



Early Learning Furniture

Product NRC Rating 18mm thick foam

Acoustic tiles are constructed with 18mm thick sound absorbing foam.

12mm sound absorbing equivalent test by University of Salford with NRC rating of 0.25.

25mm sound absorbing equivalent test by SRL with NRC rating of 0.55.

Therefore inferred results for 18mm thick foam is 0.43 NRC rating.

BS EN ISO 354:2003																																							
Acoustics - Measurement of absorption in a reverberation room																																							
Client:	Carpenter Ltd Dining Lodge Industrial Estate Glossop, Derbyshire SK13 0LE																																						
Object:	FX25140 12mm																																						
Size:	12.05 m ²																																						
Receiving room:																																							
Volume:	220 m ³																																						
Condition:	clean																																						
Type:	large reverberation room																																						
Location:	acoustic transmission suite																																						
Sample out:	Temperature [°C]: 20.1 Humidity [%]: 32.6																																						
Sample in:	Temperature [°C]: 20.4 Humidity [%]: 34.1																																						
Sound absorption coefficient α_w																																							
0.25 NRC																																							
<table border="1"> <thead> <tr> <th>Frequency Hz</th> <th>α_w</th> </tr> </thead> <tbody> <tr><td>100</td><td>0.02</td></tr> <tr><td>125</td><td>0.06</td></tr> <tr><td>160</td><td>0.05</td></tr> <tr><td>200</td><td>0.08</td></tr> <tr><td>250</td><td>0.08</td></tr> <tr><td>315</td><td>0.12</td></tr> <tr><td>400</td><td>0.12</td></tr> <tr><td>500</td><td>0.16</td></tr> <tr><td>630</td><td>0.22</td></tr> <tr><td>800</td><td>0.26</td></tr> <tr><td>1000</td><td>0.27</td></tr> <tr><td>1250</td><td>0.34</td></tr> <tr><td>1600</td><td>0.41</td></tr> <tr><td>2000</td><td>0.46</td></tr> <tr><td>2500</td><td>0.56</td></tr> <tr><td>3150</td><td>0.64</td></tr> <tr><td>4000</td><td>0.78</td></tr> <tr><td>5000</td><td>0.90</td></tr> </tbody> </table>	Frequency Hz	α_w	100	0.02	125	0.06	160	0.05	200	0.08	250	0.08	315	0.12	400	0.12	500	0.16	630	0.22	800	0.26	1000	0.27	1250	0.34	1600	0.41	2000	0.46	2500	0.56	3150	0.64	4000	0.78	5000	0.90	<p>The graph shows the sound absorption coefficient (α_w) on the y-axis (ranging from 0.00 to 1.40) against frequency (f) in Hz on the x-axis (ranging from 100 to 4000). The curve starts at approximately 0.02 at 100 Hz and rises steadily to about 0.90 at 5000 Hz.</p>
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Test reference number	1306-1040																																						
Date:	14/05/13																																						
University of Salford, School of Computing, Science & Engineering																																							
SSV1																																							



Data Sheet 1

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

Test Date: 10/10/2015
 Empty Room: Temperature: 18.3 °C Humidity: 68 %RH Pressure: 1013 mbar
 Room with Sample: Temperature: 18.7 °C Humidity: 65 %RH Pressure: 1013 mbar
 Sample Description: FX25150 25mm Thick

Mounting Method: A
 Sample Area: 11.85 m²
 Chamber Volume: 300 m³

Test 2

Freq Hz	T1 sec	T2 sec	Absorp Coeff	Practical Absorp Coeff #
50*	4.58	4.45	0.03	
63*	4.91	4.64	0.05	n/a
80*	5.32	5.11	0.03	
100	6.40	6.26	0.01	
125	6.72	6.06	0.07	0.05
160	6.84	5.88	0.12	
200	7.00	5.60	0.15	
250	7.30	5.52	0.18	0.20
315	7.03	5.07	0.22	
400	6.21	4.35	0.28	
500	5.32	3.49	0.40	0.40
630	5.11	3.20	0.46	
800	5.57	3.09	0.59	
1000	6.03	3.03	0.67	0.65
1250	5.62	2.61	0.75	
1600	5.31	2.47	0.89	
2000	4.62	2.33	0.91	0.90
2500	4.35	2.15	0.98	
3150	3.63	1.92	1.01	
4000	2.99	1.73	1.00	1.00
5000	2.38	1.46	1.05	
6300*	1.74	1.19	1.09	
8000*	1.35	0.99	1.11	n/a
10000*	0.95	0.76	1.09	

α_w 0.45(H)

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

