

WAWL Acoustic Wall Linings

Waterloo Acoustic's acoustic wall lining system provides an effective cost efficient method of introducing noise absorption to a wide range of industrial and commercial environments. The application of WAWL Acoustic Wall linings can reduce the unwanted reverberant build-up of noise within plant rooms, industrial noise havens, plant enclosures and general factory areas.

The reduction of the reverberant sound field within an enclosed area may also have the added benefit of reducing the level of noise transmitted to other areas and the WAWL system provides a simple easy fix method to achieve this end.

Materials and Construction

Linings

Absorptive wall lining systems are available in a range of depths from with 50mm, 75mm or 100mm as standard available options. The acoustic media is retained by a 22 swg perforated sheet with folded return edges that slot easily into a profiled framing system ensuring a robust construction. Pre-galvanised wall sections are manufactured from 18 swg galvanised mild steel which are supplied to secure linings to wall.

The standard finish is galvanised mild steel for the wall channels and the perforated faces. Alternative finishes include polyester powder paint to any BS or RAL Colour range or PVC Plastisol to British Steel and BS Colour ranges are also available

Material Options – pre-galvanised mild steel, aluminium or stainless steel.

Acoustic media

The acoustic fill shall be inorganic, non-hygroscopic, flame, moisture and vermin proof mineral wool or glass fibre, with a minimum density of 45kg/m³ as standard and packed under at least 5% compression to avoid settling.

Where the infill can be contaminated or the environment is water or oil saturated then the acoustic fill is further protected by enveloping in an impervious membrane such as Melinex. This treatment is also recommended for Clean Room, sterile or outdoor applications.

Connections

The linings shall be fixed back to the wall with profile sections, dependent on site requirements. The linings locate into wall joiners or channel sections which are fixed to the wall via rawl plugs and screws. The section design and sealing arrangement shall be such that optimum acoustic performance is achieved from the erected acoustic structure.

Penetrations for pipework, cables and ducts, etc, will be made where possible during manufacture, exact acoustic infill and closure sealing plates supplied with panels. Alternatively cutting at site can be easily achieved with care taken to seal around the penetration.

Where doors are fitted for either plant removal or personnel access or maintenance they will have an acoustic performance equal to the linings. Doors will be fitted with heavy duty hinges and locks which should have panic release features. Door to close on to neoprene seals around the door periphery.

Performance

Performance enhancement options are readily available by varying the media density and utilising different acoustic media such as an open cell acoustic foam to eliminate particle migration in sensitive systems. The performance data below are indicative of our standard range of WAWL linings mounted on brick or concrete walls or ceilings.

Sound Absorption Coefficient of Standard WAWL Wall Linings

Lining Depth	Absorption Coefficients							
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Std. 50mm Lining	0.15	0.30	0.60	0.70	0.85	0.85	0.80	0.80
Std. 75mm Lining	0.25	0.45	0.75	0.80	0.85	0.85	0.90	0.90
Std. 100mm Lining	0.40	0.62	0.9	0.9	0.9	0.9	.86	0.85

All materials used are non-combustible with standard mineral wool having a fire rating to BS 476, Part7: Class 1



Warranty

A warranty against defective materials or workmanship is furnished with all Waterloo Acoustic products, expiring 12 months from the date of despatch from our works.

We reserve the right to alter our design and specification at any time without prior notice to ensure continued product improvement.