

# Acoustic Test Report - Absorption

**Absorption Class:** C

Calculated to EN ISO 11654:1997

**Fabric:** Acoustic Molton

**Fullness:** Flat

**Cavity from Wall:** 100mm



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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:** 30/11/2020

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

**Room with Sample:** **Temperature:** 15.7 °C **Humidity:** 55 %RH **Pressure:** 1009 mbar

**Sample Description:** Acoustic Molton - Single Layer - Flat (Approx. Weight 500g/m<sup>2</sup>) - 100mm Cavity From Wall

**Mounting Method:** G - 100

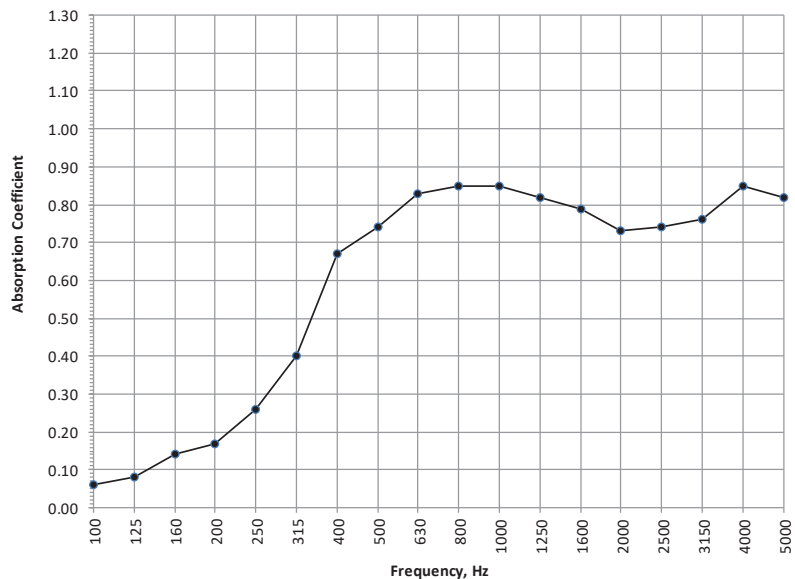
**Sample Area:** 9 m<sup>2</sup>

**Chamber Volume:** 300 m<sup>3</sup>

### Test 20

Freq Hz	T1 sec	T2 sec	Absorp Coeff α <sub>s</sub>	Practical Absorp Coeff #
50*	5.15	5.23	-0.01	
63*	4.83	5.51	-0.14	n/a
80*	7.33	7.60	-0.03	
100	7.42	6.82	0.06	
125	7.17	6.47	0.08	0.10
160	6.75	5.78	0.14	
200	6.77	5.59	0.17	
250	6.80	5.13	0.26	0.30
315	6.65	4.48	0.40	
400	6.46	3.60	0.67	
500	5.63	3.19	0.74	0.75
630	5.00	2.83	0.83	
800	5.22	2.88	0.85	
1000	5.79	3.04	0.85	0.85
1250	5.75	3.08	0.82	
1600	5.33	3.00	0.79	
2000	4.93	2.95	0.73	0.75
2500	4.35	2.70	0.74	
3150	3.55	2.34	0.76	
4000	2.92	1.96	0.85	0.80
5000	2.34	1.68	0.82	
6300*	1.60	1.22	0.91	
8000*	1.30	1.05	0.78	n/a
10000*	0.93	0.77	0.92	

### Sound Absorption Coefficient



$\alpha_w$  0.60(MH)

Class C

Calculated to EN ISO 11654:1997

NRC 0.65

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:** C

Calculated to EN ISO 11654:1997

**Fabric:** Acoustic Molton

**Fullness:** Flat

**Cavity from Wall:** 350mm



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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:** 19/01/2019

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

**Room with Sample:** **Temperature:** 15.5 °C **Humidity:** 43 %RH **Pressure:** 1001 mbar

**Sample Description:** Acoustic Molton - Single Layer - flat (Approx. weight 500g/m<sup>2</sup>) 350mm cavity from wall

**Mounting Method:** G - 350

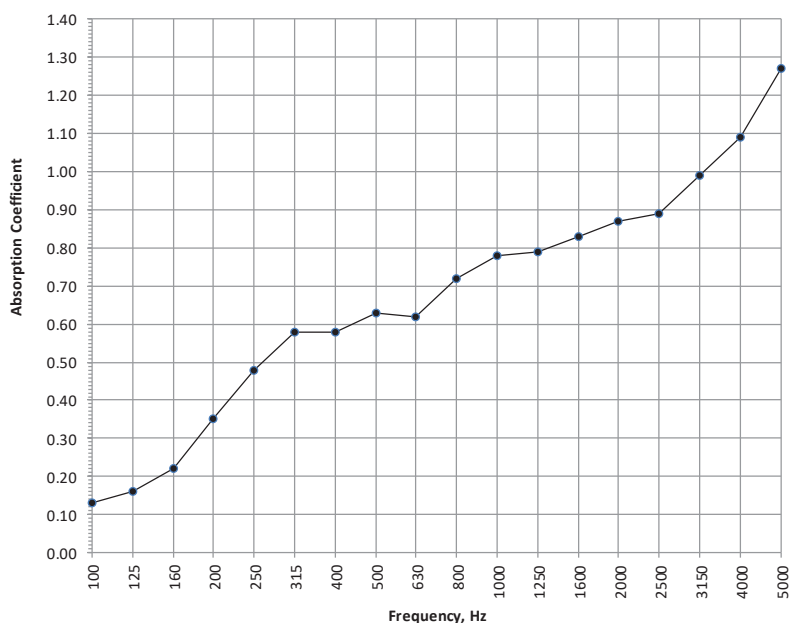
**Sample Area:** 9 m<sup>2</sup>

**Chamber Volume:** 300 m<sup>3</sup>

### Test 10

Freq Hz	T1 sec	T2 sec	Absorp Coeff α <sub>s</sub>	Practical Absorp Coeff #
50*	4.96	4.87	0.02	
63*	5.39	5.02	0.08	n/a
80*	7.08	6.76	0.04	
100	9.00	7.44	0.13	
125	7.30	6.03	0.16	0.15
160	6.60	5.23	0.22	
200	6.86	4.78	0.35	
250	7.22	4.43	0.48	0.45
315	6.99	4.00	0.58	
400	6.36	3.81	0.58	
500	5.64	3.42	0.63	0.60
630	5.09	3.23	0.62	
800	5.10	3.05	0.72	
1000	5.74	3.14	0.78	0.75
1250	5.63	3.08	0.79	
1600	5.18	2.86	0.83	
2000	4.76	2.65	0.87	0.85
2500	4.22	2.43	0.89	
3150	3.35	2.00	0.99	
4000	2.59	1.62	1.09	1.00
5000	2.04	1.30	1.27	
6300*	1.39	0.96	1.39	
8000*	1.14	0.80	1.52	n/a
10000*	0.80	0.59	1.79	

### Sound Absorption Coefficient



**α<sub>w</sub>** 0.65(H)

**Class C**

Calculated to EN ISO 11654:1997

**NRC** 0.70

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:** Acoustic Molton

**Fullness:** 50%

**Cavity from Wall:** 350mm



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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:** 19/01/2019

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

**Room with Sample:** **Temperature:** 15.4 °C **Humidity:** 43 %RH **Pressure:** 1001 mbar

**Sample Description:** Acoustic Molton - Single Layer - 50% fullness (Approx. weight 500g/m<sup>2</sup>) 350mm cavity from wall

**Mounting Method:** G - 350

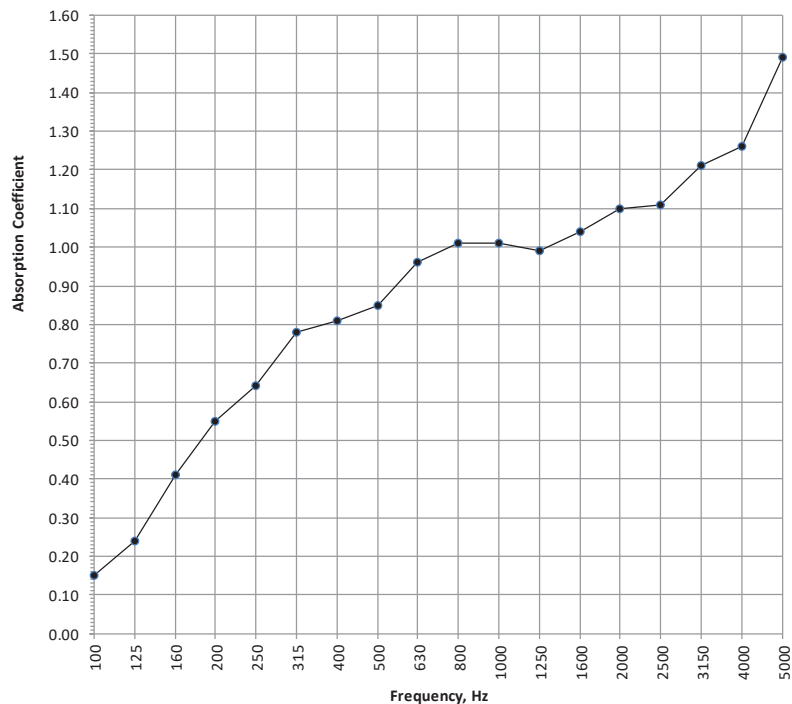
**Sample Area:** 9 m<sup>2</sup>

**Chamber Volume:** 300 m<sup>3</sup>

### Test 9

Freq Hz	T1 sec	T2 sec	Absorp Coeff α <sub>s</sub>	Practical Absorp Coeff #
50*	4.96	4.75	0.05	
63*	5.39	4.91	0.10	n/a
80*	7.08	6.53	0.07	
100	9.00	7.17	0.15	
125	7.30	5.54	0.24	0.25
160	6.60	4.40	0.41	
200	6.86	4.05	0.55	
250	7.22	3.91	0.64	0.65
315	6.99	3.50	0.78	
400	6.36	3.28	0.81	
500	5.64	3.01	0.85	0.85
630	5.09	2.69	0.96	
800	5.10	2.62	1.01	
1000	5.74	2.77	1.01	1.00
1250	5.63	2.77	0.99	
1600	5.18	2.58	1.04	
2000	4.76	2.38	1.10	1.00
2500	4.22	2.21	1.11	
3150	3.35	1.85	1.21	
4000	2.59	1.54	1.26	1.00
5000	2.04	1.23	1.49	
6300*	1.39	0.91	1.68	
8000*	1.14	0.77	1.77	n/a
10000*	0.80	0.59	1.77	

### Sound Absorption Coefficient



**α<sub>w</sub>** 0.90

**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

v5

# Acoustic Test Report - Absorption

**Absorption Class:** A

Calculated to EN ISO 11654:1997

**Fabric:** Acoustic Molton

**Fullness:** 100%

**Cavity from Wall:** 100mm



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## Data Sheet 19

### 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:** 55 %RH **Pressure:** 1009 mbar

**Sample Description:** Acoustic Molton - Single Layer - 100% Fullness (Approx. Weight 500g/m<sup>2</sup>) - 100mm Cavity From Wall

**Mounting Method:** G - 100

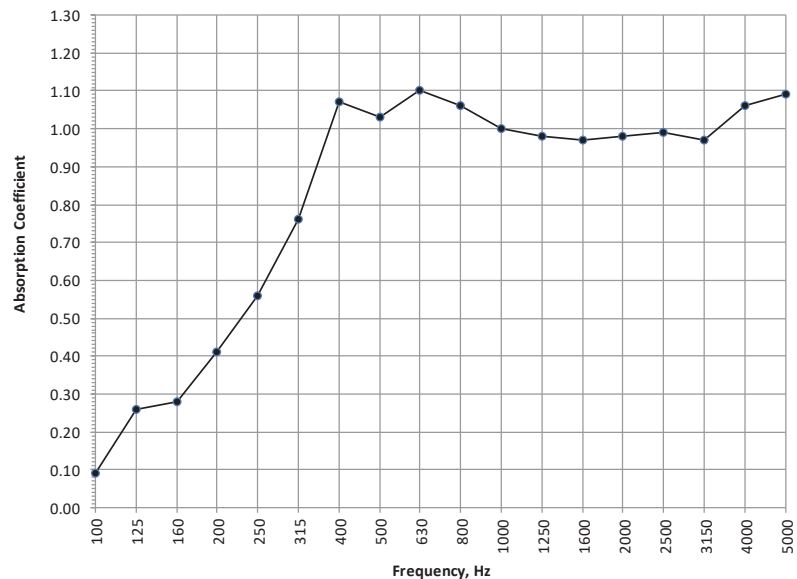
**Sample Area:** 9 m<sup>2</sup>

**Chamber Volume:** 300 m<sup>3</sup>

### Test 19

Freq Hz	T1 sec	T2 sec	Absorp Coeff α <sub>s</sub>	Practical Absorp Coeff #
50*	5.15	5.18	0.00	
63*	4.83	5.19	-0.08	n/a
80*	7.33	7.40	-0.01	
100	7.42	6.58	0.09	
125	7.17	5.33	0.26	0.20
160	6.75	4.99	0.28	
200	6.77	4.49	0.41	
250	6.80	3.99	0.56	0.60
315	6.65	3.45	0.76	
400	6.46	2.84	1.07	
500	5.63	2.72	1.03	1.00
630	5.00	2.49	1.10	
800	5.22	2.59	1.06	
1000	5.79	2.80	1.00	1.00
1250	5.75	2.82	0.98	
1600	5.33	2.73	0.97	
2000	4.93	2.60	0.98	1.00
2500	4.35	2.40	0.99	
3150	3.55	2.14	0.97	
4000	2.92	1.82	1.06	1.00
5000	2.34	1.55	1.09	
6300*	1.60	1.18	1.06	
8000*	1.30	1.00	1.04	n/a
10000*	0.93	0.76	1.01	

### Sound Absorption Coefficient



**α<sub>w</sub>** 0.90

**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

v5

# Acoustic Test Report - Absorption

**Absorption Class:** A

Calculated to EN ISO 11654:1997

**Fabric:** Acoustic Molton

**Fullness:** 100%

**Cavity from Wall:** 350mm



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## Data Sheet 7

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:** 15.4 °C **Humidity:** 44 %RH **Pressure:** 1001 mbar

**Sample Description:** Acoustic Molton - Single Layer - 100% fullness (Approx. weight 500 g/m<sup>2</sup>) 350mm cavity from wall

**Mounting Method:** G - 350

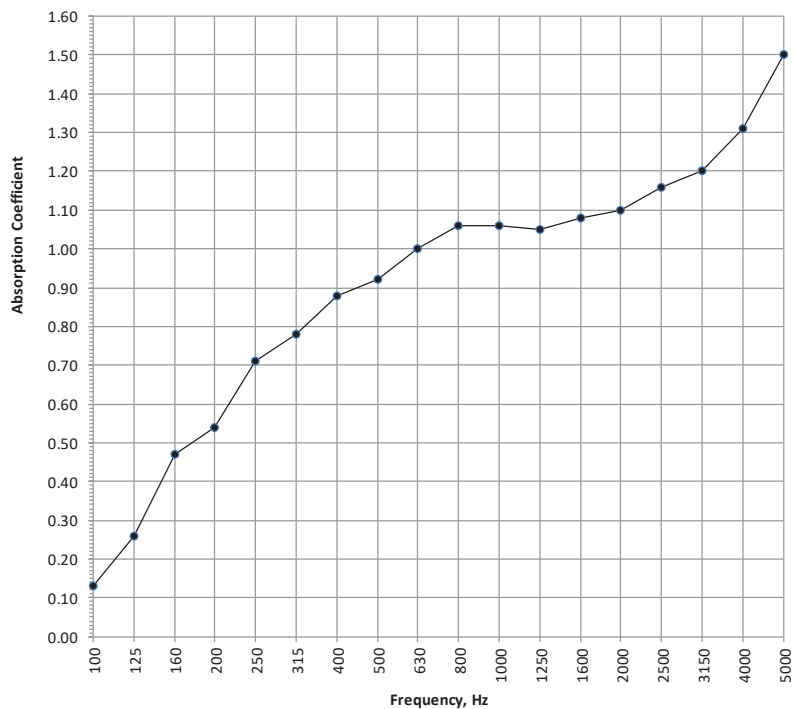
**Sample Area:** 9 m<sup>2</sup>

**Chamber Volume:** 300 m<sup>3</sup>

### Test 8

Freq Hz	T1 sec	T2 sec	Absorp Coeff $\alpha_s$	Practical Absorp Coeff #
50*	4.96	4.66	0.07	
63*	5.39	4.95	0.09	n/a
80*	7.08	6.47	0.07	
100	9.00	7.41	0.13	
125	7.30	5.44	0.26	0.30
160	6.60	4.19	0.47	
200	6.86	4.09	0.54	
250	7.22	3.73	0.71	0.70
315	6.99	3.49	0.78	
400	6.36	3.14	0.88	
500	5.64	2.90	0.92	0.95
630	5.09	2.64	1.00	
800	5.10	2.56	1.06	
1000	5.74	2.71	1.06	1.00
1250	5.63	2.69	1.05	
1600	5.18	2.53	1.08	
2000	4.76	2.39	1.10	1.00
2500	4.22	2.17	1.16	
3150	3.35	1.87	1.20	
4000	2.59	1.53	1.31	1.00
5000	2.04	1.24	1.50	
6300*	1.39	0.91	1.75	
8000*	1.14	0.78	1.77	n/a
10000*	0.80	0.58	2.04	

### Sound Absorption Coefficient



$\alpha_w$  0.95

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