



Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

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We Identify and S.T.O.P. Your Noise Problem

Acoustik Underlayment Sub-flooring Used in Customer's Bonus Room

By Ted Weidman

Bonus rooms above existing living spaces are often great places to not only add square footage to a residence but be used as a “get-away” for the homeowners. These rooms which were used as attics often times provide spaces where home owners can relax and enjoy. The fact that these areas are above the rest of the house introduces a clear need for some acoustical floor treatment for some of the rooms.

Mr. Dreher contacted me about an installation that he was considering that had a unique quality. Although the idea of converting the attic into a usable, livable space was not necessarily a new idea, his considera-



The floor was raised with plywood to hide the HVAC system for the house as well as to offer a flat surface for a subfloor.



It is important to use a marine grade or exterior grade T&G subfloor so that moisture doesn't cause expansion.



Acoustik underlayment is adhered to the new subfloor with our DA-5 two part adhesive. This adhesive has bits of recycled rubber in it and is installed onto the subfloor with a 3/16" notched trowel. The ridges of adhesive are an important part of the overall performance of the floor system. It will help decouple the rubber from the subfloor and offer a different rate of deflection to help absorb impact energy.

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tion for a finish floor was. The idea was to get some extremely expensive, extremely rare re-claimed lumber that has spent years and years submerged under water. This extremely beautiful wood was critical to the aesthetic that he envisioned for the room. The 3rd floor loft was directly above the bedrooms and an office on the second floor, so clearly keeping the footfall and airborne noises out of those areas was critical.

In order to make this room useable, some significant structural changes needed to be made to cover the HVAC services and the like. As one of the pictures show, a secondary truss/flooring grid was constructed which allowed for a level floor in the room. On top of this framing system a standard tongue-and-groove sub-floor was installed. A couple saw fits and some additional



The seams of the Acoustik are staggered like bricks.



It is extremely important to avoid penetrating the rubber membrane with screws or nails – or “floating” the finish floor. Penetrating the rubber will not allow the finish floor to flex to absorb impact and will act as an antenna for airborne sound transmission. To adhere a finish floor to the top of the Acoustik, we strongly suggest using our Poly 300 topical adhesives. Most adhesives do not bond well to rubber products because of the grease and oil involved. The Poly 300 has been engineered with that in mind.



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framing and things were ready for the underlayment. The Acoustik underlayment is adhered to the sub-floor with a two-part adhesive called DA-5. This 5 gallon pail is applied with a 3/16" notched trowel and the Acoustik underlayment is then put on top of the grooves of adhesive. After the floor is covered with the rubber underlayment, a topical adhesive called Poly 300 is used to hold the finish floor to the top of the rubber. It is critical to the acoustical integrity of the flooring system that no fasteners penetrate the rubber membrane. If this happens, a significant amount of vibration is allowed to flank the underlayment via hard surface to hard surface contact and the finish floor is no longer "floating." Due to our extensive amount of testing, and as long as we are given full disclosure



It was very important to get these floor boards to stay very tight together. The 2 x 4 shown here were screwed through the Acoustik, into the subfloor to provide a strong, stationary point. Pressure was then applied using the other pieces of plywood pushing the boards tightly together until the adhesive cured.



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of the construction materials and proposed installation methods, we are able to carry the warranty of the finish floor.

The advantage of the 3/8" Acoustik underlayment over other similar products is significant. The largest of these advantages is the dual-durometer of the rubber used. Because two different "relative hardness" rubbers are used, the product is extremely effective at absorbing the energy of impact and improving the IIC of the floor/ceiling assembly. The rubber used is extracted from used car tires (after pulling out the steel and nylon) which is a much better use for the rubber than the tire sitting in a landfill somewhere.

Considering the fact that it is rubber, this product should last a long, long time.



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Although, in this case, Mr. Dreher did not have any experience with the flooring assembly before the Acoustik and re-claimed wood were installed, he did report the following:

"The product appears to have accomplished our goal of minimizing noise and vibration from our 3rd floor loft into the 2nd floor bedrooms and office below. I do know that we made the right choice in using the Acoustik Underlayment and I continue to promote the product/solution to everyone that visits the space, especially if they're in the design and construction fields."

All the Best,
Daniel

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As you can see, the finished product is an absolutely beautiful and very warm bonus room that can be used without disturbing the rooms below. I am sure that this project was quite expensive but the result is definitely worth it and will likely pay off if the home is ever sold. After seeing this room, I don't think that is going to happen for a LONG time.

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If you have any questions about this or a similar installation that you are considering, please feel free to contact Ted Weidman (800-527-6253 ext. 25) or ted@acousticalsurfaces.com



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