



# What you need to know about modern running tracks

OKAY, you know a thing or two about tracks. They're oval in shape. They're 400 meters in distance. And it's been a long time since you saw one made out of cinders. But if that's the extent of your knowledge, consider this your introduction.

Today's track surfaces may look alike but they can vary greatly in terms of construction, surfacing, drainage, etc. Ultimately, factors such as site, budget and intended use influenced the selection

decision. Here is an overview of the essentials, including the components of a track, how they come together, and the best strategies for maintaining the facility as a whole.

According to the American Sports Builders Association (ASBA)'s publication, *Running Tracks: A Construction and Maintenance Manual*, construction begins with site preparation: grading, compaction and drainage. Next comes the installation of a

» **THE COATESVILLE AREA (PA) HIGH SCHOOL STADIUM** features a new synthetic turf surface, a renovated running track and new amenities to enhance its football facilities. ELA Sport of Lititz, PA acted as athletic facilities design consultant as well as project engineer. Photo courtesy of ELA Sport.



Runner illustration courtesy of istockphoto.com

base of crushed aggregate (limestone or gravel), or of processed or recycled asphalt or concrete.

Paving commences once a base has been laid. Asphalt is the most frequently used paving material. Asphalt is a flexible pavement; it is able to “give” slightly to compensate for the ground’s movement due to settling, to the action of water, and to freeze/thaw activity. However, as it gets older, asphalt shrinks and hardens and is prone to cracking. Asphalt used can be either regular highway asphalt, or permeable asphalt that allows water to drain down through the track.

The surface is installed over the pavement. Generally, track surfaces fall into two categories: permeable (or porous) meaning water drains through the surface, and impermeable (or non-porous), meaning water drains and/or evaporates off the surface. Which is right for you depends on the site, weather and geographic conditions and other factors.

A variety of products are used in the construction of a track surface. They include primers (latex primers and polyurethane primers), binders (SBR or Styrene-Butadiene-Rubber latex binder, acrylic-latex polyresin binders or polyurethane binder), and coatings (water-based coatings or various polyurethane coatings). Beyond these, the major product used in the construction of a track surface is rubber (black rubber particles, colored rubber particles and pre-manufactured rubber products are used.)

Generally, systems are divided into three categories, any of which may be suitable for a given installation:

**Latex systems.** These consist of rubber particles bound together by a water-based latex binder that can be broken down into black mat systems, colored binder systems, colored sandwich systems and full-depth color systems.

**Polyurethane systems** These can be broken down into polyurethane base mat surfacing systems-permeable, polyurethane base mat structural spray systems-permeable, polyurethane sealed base mat structural spray systems-impermeable, polyurethane base mat sandwich systems-impermeable and polyurethane full pour surfaces-impermeable.

**Pre-manufactured tracks.** These can be broken down into a pre-manufactured base

mat with a seal and a polyurethane structural spray top coating, a pre-manufactured base mat with a seal and polyurethane coating applied to the base mat with embedded colored EPDM rubber granules, and a pre-manufactured, vulcanized rubber product that is installed in a single layer and does not require any further finishing for use.

While some uncoated asphalt tracks or unbound natural surface tracks such as cinder, clay, expanded shale or decomposed granite, are still in use, current guidelines and recommendations are no longer developed or issued for such surfaces.

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## Maintenance

Tracks, like your house, do not hold value without regular upkeep. Daily, weekly, monthly, seasonal and annual maintenance will help keep a track in good repair. (Yes, this includes all-weather surfaces; just because it has that nickname does not mean it can withstand season after season without regular checkups and care).

“Most track surfaces are maintenance-free, meaning that the owner cannot do any real maintenance other than washing the track during the dry season and touching up numbers and triangles when the paint is worn out,” says Luca Reinaudo of Mondo USA. “But in our opinion the emphasis should be on preventive maintenance.”

According to the professionals who design, build and supply materials for those facilities, scheduled maintenance and constant vigilance are the keys that year after year, result in a great experience for athletes and coaches alike when they step onto a track.

“It’s the small maintenance items that turn into big headaches when neglected,” says Sam Fisher of Fisher Tracks.

Problems with a track might be occurring underneath, but the first place you’ll see them is the surface. Do a walk-through of the facility on a regular basis. Daily is best, but weekly

should be the minimum, particularly when the track is in heavy use. Create a schematic showing the track, and make notes to yourself to document any irregularities, such as high or low spots, dings, damage and more. Carry a digital camera and take photos of any areas of concern, then e-mail them to the contractor who put in your track, who can give you a call, or come out to inspect the facility.

Keep the surface clean at all times, and free of grass clippings, dirt, gravel and other debris. (A leaf blower is a low-tech tool, but it works wonders in this case). Otherwise, once athletes begin working out on the track, the debris starts getting ground in, causing damage. Check gates to make sure they are not dragging on the surface and abrading it. Check, too, to see that gate latches are working properly.

The fence, including the perimeter fence, fence mazes and the fence separating the stands from the track, should be checked regularly. Check all rails for good connections, and look for any bulging, sagging or tears in the fence fabric. Have problems fixed immediately.

Ascertain that sprinklers for the field or for the surrounding landscaping are not spraying onto the track and overloading it with water. Clean out drains; keep them free of grass clippings, leaves, dirt, litter and other debris that can clog them and keep them from working

effectively. If you see water ponding on the track, alert the contractor.

“A super-saturated subbase will rot the asphalt, creating a great deal of vapor pressure on the underside of the rubber surface and causing bubbling and delamination,” says Fisher. “In addition, we have asphalt stripping. Lastly, there are the sheer cosmetics of the discoloration due to the hardness and mineral content of the water itself.”

Another way of protecting the surface? Allow only foot traffic on it. Use boards or rubber matting to protect the surface. Additionally, signage around the track should indicate rules concerning footwear (soft spikes, etc.) The contractor who put in the surface will be able to provide more specific recommendations. Many times, those engaging in other sports will run across the track on their way to the field, not realizing how much damage they cause. Again, putting mats or boards at entrance and exit points can help save your surface.

Because many facilities are open for community use, more than runners and walkers will take advantage, often to the misfortune of the facility manager. Dog walkers may use the field, and parents with children in strollers (or older children on tricycles and bicycles) and others may want to use the track. All these undesirable uses will have a negative effect on the facility, and on the ability of athletes to use it for its intended purpose. Be vigilant about enforcing the rules.

“Seventy-five per cent of damages that we see on tracks are due to misuse of the facility, and could be avoided if appropriate signs were posted,” says Reinaudo.

The best maintenance advice? Talk to managers and athletic directors who have facilities you’re particularly impressed with and find out what they do. ■

*Mary Helen Sprecher wrote this article on behalf of the the American Sports Builders Association (ASBA), a non-profit association helping designers, builders, owners, operators and users understand quality sports facility construction. ASBA has available at no charge publications aimed at assisting turf managers and others, as well as their Membership Directory. See [www.sportsbuilders.org](http://www.sportsbuilders.org).*



➤ **THIS SHOT IS OF MIDDLETON (WI) HIGH SCHOOL'S FACILITY** that features a nine-lane track as well as a portion of the newly installed sports field. Photo courtesy of Rettler Corp., Stevens Point, WI.