

Sports Flooring Solutions for Your Athletic Facility

by **Ellen Kollie**

Poured, rolled, interlocking tile, natural wood — when it comes to choosing sports flooring, the options can seem overwhelming. Here's help for determining your needs and finding the right solution.

“The most important feature of a sports floor is that it prevent injuries for the people who use it, whether they're competitive athletes in high school or elementary school children getting their first chance to play on a sports floor,” says Robin Traum, spokesperson for Taraflex Sports Flooring by Gerflor, a manufacturer of vinyl sports flooring headquartered in France and which has a national sales office in Atlanta.

Traum's statement may read like a no-brainer, but choosing the right sports floor isn't as simple as it appears. Likewise, armed with the proper knowledge, choosing the right sports floor doesn't have to be painful. Here's how to assess your needs and find the right product.

For Your Information

Starting with the basics, there are six types of sports flooring from which to choose:

1. resilient pure vinyl,
2. wood,
3. poured urethane,
4. polypropylene interlocking tile,
5. solid rubber, and
6. vinyl composition tile (VCT).

The United States and Canada have no official sports flooring standard, says Traum. But, Europe does. Therefore, many North American architects rely on the European flooring standard, which was adopted in 2001, and is known as DIN V 18032-2.

The standard uses five performance criteria for evaluating sports flooring:

1. shock absorption,
2. energy restitution,
3. vertical deformation,
4. slip resistance, and
5. ball bounce.

In addition, the standard uses six mechanical criteria for evaluating sports flooring:

1. resistance to indentation,
2. impact absorption,
3. resistance to heavy moving loads,
4. abrasion resistance,
5. light reflection, and
6. surface uniformity.

According to Traum, Gerflor is a member of an ASTM (American Society for Testing and Materials) International subcommittee that is working on developing sports flooring standards for the United States. For more information on this topic, go to .

The Decision-Making Process

The experts agree that there are three steps to take when working with your architect to choose the

right sports floor for your athletic facility.

1. Determine what activities will occur on the floor. Is the floor for basketball and volleyball only, or is it also used for physical education classes, indoor soccer and other athletic events? Is the floor used for nonathletic events like science fairs, college fairs, proms/dances, awards assemblies and band competitions? Is it truly a multipurpose floor that sees a lot of traffic because, in addition to sports, the space is used as a cafeteria? "If the space is for multipurpose use, sometimes there's a compromise in choosing a floor that works for everything," says John Davids, AIA, a project director in the Novi, Mich., office of Celina, Ohio-based Fanning/Howey Associates, Inc. "The floor may not be perfect for one given activity, but is good for all the activities."

2. Visit a number of installations. "We want to make sure that what we install is what the user wants," says Tom Neff, a vice president in the Indianapolis office of Fort Wayne, Ind.-based SchenkelShultz Architects. "We advise that you look at both recently installed and older floors, so you can see how the technology has held up through time. Looking at a sample does not provide enough information to base several hundreds of thousands of dollars on." Davids agrees: "It's easy to make a decision based on what you've always seen, but it may not be the best choice. Talk to people who've had different types of floors for several years, and ask how they like them." Both men refer to this step as having an opportunity to "kick the tires."

3. Visit a number of manufacturers. When you visit different manufacturers' showrooms, you can walk and dribble a basketball on their floors. It also gives you an opportunity to evaluate what your coaches have suggested that they do and don't like. "I think manufacturers are trying to be proactive in creating floor systems that offer more than what a traditional floors offer," says Davids. Visiting their showrooms allows you to see firsthand what they offer.

Things to Think About

Acoustics: Although not a primary factor in the decision-making process, some sports flooring has sound-dampening properties in addition to serving in multipurpose applications.

Color: "Colors are getting better," says Anna Marie Burrell, AIA, an associate with SchenkelShultz. Most synthetic sports floor manufacturers offer custom colors, which she prefers to use only when adding graphics. "We try to stay with standard colors because it's easier for color matching when doing repairs/patches."

Cost: Sports flooring costs range from \$5 to \$6 per sq. ft. to \$12 to \$13 per sq. ft., notes Davids.

Humidity: If you're using wood, you must have a wonderful roof system because, if the roof leaks, you can lose the entire floor from warpage. Likewise, if you have a wood floor in a facility that can't be air conditioned year-round, you could experience problems with expansion and contraction. Neither of these issues is a problem with synthetic floors. In addition, Davids suggests that if you're using natural wood on a gym floor in a facility that also contains a swimming pool, the pool deck should be lower than the gym floor so that, if the pool floods, the water might not reach the gym floor.

Maintenance: While maintenance can be a factor in choosing sports flooring, it isn't the major factor, notes Neff. The major factor is the number of uses you want to have on the floor.

Renovation Vs. New Construction: Sports flooring can be installed in renovation or new construction projects, says Neff.

Resiliency: A resilient floor has some give to it, says Davids. For example, concrete is not resilient. For safety reasons, your sports floor should provide a fair amount of resiliency. Yet, for ball bounce back, you do want not too much resiliency.

Expert Examples

Athletics: Located south of Indianapolis, Clark-Pleasant School Corporation's Whiteland High School boasts a synthetic sports floor in the hallways of its sports complex. It's a poured epoxy floor over a rubber pad. Administrators made this decision so that the hallways can be used as a training facility: wrestlers run the hallways, and sprinters take to the hallways when it's raining outside.

Multipurpose: Administrators at a school district in Fairfax, Va., replaced four of their schools' gymnasium floors with a sheet vinyl that they determined could handle multipurpose use and high traffic. They were looking for durability, safety, comfort and reduced maintenance. In fact, one of the original floors was in good enough shape that the replacement floor was installed on top of the old,

eliminating removal costs.

Arts: Something similar to sports flooring was installed in a black box theater in a high school in Novi, Mich., notes Davids. “There are spaces where resiliency is an issue — they’d like to have something to perform on, but they also would like the look of the less-resilient hardwood floor.

No doubt, there’s a lot to think about when choosing sports flooring. First, ask your architect what makes a sports floor and talk with the people who are responsible for maintaining it. Then, if you can keep safety and how the floor is going to be used as your primary qualifiers, you’ll find that you’ve already narrowed your choices substantially. “It can be time consuming to think about it and evaluate it,” says Traum, “but, in the long run, it all pays off.”

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