



Latest generation of artificial grass for sports and leisure.

## The growth of fake grass

by ACT Global Sports

**A**long with social development and increased leisure time in recent decades, individual participation in sporting activities has increased around the world. As demand for sports fields has grown, so has the challenge of building and maintaining natural grass fields in good condition. The increased number of players and hours on sports fields, coupled with differing climatic conditions around the world, have led sport organizations to focus on alternatives to natural grass.

Since the 1960s, artificial turf has provided a durable surface that can be utilized in all weather conditions. As the artificial grass industry has matured, so have the technological advances in the products. Each advance has added features to benefit the buyers of artificial grass.

### Focused on performance

For instance, in the 1970s, polypropylene fibrillated fibres were introduced to reduce skin abrasions caused by the original nylon-based product.

Sand-filled systems were introduced in the 1980s, greatly reducing costs. By the 1990s, the addition of rubber infill to artificial turf systems solved hardening issues with sand and provided additional shock absorbency. During the past several years, infill-based artificial grass systems generally feature excellent shock absorption and soft polyethylene fibres that resist ultraviolet light.

**“With ISO 9001, ACT Global strives to show how committed we are to quality, customers and improving efficiency.”**

Technology and quality methods have improved significantly just in the past three years, and so have users' demands for better sports performance. The turf system must go beyond maintenance benefits or all-weather playability. Artificial turf must include safety features, shock absorbency, low abrasion, speed, stable footing and traction. It must also be designed and tested to perform under extreme conditions while maintaining durability and long-term quality.

To meet these demands, manufacturers can utilize a combination of the ISO 9000 quality system, ISO 14000

environmental management and technical standards to provide high-quality, reliable artificial turf systems.

### A critical factor

ISO 9001 is a widely recognized standard for quality management in many industries. Thousands of companies in more than 150 countries have already adopted it, and many more are in the process of doing so. In the artificial turf industry, ACT Global Sports is among the handful of manufacturers applying the ISO 9000 series of standards.

ACT Global Sports initially decided to follow this path because quality is a critical factor in the selection of a synthetic turf supplier. The decision grew to an organizational commitment to control and improve the quality of its products, reduce the costs associated with poor quality, and increase competitiveness.

ACT Global Sports and other firms with ISO 9001-certified manufacturing facilities find these standards and systems to be key to successfully implementing consistent policies, procedures, records, technologies, resources and structures that will help us achieve the standards of quality that our international customers demand from our organization.

## About ACT Global Sports

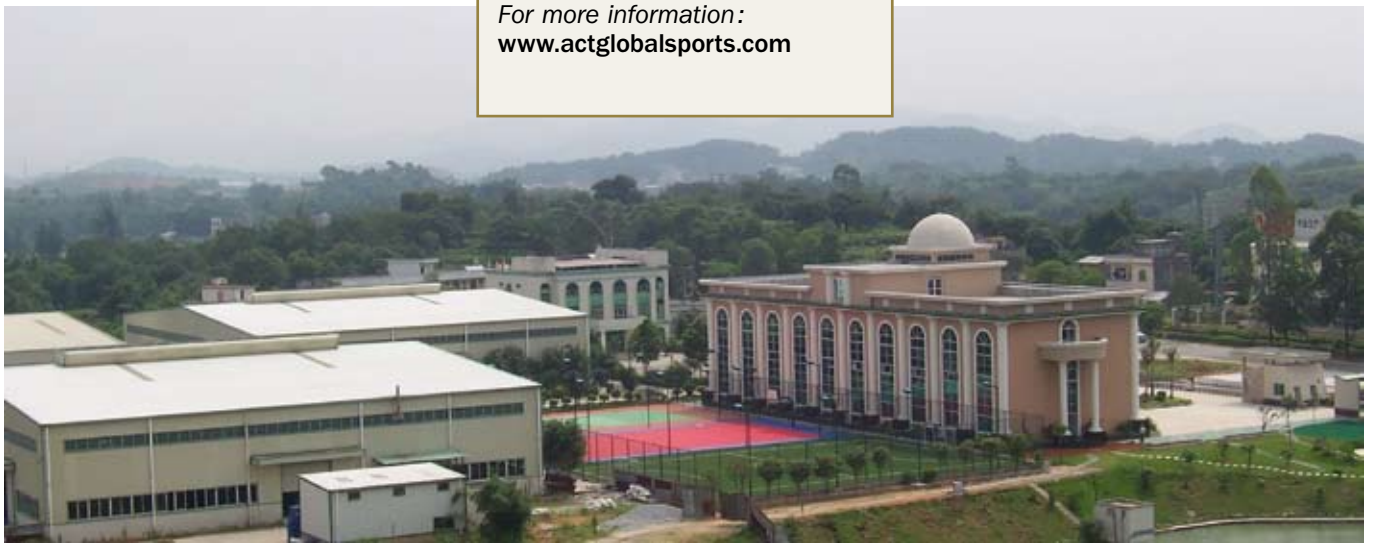
In implementing ISO 9001, ACT Global strives to motivate its staff to define key roles and responsibilities, to show how committed we are to quality and customers, and to demonstrate a willingness to work towards improving efficiency. John Baize, Director of ACT Global Sports says, “sports players around the world may not be aware of our quality standards, but they surely benefit from quality consistency and product reliability.”

ACT Global Sports is headquartered in Texas, USA, with locations in Georgia (USA), China, Cyprus, Hong Kong and The Netherlands. The company is one of the leading suppliers of artificial turf, with sales in more than 45 countries around the world. The company’s state-of-the-art manufacturing location and a dedicated research and development centre have received ISO 9001 and ISO 14001 certifications.

For more information:  
[www.actglobalsports.com](http://www.actglobalsports.com)

## Stewards of the environment

With artificial turf systems that are purchased by schools, sports clubs, communities, universities, homeowners and government entities, stakeholders of the artificial turf industry benefit from environmental stewardship by manufacturers.



ACT Global fully-integrated production centre in Asia with ISO 9001 and ISO 14001 certification.

## Grass you can trust

During the manufacturing phases, the ACT Global quality programme focuses on problem prevention in addition to problem detection. Depending upon the order specifications, “we have up to 22 quality checks to verify fibre, backing, coating and turf production,” says Director Wil Ditzel. After the turf is produced, a final visual inspection is performed, including a check of key product characteristics to verify that they are consistent with specifications. ACT Global Sports also retains samples of all products that are shipped to the job site for future testing and comparison with field performance.

Quality is further assured when the company adheres to a Total Quality Management methodology. The phases include:

- management commitment to quality;
- employee training and procedures;
- research and development;

- product design and testing;
- manufacturing processes which focus on prevention;
- strict review and use of quality raw materials;
- processes to detect, record and resolve any product quality matters;
- sample retention;
- final pre-shipment inspection;
- installation workmanship;
- post-installation maintenance.

By implementing quality standards in each phase of artificial turf manufacturing (from research and development through post-installation services), companies such as ACT Global are better able to deliver reliable artificial grass systems that have been scientifically engineered to meet increasing demands for performance and quality.

**“As the artificial grass industry has matured, so have the technological advances in the products.”**

ACT Global recognizes this and prides itself on being committed to environmentally friendly products, as demonstrated by the ISO 14001 environmental certification of ACT Global’s main manufacturing plant. Although the environmental impacts of goods and services receive due attention in many industries and countries, few artificial turf makers have achieved ISO 14001 certification. ACT Global acknowledges that being good stewards of the environment does not result in many direct sales contracts, but as Mr. Baize notes, “it is part of our corporate values. It costs money to invest in proper environmental methods and research, but with sales in over 45 countries, being a good corporate citizen is also good for long-term business.”

## Main Focus

The company is able to continually improve its environmental performance by implementing a systematic approach to setting environmental objectives and targets. ACT Global screens materials used in its grass fibres and has conducted environmental research within the artificial turf industry.

ACT Global further encourages its employees to implement the best practices in energy and resource efficiency, waste reduction, renewable resources, and the use of cleaner production. The company also urges its customers to perform research on environmental issues. Environmental protection is of increasing importance and ACT Global encourages competitors to join in the effort to research methods for environmental improvement.

### High acceptance standards

A number of other standards throughout the world provide metrics by which to compare the many different types of artificial turf available in the market. Most notably, by better understanding the player and ball interaction with natural grass, the soccer football governing bodies, Fédération internationale de football association (FIFA) and the Union of European Football Associations (UEFA), have established newer and higher acceptance standards for artificial grass.

The FIFA Quality Concept encourages the artificial grass industry to develop systems that replicate the natural grass experience. This includes player-to-surface interaction standards in areas such as shock absorbency vertical deformation (foot stability), slip resistance, traction and skin abrasion. There are also ball-to-surface standards as well as stringent quality criteria such as simulated wear and UV testing. Chris Clapham, Director of ACT Global, comments: "FIFA has made significant investments in understanding the performance of natural grass and synthetic turf. These standards provide a roadmap for artificial turf manufacturers to continually improve our own research, products, installation and maintenance methods."

1) ASTM International, formerly American Society for Testing and Materials.



Main photo - Corinthians Paulista Brazil installation with FIFA certification top right (top left, original site).

Top centre - professional team installation in The Netherlands.

### Objective quality comparison

Other standards have been developed around the world, many of which are similar to the FIFA requirements but may have additional standards for environmental testing or other quality measurements. For instance, DIN (Deutsches Institut für Normung), the ISO member for Germany, also encompasses testing for heavy metals such as lead, cadmium, chromium, zinc and mercury, and for toxicity. ASTM<sup>1)</sup> testing in the United States focuses on specifications such as fibre weights, grass tensile strength, tuft bind, shock absorption and grab tear strength.

ACT Global Sports has conducted extensive testing for FIFA norms, DIN environmental standards and ASTM measurements. Understanding the complexities of each system component would be rather confusing for most buyers of artificial grass, so Mr. Clapham suggests, "to evaluate that proper performance, safety and quality standards are met, a buyer should require the testing information from all of its prospective suppliers, so it can make an objective quality comparison."

### A green and performance-based future

Although artificial turf systems have developed a great deal since the 1960s, the industry can expect newer technologies and user demands to continue to raise the standards for the industry. As buyers become educated, they will evaluate quality at both the manufacturer level (ISO 9001) and product level (currently FIFA and sports standards).

From a sports performance perspective, despite the introduction of infill-based artificial grass fields, athletes have still voiced preferences for natural grass surfaces. Players have raised concerns about their interaction with the artificial surface and the behaviour of the ball on the surface. These concerns include foot stability, slipping, early fatigue, injuries and unfavourable ball roll speeds. Newer technologies continue to address these concerns, especially in areas such as energy restitution and injuries.

Environmental standards like ISO 14001 are also quickly becoming more widespread in the industry. ACT Global and others are conducting research to develop and diffuse environmentally friendly technologies and energy-efficient production. As new methods and business practices are identified, these can be implemented as part of short- and long-term environmental management initiatives. ■