

**Sound absorption coefficients according to ISO 354
Measurement of sound absorption in a reverberation room**

Client: Autex Industries

Date of test: 10-Dec-12
Test room: Chamber A

Description of the test specimen:
25mm panels hot rolled face

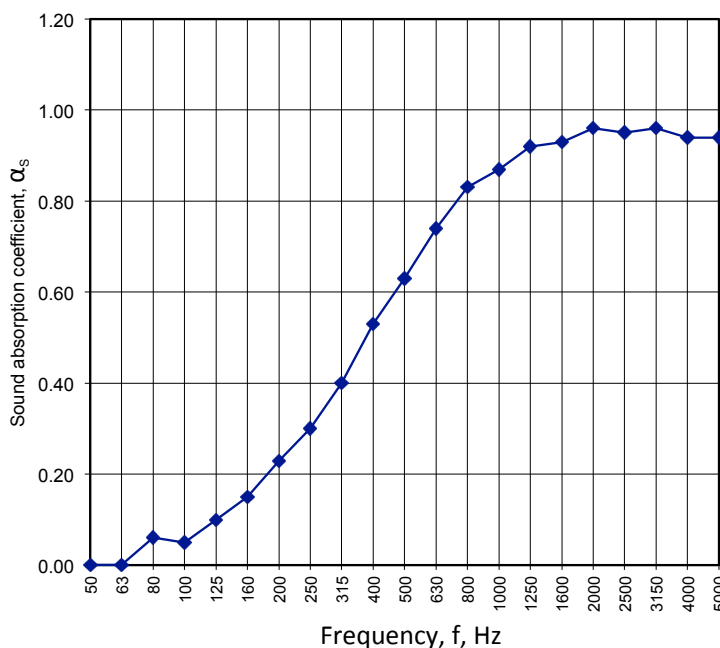
The shape of the reverberation chamber and its diffusion treatment are described in the Annexes of the full test report.

Associated computer files: RT-Empty: T1231-5 Empty Chamber.CMG ID.63 RT-Sample: T1231-5 25mm Sample.CMG ID.63

Area of test specimen: 10.26 m²
Air temp in the test room: 20 °C
Air humidity in test room: 38 %

Number of sound source positions: 2
Number of microphone positions per sound source position: 12
Type of noise used: Pink random noise.
Type of mounting used: Type: A

Frequency <i>f</i> (Hz)	<i>T</i> ₁ - Empty Chamber (seconds)	<i>T</i> ₂ - With Sample (seconds)	α_s One-third octave
50	6.52	7.24	0.00
63	7.93	7.99	0.00
80	7.07	6.27	0.06
100	6.87	6.17	0.05
125	6.91	5.66	0.10
160	6.92	5.23	0.15
200	7.92	5.07	0.23
250	7.53	4.39	0.30
315	7.54	3.86	0.40
400	7.81	3.39	0.53
500	7.90	3.07	0.63
630	7.64	2.75	0.74
800	7.27	2.51	0.83
1000	6.69	2.37	0.87
1250	6.03	2.19	0.92
1600	5.36	2.08	0.93
2000	4.55	1.92	0.96
2500	3.95	1.81	0.95
3150	3.50	1.70	0.96
4000	2.98	1.58	0.94
5000	2.42	1.41	0.94



Ratings according to ISO 11654

Weighted sound absorption coefficient:

$$\alpha_w = 0.6(H)$$

It is strongly recommended to use this single number rating in combination with the complete sound absorption coefficient curve.

Sound absorption class: C

Practical sound absorption coefficients

Frequency (Hz)	α_p
125	0.10
250	0.30
500	0.65
1000	0.85
2000	0.95
4000	0.95

Rating according to ASTM C423 - 99

Noise Reduction Coefficient = 0.70

Sound Absorption Average = 0.69

Evaluation based on laboratory measurement results obtained by an engineering method.

No. of test report: T1228-5

Name of test institute: University of Auckland Acoustics Testing Service.

Date:

Signature: **Preliminary Results Only**