

Superior Sound Control

In this test, a small assembly was constructed with wood studs, resilient channels, and gypsum wallboard. Penetrations were made for a single and back-to-back metal electrical boxes, as shown in the graphs to the right. The assembly was tested with:

1. No Insulation
2. Fiber glass batt insulations
3. BIBS Insulation system

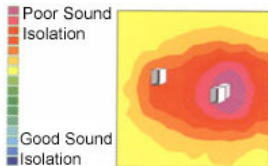
In order to simulate a field installation, instead of laboratory conditions, R-11 kraft-faced insulation was cut with up to a 1/8" gap around all three metal electrical boxes. No insulation was installed between the back-to-back electrical boxes.

High sound levels were generated on one side of the assembly, and sound energy was transmitted through the panel. On the quiet side of the assembly, a sound intensity probe was used to scan the surface, measuring regions of locally high and low sound intensity levels.

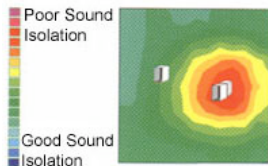
Sound intensity contour maps were generated from the experiment to graphically display the sound energy transmitted through the wall. The colors indicate local regions of local regions of high and low sound transmission.

The contour maps clearly show the leakage through the back-to-back electrical box penetrations, and slight leakage from the single metal electrical box penetration.

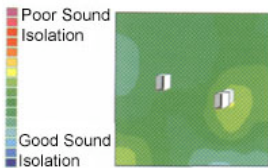
The three tested assemblies show great contrast in their overall levels, and demonstrate the importance of quality installation in sound-rated insulated assemblies. The small gaps in the R-11 batt insulated assembly can clearly reduce the effectiveness of the sound control of the wall in the 500 to 2000 Hz frequency range. With the Blow-In-Blanket System and professionally-trained BIBS installers, the gaps, are virtually eliminated and superior sound control is achieved.



Wall with penetrations and no insulation



Wall with penetrations and batt insulation



Wall with penetrations and BIBS insulation