

PYROSORB-S

THERMAL PROPERTIES

TEST METHOD

BS874 1973 and AMD3006 8/79

Guarded hot plate method.

RESULTS

Thermal Conductivity 0.048 - 0.051 $\text{Wm}^{-1} \text{K}^{-1}$

CONDITIONS

Thickness 26.0mm

Density 94.7 kgm^3

Mean Cold Face Temp 0.0°C

Mean Hot Face Temp 24.0°C

Ambient RH 48 - 51 %

Ambient Temp 22 - 23°C

Thermal Conductance or Thermal Transmittance

From the above result we can calculate U Values :

12mm	4.17	$\text{Wm}^{-2} \text{K}^{-1}$
25mm	1.92	$\text{Wm}^{-2} \text{K}^{-1}$
50mm	1.00	$\text{Wm}^{-2} \text{K}^{-1}$

REFERENCE

Salford University Report
Warrington Research Report

TT83/119
26992

REF: C0703901

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ACOUSTIC PERFORMANCE

ASTM and BS EN 20354 (previously BS3638 : 1963) are both standard tests for measuring absorption co-efficients. ASTM C384 is a laboratory scale test measuring normal incidence co-efficients. Both methods give an indication of the potential performance of the material under the test. Whilst the latter reverberation room method may prove more relevant in most practical situations, neither test can predict overall performance in a real application.

Absorption co-efficients: ASTM C384

Thickness (mms)	Frequency (Hz)					
	125	250	500	1000	2000	4000
12	---	0.04	0.14	0.15	0.29	0.54
25	---	0.07	0.14	0.32	0.80	0.71
50	0.11	0.11	0.50	0.86	0.84	0.90

Absorption Co-efficients: BS EN 20354 (BS3638): 1963

Thickness (mms)	Frequency (Hz)						
	63	125	250	500	1000	2000	4000
12	---	0.06	0.09	0.18	0.29	0.38	0.58
25	---	0.09	0.22	0.38	0.52	0.63	0.73
50	0.05	0.24	0.47	0.75	0.84	0.87	1.02
100	0.12	0.41	1.01	1.10	0.96	1.03	1.06

PYROSORB-S is also available in a profiled form (also known as egg-box or convoluted). The acoustic absorption of these products is better than the equivalent flat thickness in the frequency range 250 to 1000 Hz

Absorption Co-efficients: BS EN 20354 (BS 3638) : 1963

Thickness before Profiling (***) (mms)	Frequency (Hz)						
	63	125	250	500	1000	2000	4000
25 (*)	0.01	0.06	0.12	0.22	0.35	0.47	0.58
25 (**)	0.01	0.05	0.12	0.21	0.32	0.39	0.51
50 (*)	0.02	0.10	0.25	0.44	0.61	0.70	0.72
50 (**)	0.02	0.10	0.23	0.42	0.56	0.60	0.70

(*) Profile side away from the noise source.

(**) Profile side towards the noise source.

(***) The actual sizes tested were
25mm profiled to 2mm base 21mm rise
50mm profiled to 7mm base 36mm rise

REF : C2404911 ACS