



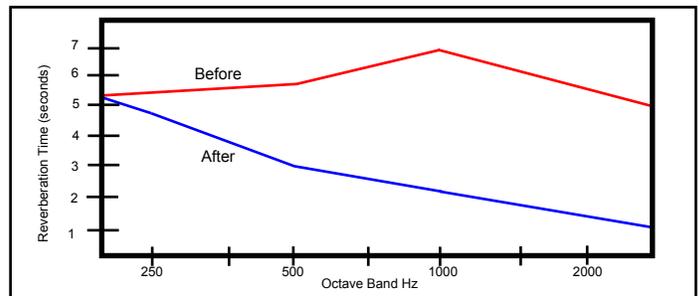
<b>PROJECT</b>	Villanova University Pavilion Villanova, PA
<b>DETAILS</b>	K-13 Tan 2" Thick 50,000 Sq. Ft.

monolithic coating met the recommendations of Ostergaard Acoustical Associates and reduced the reverberation in the pavilion making the constant noise from the ventilation system less noticeable.

The installation of K-13 acoustical treatment was successful in reducing reverberation time and improving the acoustics in the pavilion. The reduced reverberation time resulted in greatly improved speech intelligibility and audio quality. The chart below depicts measurements taken before and after the installation of K-13.

Villanova Pavilion is primarily used for the University of Villanova basketball games. However, many special events are also held at the pavilion, including concerts and masses. The acoustically reflective hardwood flooring and wooden plank ceiling made speech and music unintelligible. Additionally, the ventilation system added to the overall noise of the pavilion. The combination of excessive reverberation and constant background noise from the ventilation system motivated University officials to contact Ostergaard Acoustical Associates. Ostergaard Acoustical Associates performed an acoustical analysis of the pavilion in November 2001. Analysis of the data generated suggested an acoustical absorption material needed to be installed over the entire ceiling area.

Acoustic baffles, tiles, and K-13 were considered for the project. However, K-13 Tan was chosen for its high NRC values and because it would blend into the ceiling and not interfere with the beauty of the wood. K-13's uniform



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## SIMILAR K-13® PROJECTS



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Wichita Falls, TX



**White River Amphitheater**  
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**The Sanford Center**  
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### WHY DO ARENAS NEED TO CONSIDER ACOUSTICS?

Arenas are often multipurpose, hosting a variety of events ranging from sporting events to concerts. Acoustics need to be considered for optimum sound during a concert or for announcements, speeches, and general conversing.

The resilient fibers of K-13 absorb sound energy instead of reflecting it, reducing reverberation time and making speech and music more intelligible. K-13 reduces excessive noise while greatly improving ambient sound quality.

K-13 is spray-applied, and can adhere to virtually any common substrate, or surface configuration. K-13 is available in six standard colors, and can also be produced in custom matched, integrated colors. K-13 is made of 80% recycled materials and can add LEED credits to your project.



### TIMMONS ARENA

Greenville, SC

In December 1997, Furman University built a new multipurpose arena. By January, local papers were reporting a major design flaw. Acoustics had been severely overlooked and visitors would complain that they couldn't hear the announcements due to the reverberation. Acoustic consultants recommended 2" of K-13 White to remedy the problem. The results were dramatic. The reverberation time went from 4.7 seconds to a low 2.5 seconds. By controlling the reverberation time, both speech intelligibility and background noise were effectively controlled.



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Minimum 80% recycled content

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