

What is artificial/synthetic turf?

Artificial turf, or **synthetic turf**, is a grass-like man-made surface manufactured from synthetic materials. It is most often used in arenas for sports that were originally or are normally played on grass, however, it is now being used on residential lawns and commercial applications, as well.

History

1960s and 1970s

David Chaney -- who moved to Raleigh in 1960 and later served as dean of the North Carolina State University College of Textiles -- headed the team of RTP researchers who created the famous artificial turf. That accomplishment led Sports Illustrated magazine to declare that Chaney was the man "responsible for indoor major league baseball and millions of welcome mats." Artificial turf first came to prominence in 1965, when AstroTurf was installed in the newly -built Astrodome in Houston, Texas. The use of AstroTurf and similar surfaces became widespread in the 1970s and was installed in both indoor and outdoor stadiums used for baseball and gridiron football in the United States and Canada. Maintaining a grass playing surface indoors, while technically possible, is prohibitively expensive, while teams who chose to play on artificial surfaces outdoors did so because of the reduced maintenance cost, especially in colder climates with urban multi-purpose "cookie cutter" stadiums such as Cincinnati's River front Stadium, Pittsburgh's Three Rivers Stadium and Philadelphia's Veterans Stadium.

1980s and 1990s



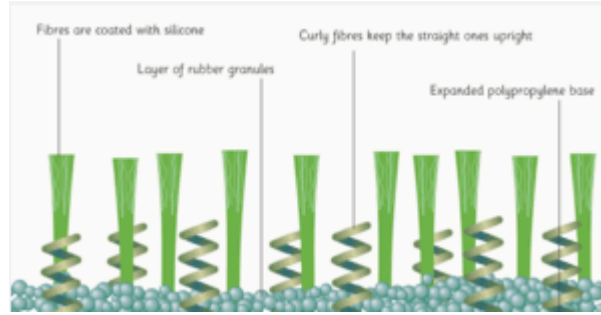
Modern artificial grass

Some football (soccer) clubs in Europe installed artificial surfaces in the 1980s, which were called **plastic pitches** (often derisively) in countries such as England. In England several professional club venues had adopted the pitches, QPR's Loftus Road, Luton Town's Kenilworth Road, Oldham Athletic's Boundary Park and Preston's Deepdale until the English FA banned them in 1988. Artificial turf gained a bad reputation on both sides of the Atlantic with fans and especially with players. The first artificial turfs were a far harder surface than grass, and soon became known as an unforgiving playing surface which was prone to cause more injuries (and, in particular, more serious joint injuries) than would comparatively be suffered on a grass surface. Artificial turf was also aesthetically unappealing to many fans.

In 1981, London soccer club Queens Park Rangers dug up its grass pitch and installed an artificial one. Others followed, and by the mid-1980s there were four plastic grass pitches in operation in the English league. They soon became a national joke: the ball pinged round like it was made of rubber, the players kept losing their footing, and anyone who fell over risked carpet burns. Unsurprisingly, fans complained that the football was awful to watch and, one by one, the clubs went back to natural grass.

In the 1990s many North American soccer clubs also removed their artificial surfaces and re-installed grass, while others moved to new stadiums with state-of-the-art grass surfaces that were designed to withstand cold temperatures where the climate demanded it. The use of artificial turf was later banned by FIFA, UEFA and by many domestic football associations, though, in recent years, both governing bodies have expressed an interest in resurrecting the use of artificial surfaces as the related technologies continue to evolve (see below 21st century).

21st century



Modern artificial grass

In the early 21st century, new artificial playing surfaces using sand and/or rubber infill were developed. These "next generation", or Artificial Grass, surfaces are often virtually indistinguishable from grass when viewed from any distance, and are generally regarded as being about as safe to play on as a typical grass surface — perhaps even safer in cold conditions.

Many clubs have installed the new synthetic turf surfaces (most commonly as part of an all-weather training capability), while some clubs which have maintained grass surfaces are now re-considering artificial turf. With football clubs in Europe looking to reduce both maintenance costs and the number of winter matches that are cancelled due to frozen pitches, the issue has also been re-visited by that sport's governing bodies.

Natural Versus Artificial turf

Natural



- fast deterioration
- high maintenance costs
- only limited time of usage
- Natural pitch can be played on
- only about 150 hours/year

Artificial turf



- high durability
- low maintenance
- temperature independent
- independent of weather
- saves money