

sound reduction systems for commercial, educational and industrial environments

Tel: +44 (0)1204 380074 · Fax: +44 (0)1204 380957

E-mail: info@soundreduction.co.uk · Web: www.soundreduction.co.uk



Multi-Purpose
Acoustic Curtain



Introduction

Soundstop is a multi-purpose acoustic barrier, suitable for many applications where the breakout of sound is a problem. In construction it is ideal for use in ceiling voids or within partition walls. For machinery, it can be applied to housings or enclosures. Pleasant and easy to handle, it is formed by bonding lead between two layers of SRS Coustifoam. It will mould to most contours and with a thickness of only 13mm takes up the minimum of space. Available in various types and finishes to meet defined specifications, it is a most versatile and efficient sound attenuator.

The Benefits

- Reduces room to room noise.
- High sound reduction index.
- Easily workable, will form to any contour.
- Avoids treating the whole of the ceiling.
- Installation causes minimum disruption.
- Multi-purpose.
- Ideal for plant and machinery.

Alternative Solutions

Soundblocker - page 4

Soundbar - page 14

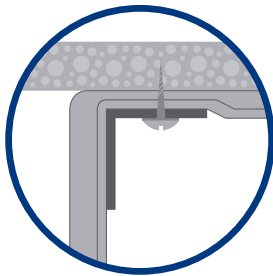
Suspended Ceiling Voids

The transmission of sound within buildings is a common problem. In commercial office constructions, partitions are often installed up to the underside of suspended ceilings. Sound will transmit through the ceiling void into adjoining offices often making concentration and private conversation difficult.

Soundstop installed as a curtain from the soffit to the partition head, forms an acoustic barrier, and solves this problem.

Installation - method one

Fixed direct to the soffit and perimeter walls by means of a 25 x 25mm continuous angle. The angle should be securely fixed through the blanket into the substrate, compressing and trapping it over the whole length. The Soundstop should slightly extend beyond the face of the angle.



Fixing method one.

Installation - method two

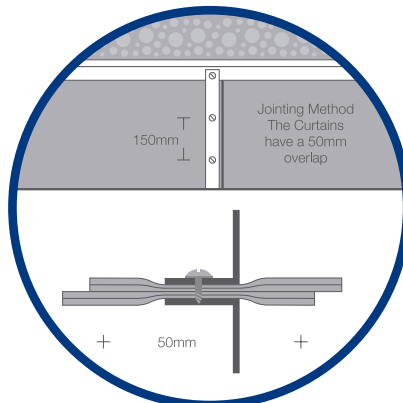
An angle is first fixed directly to the soffit and perimeter walls. The Soundstop is then fixed to the face of this angle by a second angle screwed or bolted through to the first. The Soundstop must have sufficient overlap to extend along and be trapped and compressed to the soffit or wall by the secondary angle.



Fixing method two.

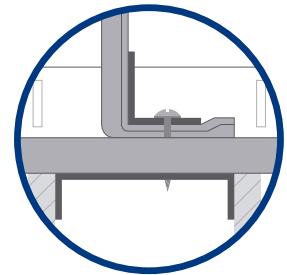
Jointing

Where two curtains join they must overlap by a minimum of 50mm. From the top fixing angle a 25mm x 25mm angle or flat strip is fixed vertically on the centre of the joints. This is then fixed to the ceiling grid at the bottom. A second angle or strip is then positioned onto the opposite face of the curtain and screwed or bolted through to the first, thus compressing the whole length of the joint.



Bottom Fixing

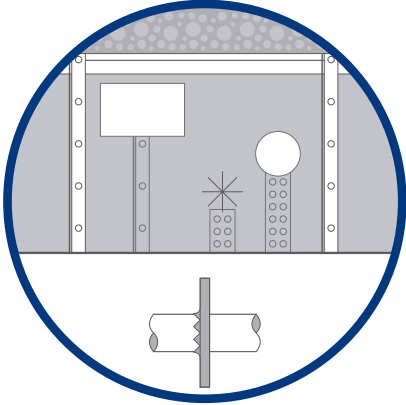
The Soundstop returns onto the ceiling and is secured by an angle which runs between the tees, and is then screwed through into the partition head.



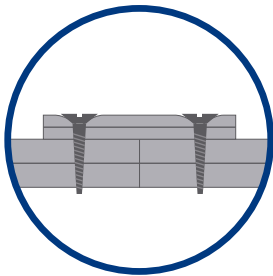
Fixing to suspended ceiling.

Services Through The Curtain

Soundstop is ideal where services pass through the curtain. It is easily cut and will compress and mould to any shape forming a good seal. Using a trimming knife, a hole is simply cut smaller in dimension than the penetration, or a star cut is made. A cut is then made to the bottom edge of the curtain, which can then be formed around the penetration. The cut should be covered by a 50mm strip of Soundstop glued or screwed to the curtain. The hole or star cut should be formed around and onto the penetration, and this should be sealed by either tape, a jubilee clip, or strips of Soundstop wrapped around. Where a number of items pass through together, a square hole can be cut to accommodate them. This can be sealed by pieces of Soundstop cut and formed around the items, and fixed by glue or screws.



Curtain formed around pipes with cover strip over joint. A hole or star cut in the curtain must be cut smaller than the item passing through so it will compress around it.



Glued or screwed cover strip over joint.

Walls

Where sound is transmitted through a wall, Soundstop can be installed in various applications.

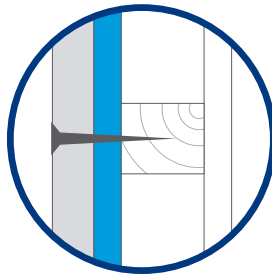
- a) It can be fixed within demountable or stud partitioning.
- b) It can be fixed onto the face of a stud or block wall.

(for further information on soundproofing walls, please see Maxiboard brochure)

Installation

When installing into a stud partition, fix the Soundstop onto the timber stud. All

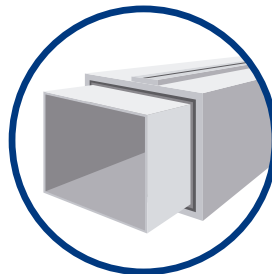
vertical joints must occur on a stud. Horizontal joints must also be supported by pre-installed noggins. Fix the plasterboard onto the studs the normal way, trapping the Soundstop between the boards and the studs. When fitting to a solid wall it should be studded out with timber and fixed as above, leaving an air gap between the Soundstop and the wall.



Fixed to stud.

Mechanical Services, Ducting and Pipes

Soundstop is ideally suited for stopping or reducing noise breakout from ducting and services. For this application it is best to use Soundstop AF faced with Aluminium foil on one surface. It is quickly and easily applied, and provides a neat efficient acoustic cover.



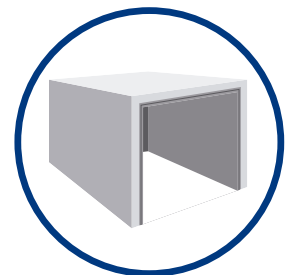
Soundstop formed around a duct.

Installation

Wrap the Soundstop around and fit tight to the duct or pipe with the aluminium face outward. At all joints overlap by a minimum of 50mm and seal with a 50mm wide aluminium tape. Fix a band of tape also completely around the duct/pipe at 600mm centres, and seal at all ends.

Machinery and Plant

Where acoustic treatment is required to machinery, motors, or plant, Soundstop can be applied in two ways: direct to the noise source if this can be done, or as an internal lining to a housing or machinery cover. For these applications Soundstop 520 is available. This offers higher absorption, reducing reverberation. For applications where there is oil or dirt which would deposit onto the Soundstop, Soundstop PU finish is available. This has Polyurethane coating on one surface which stops the ingress of oil and can easily be wiped clean.

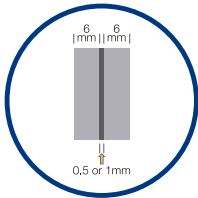


Soundstop forming the internal lining of an acoustic hood.

Types

Soundstop 5

Suitable for most applications, it has 5kg/m² lead core bonded between two 6mm layers of SRS Coustifoam. (see page 19)

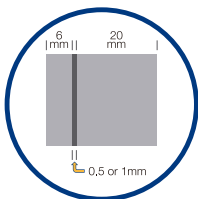


Soundstop 10

Where higher attenuation is required, it has 10kg/m² lead core bonded between two 6mm layers of SRS Coustifoam.

Soundstop 520

Where higher absorption is required, it has 5kg/m² lead core bonded between one 6mm and one 20mm layer of SRS Coustifoam.



Soundstop 1020

Where a higher attenuation and absorption are required, it has 10kg/m² lead core bonded between one 6mm and one 20mm layer of SRS Coustifoam.

Finishes

PU: Has a polyurethane film applied to one surface of the SRS Coustifoam. It is ideal where there may be ingress of oil or dirt and can easily be wiped clean. The coating does not significantly affect the absorption coefficient.

AF: Has a reinforced aluminium foil to one surface. It is ideal where regular contact is made with the surface or where it is required to be kept clean.

SA: Has an adhesive coating to one face. This makes for quick and easy fixing when applying to a surface.

FLAMMABILITY PROPERTIES	
FMVSS 302	Self extinguishing/no burn rate
BS 4735	Char length 4-5mm
ASTM 1692: 1974	Resists Ignition
BS 476 Parts 6 & 7 Class 1 & Class 0	0
UL94 Class	94V-0
Oxygen Index	41
CAAB/FAA	PASS
Smoke, max, obscuration % to BS5111	55
Wicking	None
Dripping	None

Sound Insulation

Tested in accordance with BS 2750 (part 3) 1980 (BS EN ISO 140-3). Weighted sound reduction index (R_w) ranges from 31-34dB. Rated according to BS 5821 (Part 1) 1984 (BS EN ISO717-1). Test carried out at University of Salford Department of Applied Acoustics. Date of Test 20/11/89 Test ref no: 89/11/17

Tests carried out at The Building Test Centre, East Leake. Date of test 13.9.95 Test reference No. BTC 2869A. Tested in accordance with BS EN 140-9 1994. Room to room normalised weighted sound level difference (D_{ncw}) ranges from 46-47dB. Rated according to BS 5821 (Part 1) 1984 (BS EN ISO717-1)

Specifications

Size:

Supplied in rolls 2000 x 1200mm x 13mm / 2.4m². (For the special types and finishes this size may vary).

Cutting:

With Stanley knife, large scissors or tin snips.

Gluing:

Soundstop can be glued to most surfaces using a standard contact adhesive.

