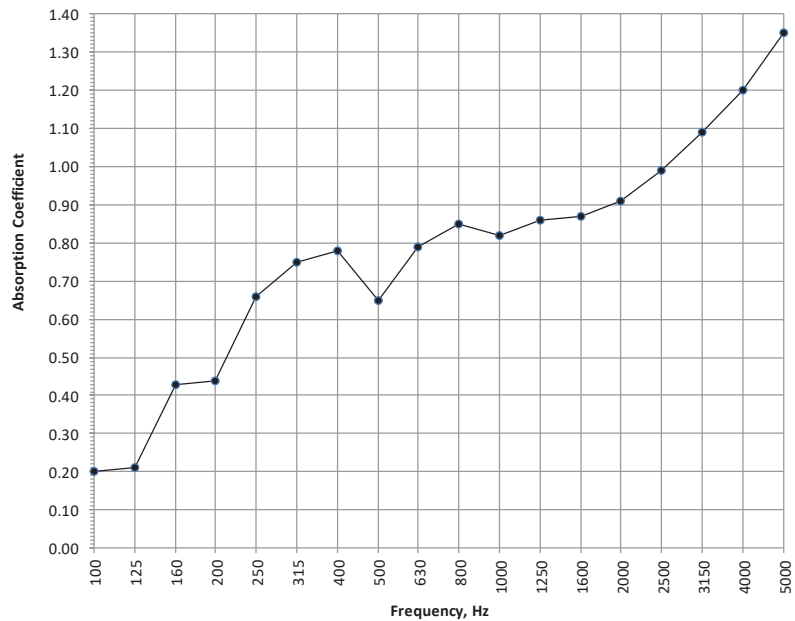
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 22

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	4.89	4.35	0.14	
63*	5.29	4.84	0.10	n/a
80*	7.17	6.41	0.09	
100	8.74	6.59	0.20	
125	7.19	5.64	0.21	0.30
160	6.81	4.43	0.43	
200	6.80	4.38	0.44	
250	6.89	3.74	0.66	0.60
315	6.81	3.50	0.75	
400	6.46	3.36	0.78	
500	5.52	3.32	0.65	0.75
630	5.09	2.93	0.79	
800	5.13	2.85	0.85	
1000	5.66	3.04	0.82	0.85
1250	5.45	2.91	0.86	
1600	5.02	2.77	0.87	
2000	4.54	2.56	0.91	0.90
2500	4.01	2.29	0.99	
3150	3.16	1.90	1.09	
4000	2.47	1.56	1.20	1.00
5000	1.89	1.25	1.35	
6300*	1.26	0.91	1.49	
8000*	1.05	0.77	1.65	n/a
10000*	0.75	0.58	1.84	

Sound Absorption Coefficient



α_w 0.80(H)

Class B

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

v5

Acoustic Test Report - Absorption

Absorption Class: A

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: 50%

Cavity from Wall: 100mm



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Data Sheet 9

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:** 15.8 °C **Humidity:** 56 %RH **Pressure:** 1013 mbar

Sample Description: Wool Serge 1000 - Single Layer - 50% Fullness (Approx. Weight 1000g/m²) - 100mm Cavity From Wall

Mounting Method: G - 100

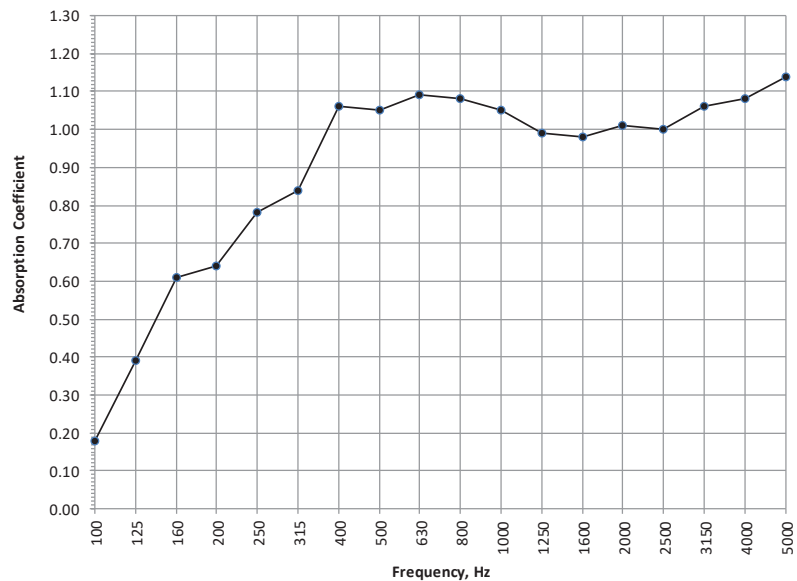
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 9

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	4.87	0.06	
63*	4.83	4.80	0.01	n/a
80*	7.33	5.99	0.17	
100	7.42	5.93	0.18	
125	7.17	4.75	0.39	0.40
160	6.75	3.84	0.61	
200	6.77	3.77	0.64	
250	6.80	3.44	0.78	0.75
315	6.65	3.27	0.84	
400	6.46	2.85	1.06	
500	5.63	2.69	1.05	1.00
630	5.00	2.50	1.09	
800	5.22	2.56	1.08	
1000	5.79	2.73	1.05	1.00
1250	5.75	2.81	0.99	
1600	5.33	2.71	0.98	
2000	4.93	2.56	1.01	1.00
2500	4.35	2.40	1.00	
3150	3.55	2.08	1.06	
4000	2.92	1.82	1.08	1.00
5000	2.34	1.54	1.14	
6300*	1.60	1.16	1.19	
8000*	1.30	0.96	1.34	n/a
10000*	0.93	0.74	1.30	

Sound Absorption Coefficient



α_w 1.00

Class A

Calculated to EN ISO 11654:1997

NRC 0.95

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: A

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: 50%

Cavity from Wall: 350mm



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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: 19/01/2019

Empty Room: **Temperature:** 17.0 °C **Humidity:** 46 %RH **Pressure:** 1002 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 42 %RH **Pressure:** 1002 mbar

Sample Description: Wool Serge 1000 - Single Layer - 50% fullness (Approx. weight 1000g/m²) 350mm cavity from wall

Mounting Method: G - 350

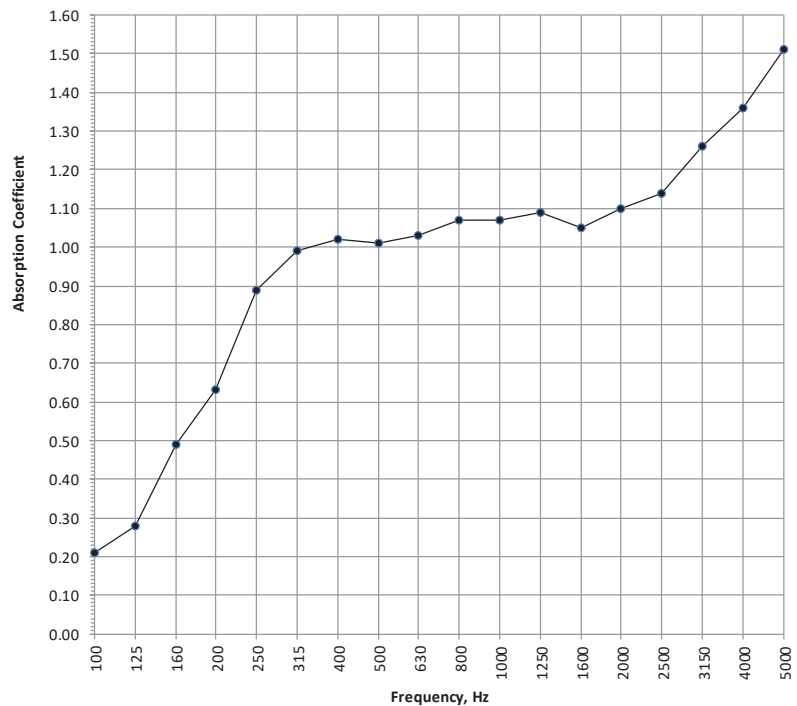
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 17

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	4.96	4.32	0.16	
63*	5.39	4.28	0.26	n/a
80*	7.08	5.64	0.20	
100	9.00	6.64	0.21	
125	7.30	5.32	0.28	0.35
160	6.60	4.12	0.49	
200	6.86	3.83	0.63	
250	7.22	3.31	0.89	0.85
315	6.99	3.07	0.99	
400	6.36	2.91	1.02	
500	5.64	2.76	1.01	1.00
630	5.09	2.59	1.03	
800	5.10	2.54	1.07	
1000	5.74	2.69	1.07	1.00
1250	5.63	2.63	1.09	
1600	5.18	2.56	1.05	
2000	4.76	2.38	1.10	1.00
2500	4.22	2.17	1.14	
3150	3.35	1.81	1.26	
4000	2.59	1.49	1.36	1.00
5000	2.04	1.22	1.51	
6300*	1.39	0.91	1.65	
8000*	1.14	0.77	1.73	n/a
10000*	0.80	0.58	1.87	

Sound Absorption Coefficient



α_w 1.00

Class A

Calculated to EN ISO 11654:1997

NRC 1.00

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

Acoustic Test Report - Absorption

Absorption Class: A

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: 100%

Cavity from Wall: 100mm



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Data Sheet 8

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:** 15.9 °C **Humidity:** 56 %RH **Pressure:** 1013 mbar

Sample Description: Wool Serge 1000 - Single Layer - 100% Fullness (Approx. Weight 1000g/m²) - 100mm Cavity From Wall

Mounting Method: G - 100

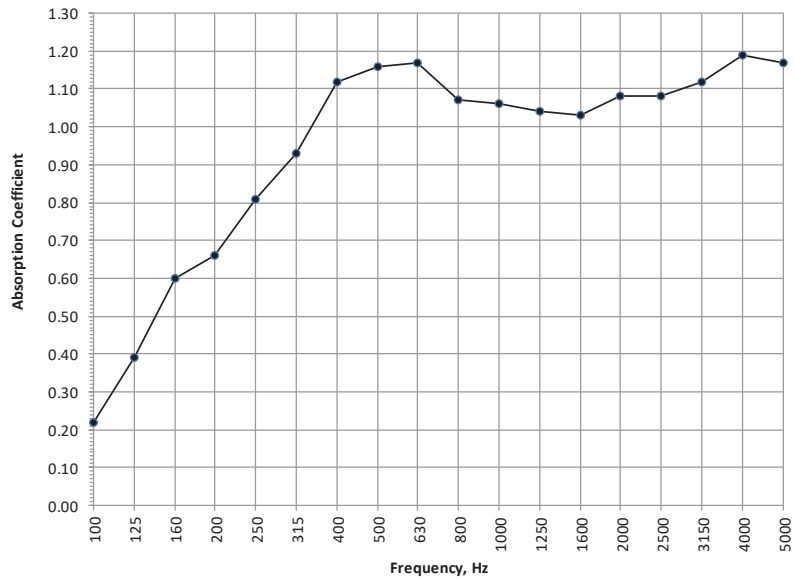
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 8

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	5.15	4.86	0.06	
63*	4.83	4.66	0.04	n/a
80*	7.33	6.04	0.16	
100	7.42	5.68	0.22	
125	7.17	4.71	0.39	0.40
160	6.75	3.86	0.60	
200	6.77	3.71	0.66	
250	6.80	3.37	0.81	0.80
315	6.65	3.10	0.93	
400	6.46	2.77	1.12	
500	5.63	2.56	1.16	1.00
630	5.00	2.41	1.17	
800	5.22	2.57	1.07	
1000	5.79	2.72	1.06	1.00
1250	5.75	2.74	1.04	
1600	5.33	2.64	1.03	
2000	4.93	2.48	1.08	1.00
2500	4.35	2.32	1.08	
3150	3.55	2.03	1.12	
4000	2.92	1.76	1.19	1.00
5000	2.34	1.53	1.17	
6300*	1.60	1.15	1.24	
8000*	1.30	0.98	1.24	n/a
10000*	0.93	0.73	1.42	

Sound Absorption Coefficient



α_w 1.00

Class A

Calculated to EN ISO 11654:1997

NRC 1.05

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: A

Calculated to EN ISO 11654:1997

Fabric: Wool Serge 1000

Fullness: 100%

Cavity from Wall: 350mm



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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: 19/01/2019

Empty Room: **Temperature:** 17.0 °C **Humidity:** 46 %RH **Pressure:** 1002 mbar

Room with Sample: **Temperature:** 15.7 °C **Humidity:** 43 %RH **Pressure:** 1002 mbar

Sample Description: Wool Serge 1000 - Single Layer - 100% fullness (Approx. weight 1000g/m²) 350mm cavity from wall

Mounting Method: G - 350

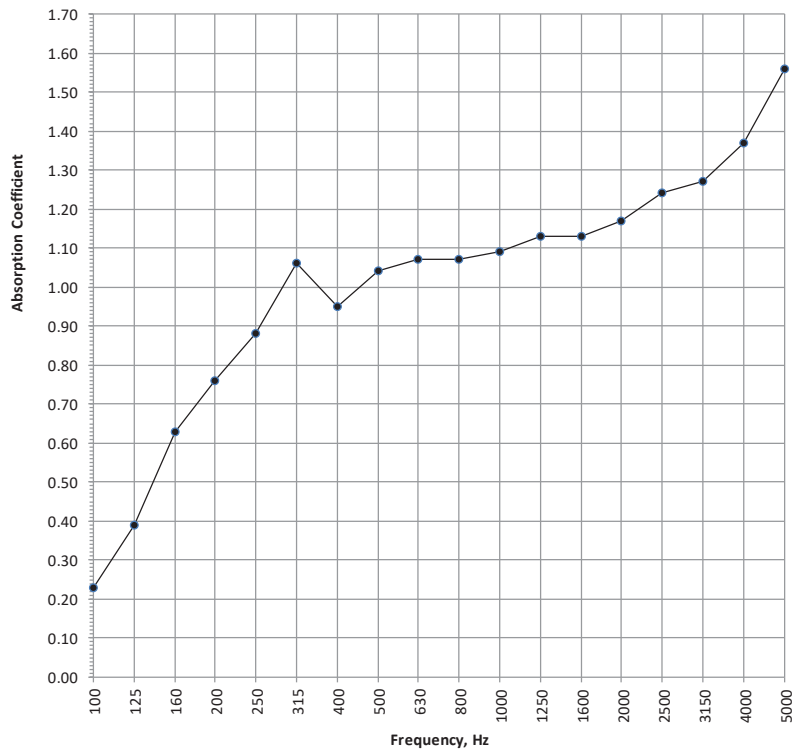
Sample Area: 9 m²

Chamber Volume: 300 m³

Test 16

Freq Hz	T1 sec	T2 sec	Absorp Coeff α_s	Practical Absorp Coeff #
50*	4.96	4.43	0.13	
63*	5.39	4.69	0.15	n/a
80*	7.08	5.83	0.17	
100	9.00	6.48	0.23	
125	7.30	4.79	0.39	0.40
160	6.60	3.73	0.63	
200	6.86	3.50	0.76	
250	7.22	3.32	0.88	0.90
315	6.99	2.95	1.06	
400	6.36	3.01	0.95	
500	5.64	2.71	1.04	1.00
630	5.09	2.54	1.07	
800	5.10	2.55	1.07	
1000	5.74	2.67	1.09	1.00
1250	5.63	2.58	1.13	
1600	5.18	2.47	1.13	
2000	4.76	2.32	1.17	1.00
2500	4.22	2.10	1.24	
3150	3.35	1.82	1.27	
4000	2.59	1.50	1.37	1.00
5000	2.04	1.22	1.56	
6300*	1.39	0.90	1.79	
8000*	1.14	0.77	1.82	n/a
10000*	0.80	0.57	2.15	

Sound Absorption Coefficient



α_w 1.00

Class A

Calculated to EN ISO 11654:1997

NRC 1.05

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