

David Parr, Jr.  
*Soundproofing for the Musician*

Noise is all around us whether you live out in the country or in a city: traffic, sirens, dogs barking, cars honking, the neighbors playing music really loud. There are lots of solutions for this problem that can be quite effective but expensive too. What if you are a musician who wants to play his music really loud and don't want to disturb the neighbors but don't have a lot of money to spend on soundproofing? You would want to use the cheapest, easiest to install, and most effective material you could find.

Sound travels differently through different materials. It travels poorly through air. So if I could find a soundproofing material that caused the soundwaves to have to move through a lot of air, it might really decrease the noise that gets through and it would make a good soundproofing material.

I compared some easy to find, affordable, and easy to install materials that anyone could use to insulate their room for sound. Materials that hold a lot of air seemed to be good choices, so I used corrugated cardboard, egg crates, styrofoam, bubble wrap, and pink fiberglass insulation. I constructed soundproofing chambers to represent a room using cardboard moving boxes and lined the insides with the different materials that I wanted to compare. I then used the soundproofing chambers to cover three different noise making devices. The noise making devices I chose were a ringing telephone, a radio, and a DVD player playing a loud movie. I used a sound level meter to measure the noise level before and after covering the noise makers with the boxes. I was able to compare which material did the best job of reducing the noise level.

I found that all of the materials reduced the noise noticeably, but, the pink fiberglass insulation material worked the best.

So, if you are a musician and want to play really loud and not annoy the neighbors, take a look at the results of my testing and consider lining your walls with pink fiberglass insulation. Your neighbors will thank you.