

Knauf Technical Substantiation Report

Reference: ILC2-13

Performance: 69dB Rw



Scope

This report outlines the test that has been carried out in order to determine the acoustic performance of the Knauf Isolator partition described below.

System Build Up

2 x 15mm Knauf Soundshield Plus

Twin 92mm [0.9] Knauf 'I' Stud

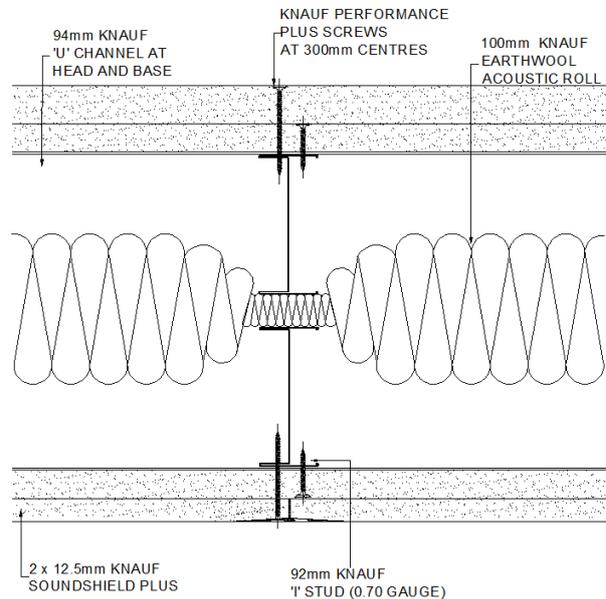
2 x 15mm Knauf Soundshield Plus

25mm Knauf Performance Plus Screws

45mm Knauf Performance Plus Screws

100mm Knauf Earthwool Acoustic Roll (10kg/m³)

300mm Overall Width



System Description

A non-loadbearing Knauf partition system comprising of twin 92mm [0.9] Knauf 'I' Studs at 600mm centres faced either side with a double layer of 15mm Knauf Soundshield Plus type A, D, F and I in accordance to EN 520:2004. Screw fixed at 300mm centres using 25mm and 45mm Knauf Performance Plus Screws incorporating 100mm Knauf Earthwool Acoustic Roll within the cavity with the overall width being 300mm. All joints were staggered, taped and filled.

Test Certificate No

C/21181/L05/DR

Supporting Data

A sound insulation assessment was carried out on a double skin Knauf partition system in accordance with EN ISO 140-3:2005. The system comprised of a double layer of 15mm Knauf Sound Moistureshield, fixed at 300mm centres with Knauf Drywall screws to each side of twin 50mm Knauf 'I' Studs at 600mm centres supported by 52mm Knauf 'U' Channel at the head and base. Incorporating 2 x 25mm Knauf Crown Partition Roll (now known as Knauf Earthwool Acoustic Roll) within the cavity, board joints were taped and filled. The overall system width was 300mm (110mm spacing between internal faces of plasterboard). The partition system achieved an acoustic rating of 65dB Rw in accordance with BS EN ISO 717-1.

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Conclusion

A non-loadbearing Knauf partition system as described in the system build up above was assessed by SRL (Sound Research Laboratories) on behalf of Knauf Drywall against the supporting data construction.

SRL have stated the following: 'The difference in sound insulation provided by partition systems using the same thickness of Knauf Soundshield Plus boards as Knauf Sound Moistureshield is likely to be negligible. The two board types have very similar density and only differ in that the Sound Moistureshield boards have added silicon.'

By using standard acoustic theory SRL would expect the proposed system to achieve at least 4dB R_w more than the tested system.

The proposed system has a spacing between the wall leaves approximately double that of the tested system. They are otherwise in their key elements essentially the same. The significant factor in the sound insulation of these types of partitions is the mass of the boarding, the separation and insulation between the boards (the physical spacing between them and any material connection between them), and the types and thickness of the insulation material within the cavity.

Therefore, the Knauf partition as described in the 'System Build Up' of this report is suitable for installations where an acoustic rating of 69dB Rw is required.

Prepared for and on behalf of Knauf by:

Technical Support Representative

15/08/18

Date

Approved on behalf of Knauf Drywall by:

Fiona Misiri
Technical Support Team Leader

Joseph Sargeantson
Technical Services Director

15/08/18

Date

Note: The results only relate to the behavior of the element of construction under the particular conditions of the test. They are not intended to be the sole criteria for assessing the potential acoustic performance of the final installed element in use, nor do they reflect the actual behavior given site considerations. For Terms & Conditions please visit www.knauf.co.uk

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