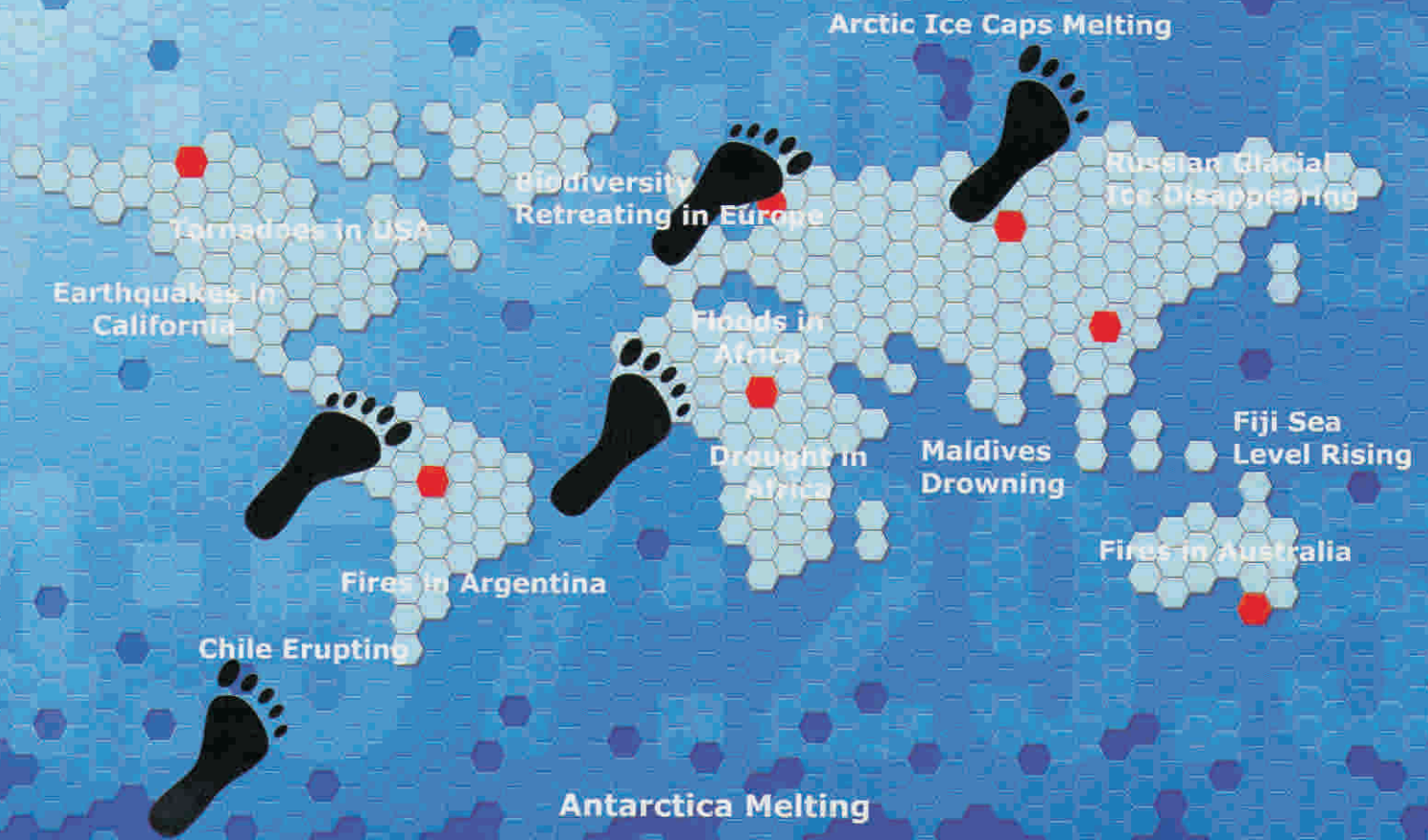
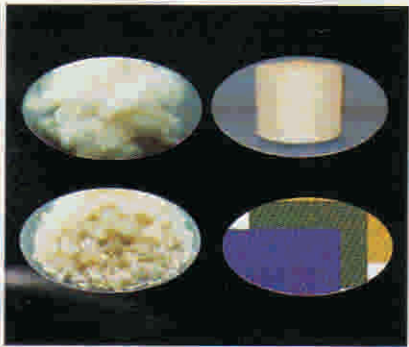




Carbon Footprint... ...Guaranteeing a Short Life



Is the Textile Industry Contributing to It?



Heat Resistant Meta-Aramid Fiber, Teijin Techno Products
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Artificial Turfs...
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Artificial Turfs ...

Complimenting, Supplementing & Adding to Nature

Artificial turf is a surface manufactured from synthetic fibres to make it look like natural grass. The most common application areas are sports arenas for sports that were originally or are normally played on grass. However now it is finding applications in residential lawns & commercial applications as well. The main reason for the usage of this product is maintenance as artificial turf resists heavy use (sports) better, and requires no irrigation or trimming.

FieldTurf is one of the leading brands for manufacturing and installing artificial turfs and belongs to the FieldTurf Tarkett division of Tarkett Sports, Nanterre, France. This company was the innovator and holds a patent for this next-generation artificial turf since 1992. It not only credits itself by its rich clientele consisting of the who's who in the world of sport and residential / commercial use but has also looked into every aspect from the fibre, backing, infill etc., of the product which has been tried and tested and has won tremendous appreciation from the top sports persons across the world. It was the first product to win FIFA approval and has the largest installed base worldwide. FieldTurf Tarkett India is the sole licensee of FieldTurf Tarkett and claims to have a 90% market share in India. BCH brings to you an interview with FieldTurf Tarkett India Founder Director, Mr. Anil Kumar who is credited with introducing the next - generation artificial grass FieldTurf Tarkett in India for the first time. Within a short span these maintenance-free "lawns" have been installed in over 1,700 of the best homes, restaurants, schools and offices in India since 2005 and are thus leading the country into a better equipped developed world.



Mr. Anil Kumar
Founder Director
FieldTurf Tarkett India

BCH: Artificial turfs are gaining popularity in India, what in your experience are the reasons for this?

AK: Primarily there are 3 reasons for this: **Firstly the continuous innovation of artificial turf:** This next-generation artificial grass is very different from the age-old turfs used for Hockey since the late 60's. This long-pile turf looks and feels like natural grass; is soft and silky, lasts 15-20 years and needs virtually no-maintenance. **Secondly the wider application:** These new products offer usage in homes, schools, restaurants, clubs...basically anywhere that you'd like to have grass but just cannot grow or maintain it: Rooftops, water or sunlight deficient areas, heavy foot-traffic areas, rocky terrain etc. Additionally, the world-class surfaces they provide for different sports are also propelling the market. **Lastly the greater awareness:** More and more architects, facility owners and even home owners are aware of the vast benefits of artificial turf in specific applications and this is leading to a good adoption.

BCH: Can you highlight some technicalities involved in the selection criteria of an artificial turf?

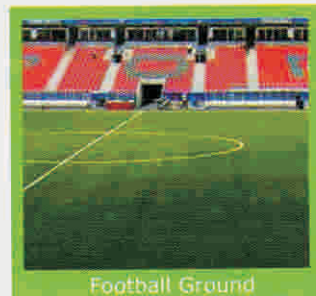
AK: There can be as many as a dozen different types of artificial turf. The first thing one has to figure out is what is the main purpose that one is considering it for: home use, school playground, aesthetic looks only, clubs or function halls with heavy foot-traffic, sports use. In sports alone there could be as many as 10 types depending on the sport (Football, Golf, Hockey, Rugby etc.) and the level of play (amateur or professional). Once the options are narrowed down, landscaping use can focus on the look-n-feel, turf density, height, infill to be used (should always have mix of rubber and silica sand and never sand alone). However it is extremely complex in choosing for professional sports fields. Every aspect of the whole system (slit-film or monofilament, the yarn denier and strength, spine, backing, permeability, tuft lock, UV treatment, cryogenic or ambient rubber, glued or sewn seams etc) are critical in making a choice. Even non product aspects like warranty, sub-base preparation, expertise, maintenance etc., are crucial to this decision. Amateur sports or multi-sport / multi-purpose grounds would be somewhere between a landscape use and professional sports use.

BCH: Fibres play a very important role in manufacturing artificial turfs, what are the trends being followed globally in their incorporation?

AK: There have been various phases when different materials were used (Nylon, PP etc). By and large, the preference is for PE currently for various reasons. Also, slit-film (of a PE tape) into thin fibres or into a honeycomb sub-structure has been around for some time now. In the last few years, various types of monofilament (spined or flat) are popular, especially for their long life, resilience and "memory". For landscaping use, there are also "thatched" or non-infilled products (wherein there is no use of rubber / silica sand between the fibres, but one or more types of spaghetti yarn is used to provide the cushioning). It has its own pros and cons.

BCH: Are artificial turfs different for different games? Please elaborate.

AK: Yes. Golf alone needs 3 or 4 types depending on what it is used for (Putting Green, Tee-Box, Fairway etc). Football and Baseball are fairly close. Tennis are short to medium pile height and high density. Rugby needs very long fibre (over 65-70mm). Hockey on the other hand is more like 10 or 11mm. Some need infill of rubber and silica sand, others don't. Cricket pitches can be of different types, helping bounce, spin etc.



Football Ground

Special Feature

contd...

BCH: Is there a negative effect on the soil & water when a natural area is replaced by artificial turf?

AK: On the contrary, the use of lakhs of tons of pesticides, fertilizers and other chemicals is eliminated by not using natural grass. These tend to eventually seep into the ground water system and find their way into the human body. Natural grass is most difficult to maintain on sports field due to heavy usage. In these situations, from various perspectives, artificial turfs are the best choice. With the next generation turfs not needing water at all, and products made from materials that are lead-free they are very environment friendly. The carbon footprint of lawn-mowing is also reduced. There is new trend where old fields installed almost 12-15 years ago, are now being replaced and the fibre is being recycled into plastic pellets to be used for small items like pipes, plates etc.

BCH: After how many years will an artificial turf laid field require replacement?

AK: Depending on the type of the field and the usage pattern (low to heavy), a good sports field can be expected to last 15 years or more. However, in residential use, with comparatively low foot-traffic the life can be well over 20 years.

BCH: Can artificial turf discolor in the sun? How well does it drain?

AK: Almost all the new generation artificial turfs have UV inhibitors and are therefore treated to resist fading. The caveat here is that at higher altitudes, the UV intensity is much more. Therefore typical warranties against fading are applicable to 5000 feet above sea level. On a rooftop, a contoured HDPE mesh is laid that provides a 6-8mm clearance between the surface (tiles / concrete etc) and the grass layer. Almost all turfs have a porous backing either through punched holes or permeable membrane. The rainwater (or any water) that drains through the turf, then flows along the slope of the rooftop towards the outlet. For professional fields though, the sub-base preparation is very exacting and elaborate. Apart from excellent drainage and equally important objective is also the evenness, slope, load bearing etc. Usually the sub-bases are anywhere from 6 inches to 14 inches and come in many designs based on site conditions. Crushed stone bases allow for rapid percolation and flow to the sides, where perforated perimeter drains channel into catch basins and transported to the storm water sewers.

BCH: What points should be kept in mind for maintaining artificial turfs?

AK: While artificial turfs do not require the extensive, careful maintenance that natural grass needs, all the same, there are some simple do & don'ts such as avoiding glass bottles or anything glass on the field or lawn, blowing or sweeping away dry leaves or any other debris, avoiding regular usage of heavy vehicles or sharp turns on the turf, maintenance of infill levels for better look and longer life and although they are fire-retardant, avoiding cigarettes or bursting of crackers on the turf.

BCH: What types of shoes/boots are required to play sports on artificial turfs? Is there any requirement for a shock absorbent material?

AK: While there are some shoes that are considered to be specially designed for artificial turf, the use of regular cleats (for football) or even spikes in the case of some varieties of turfs are welcome. For the requirement of a shock absorbent material, it is Yes & No. For a Hockey field, the sub-base will be usually asphalt. A shock pad of about 15mm is a must (on which the turf is laid). For football fields, which usually have crushed stone sub-bases, the infill of cryogenic rubber granules & silica sand is sufficient to provide the right kind of cushioning.

BCH: Artificial turf tends to be much hotter than natural grass when exposed to sun. Does this pose as a drawback while playing sports during the day time?

AK: Yes. This is possibly the main drawback of artificial turfs, especially for hot climates like India. However, if someone really wanted to play or lie down in the hot summer afternoon on the turf, they can briefly spray water on the surface and it cools immediately. In general, except in very hot conditions, they are playable for the most part.

BCH: What is the difference felt while playing sports on natural grass and on artificial turf? What kind of injuries are players prone to when playing on artificial turf fields?

AK: Some of the current generation turfs are almost exactly like playing on the best natural grass fields. There are many studies and surveys among the top players in NFL & Soccer where they have ranked some fields above many natural grass stadiums also. The carefully calibrated mix of cryogenic rubber & silica sand infill between the fibres provides exactly the same cushioning as the best grass surface not too soft and not too hard. There are scientific measures to check the GMax rating and Restitution Energy, Ball Bounce, Ball Rebound (Straight & Angular) etc., that can show if the artificial grass field is in ideal shape. You will be surprised to know that a detailed study by 4 Doctors over 5 years concluded that injuries on a good artificial turf are LESSER than those on natural grass. Of course poorly installed systems or those that have wrong ratios of rubber & sand may tend to cause some injuries. ■



Chowgule College (Goa)- Before



Chowgule College (Goa)- After

Some FieldTurfs in India

Football fields: Chowgule College Goa; Salt Lake Stadium, Kolkata
Corporates like: Reliance Industries, Infosys, Hero Honda
Educational Institutes: Head Start, Global Academy, Euro Kids
Hotel, Restaurants, Clubs: Taj Palace Hotel & Towers, Secunderabad Club, Zaafran Exotica
Others: British High Commission, Apollo Hospitals, Jain Temple
Sports: Punjab Cricket Association (Mohali), M.L.Jaisimha Cricket Academy, National Cricket Academy