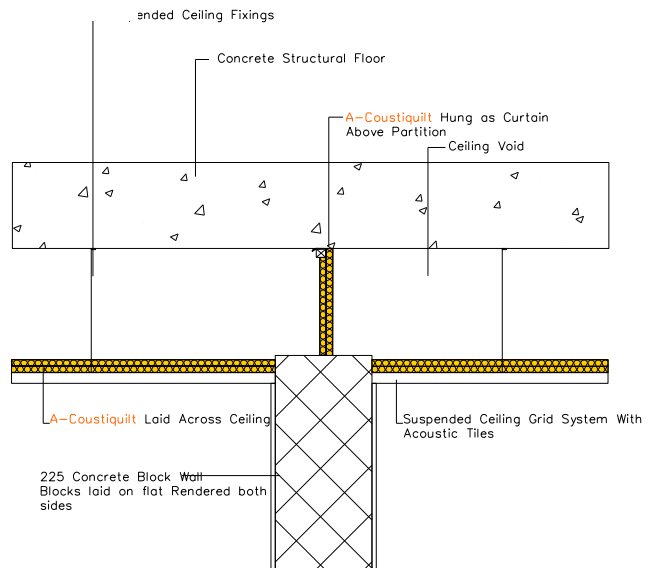
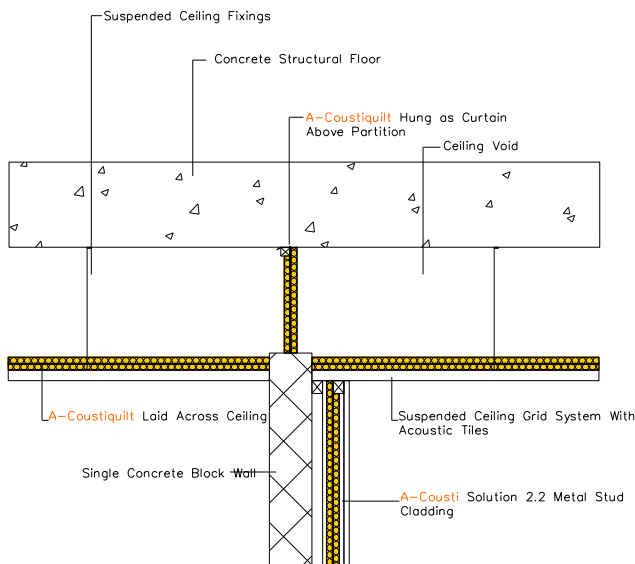


Technical Installation Guide Number 15

A-Coustiquilt in Ceiling Voids

Introduction

The ceiling contributes significantly to the transmission of sound between rooms. It is therefore necessary to achieve the highest value sound attenuation for the ceiling. The attenuation performance of a suspended ceiling is measured in terms of Dncw (Weighted Suspended Ceiling Normalised Level Difference) according to BS EN ISO 140-9 and calculated in accordance with BS EN ISO 717-1. The maximum performance that can be expected from a suspended ceiling is around 40dB. The sound attenuation performance of the structure will be compromised by sound flanking up through the ceiling and into the adjacent room. It is therefore necessary to treat the ceiling void to bring it up to the same acoustic performance as the separating wall structure. **A-Coustiquilt** tested in the laboratory gives a 22dB sound reduction (test reference XET-E-QU/H/B03). It can be laid across the suspended ceiling or hung as a curtain from the soffit down to the top of the partition, or a combination of both.





Specification

A-Coustiquilt is a laminate of the patented Xetal membrane acoustic attenuator with 25mm of glass mineral wool of up to 36kg/m³ either side. The mineral wool acts as a sound absorber whilst the patented action of the membrane neutralises the sound as it reaches the surface.

A-Coustiquilt is 52mm thick and is available in 5m rolls in widths of 400mm, 600mm, and 1200mm. The 1200mm width is recommended for treatment of ceiling voids. The product weighs approximately 1.66kg/m²

A-Coustiquilt has been tested in the laboratories of ISVR according to BS EN ISO 140-3 and a single figure measurement calculated according to BS EN ISO 717-to give 22dB sound reduction (test reference XET-E-QU/H/BO3)

Installation Guide

Acoustic blanket

A-Coustiquilt should be laid across the top of the ceiling frame and tiles, butted tightly up to the perimeter walls so there are no gaps for sound leakage. Adjacent rolls should be overlapped by 100mm minimum to allow the mineral to engage and form a seal.

A-Coustiquilt is laminated in such a way as to give a 10mm flange of the membrane element either side, and where working space permits an alternative fixing method is to lap and glue adjacent flanges using a contact adhesive so that the mineral wool butts up to form a flat continuous surface. This method will use less material but requires careful attention to workmanship.

Where the ceiling has down lighters use a proprietary fire and acoustic protection system such as the Exton Acoustic Firecap. The **A-Coustiquilt** should be lapped over the fire cap to provide a continuous blanket.

Acoustic Curtain

Where there is a significant void between the structural floor and suspended ceiling **A-Coustiquilt** can be hung as a curtain between the soffit and the top of the partition to reduce the transmission of sound between adjacent rooms.

The **A-Coustiquilt** should be measured 100mm over the drop distance so as to form a good seal on top of the partition and fitted to the soffit directly above the partition using a batten or metal strip to screw through to the structure above. Optionally the quilt can be fixed to the top of the partition by the same method. Adjacent rolls can be overlapped by a minimum 100mm or the flanges bonded to form a seal as per the method above.

Generally, ensure that there are no gaps in the structure and where this is unavoidable fill them with **A-cousti Fix and Seal** intumescent acoustic sealer.

Downlighters

Where a metal frame ceiling is used with **A-Coustiquilt** laid over the top it is recommended that only fire protected and acoustic rated products are fitted. Always fit as per the manufacturer's instructions, but in addition where **A-Coustiquilt** (or any other mineral fibre product) is fitted in the ceiling system ensure there is sufficient airflow around the downlighters. This is achieved by cutting away a hole in the **A-Coustiquilt** of 60mm greater diameter than the downlighter diameter.

In order to accurately locate the holes measure up the position of the hole using the grid of the metal frame as the reference point to establish the co-ordinates for each hole. There should be a minimum of 30mm clearance between the downlighter and the quilt in all directions.

When using proper acoustic rated downlighters there will be no reduction in the acoustic performance of the system. However, downlighters do create an obvious flanking path if not correctly fitted with adequate care.

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