

Desso iDNA

Your IDea, our DNA





Desso **iDNA**, a new step, a new standard

The perfect grass surface to play football on throughout the year: professional or recreational, summer or winter. A pitch that, under any conditions, retains its quality, and is able to withstand heavy use so that training and matches can be played in the same place under the same ideal conditions. It's the dream of every footballer? Absolutely! It's also the dream of Desso Sports Systems, which has been working for 30 years to bring that goal closer to reality using the most advanced artificial turf technology available.

Idea + DNA = **iDNA**

This latest new product in the Desso Sports range reflects its name. Just as with every innovation, it started with a simple idea - the ideal artificial turf fibre should emulate the properties of natural grass as closely as possible, with the added benefit that those properties can be retained over time, under all climatic conditions.

The determination with which we have pursued this goal is the trademark of Desso's approach to a challenge. It's in our DNA so to speak. Just as every sports person has the inborn drive to improve, so Desso has been continuously examining, testing and refining to create a product that sets itself apart from all the others. Not only by the shape of its fibre, but also through its unparalleled technological innovation. The result? Even more pure sports enjoyment without limits!

Our objectives for this new product were clear: a durable artificial turf fibre, with a natural look and feel, which could also retain its playing characteristics over the long term, thanks to its highly resilient fibres.

After a long series of tests in the lab, in production and on the pitch, the final result is **Desso iDNA**.

Research was not only concentrated on the shape of the fibre, but also in exploring technologies that had never been used before in the development of artificial turf. These efforts have produced impressive results.





With **Desso iDNA**, we have once again succeeded in pushing the boundaries to create a new generation of artificial turf for football. Not only has Desso Sports Systems taken two important, but contrasting properties for fibres (resilience and durability), and united them in a single artificial turf surface. We have also achieved a pioneering breakthrough in an even more ambitious challenge - to create the first artificial turf fibres that are as water-absorbing as natural grass. With **Desso iDNA**, we have taken a first step to making artificial turf hydrophile (water-retaining).

New fibre, durable and flexible

Thanks to the new fibre shape, with a special core designed around a vaned structure, the fibre is both flexible and durable. This ensures that the playing characteristics are better retained over a longer period of time. The fibre also feels like natural grass.

Optimal football properties

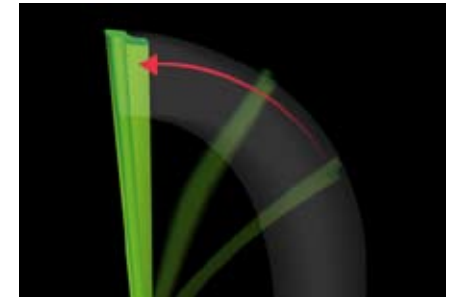
All of our research had an ultimate objective – the perfect football surface, where slides, quick passes, ball roll and ball bounce feel natural, even after years of intensive use.

Players will be able to go to the max on **Desso iDNA**.

Water-absorbing capability

Desso is the first artificial turf manufacturer to succeed in taking the first step in the process of making artificial turf fibre water-absorbent, just like natural grass fibres.

The HydroTec development process takes Desso closer to fully unravelling the DNA characteristics of natural grass and reproducing it in artificial turf.





The new shape of fibre



The shape and structure of the fibre has a major impact on the ultimate playing characteristics and durability of an artificial field. Central to Desso's goal to develop the best artificial turf fibres has always been a monofilament fibre that does not split. Desso has always been a pioneer in this area.

Recent developments in artificial turf have focused strongly on the further development of the shape of the fibres.

Most of the fibre forms in the artificial turf industry are based on a strong, distinctive shape, usually with wings attached to a thick core - the so-called 'multi-shaped yarns'.

Their advantage is that they have good resilience during the early part of their life. However, when played on intensively, the fibre begins to split and ultimately felts. This has a negative effect on the durability and uniformity of the playing characteristics over the entire pitch.

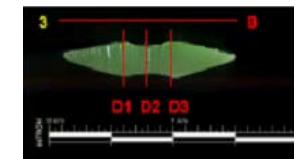
The so-called 'single-shaped yarns', with a single, solid shape, are durable, but lose their resilience over time. Until recently, it has proved very difficult to create a fibre that is both flexible and durable enough to retain both characteristics over the long term.



example of multi-shaped yarn



example of single-shaped yarn



Desso iDNA



Best of both, resilient *and* durable

In cooperation with a multi-disciplinary team of scientific experts, Desso tested all kinds of possible shapes. Such research gave us important insights into the influence that shape has on major characteristics, such as durability, flexibility and feel of the fibre.

Result: **Desso iDNA**, an artificial grass surface comprising a new generation of innovatively-shaped fibres with a special vaned structure that is composed of perfectly coordinated components. These fibres are resilient, soft to the touch and do not fibrillate.

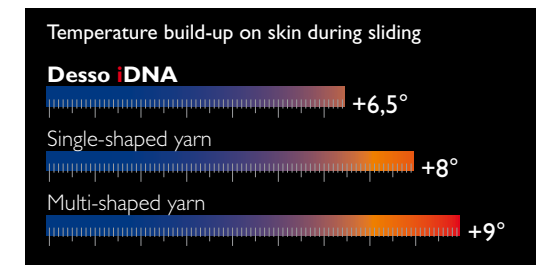
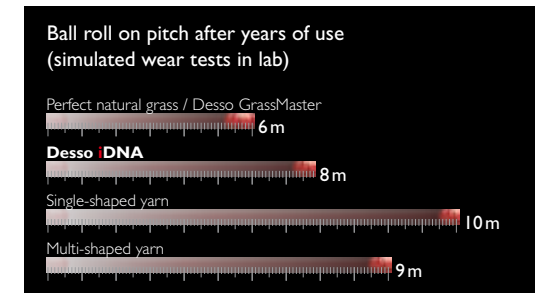
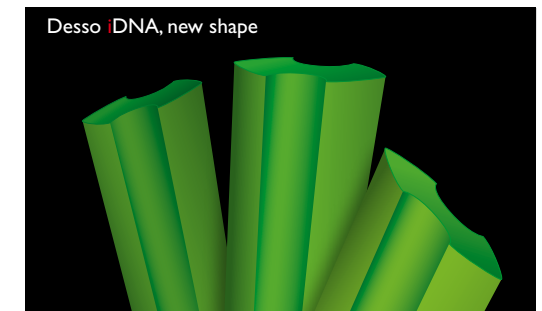
Desso iDNA - the 5 benefits of improved flexibility:

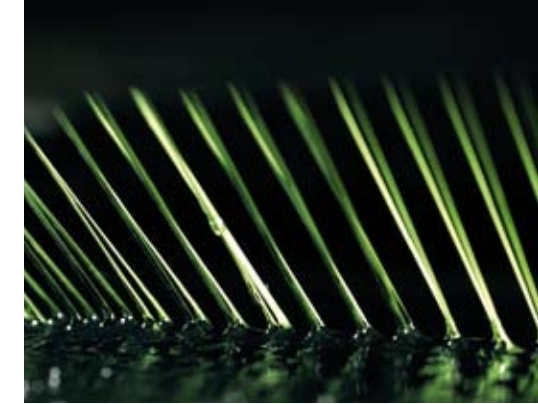
1. the playing characteristics are retained over the long term, so the pitch is consistent and players don't have to change their game
2. ball roll and ball bounce stay the same over the whole pitch, for every player, regardless of the position played
3. unlike natural grass pitches, the playing characteristics on the more intensively used central axis will stay the same as they are on the less-used parts of the pitch
4. excellent sliding characteristics
5. the pitch is forgiving for intensive action, with an improved turn and offset capability optimal shock absorption and energy return. Players can get their foot under the ball more easily

Looks natural, feels natural

Few sports are watched as often and as avidly as football. So, not only is it important for the pitch to be technically perfect to bring out the best of the players' skills, the visual appearance of the pitch surface is also crucial. In the development process, Desso increased investment in research of visual aspects. The resulting new DualTone colours give **Desso iDNA** a more natural result for fans and players alike.

For a footballer constantly in physical contact with the pitch, the touch of the playing surface is equally important. With **Desso iDNA**, the artificial grass fibres' unique composition will quickly make players notice how natural the pitch feels and it will be easy to forget that the pitch is not natural.





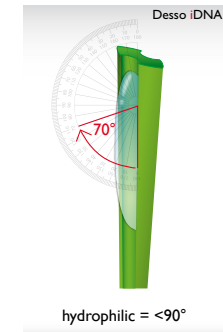
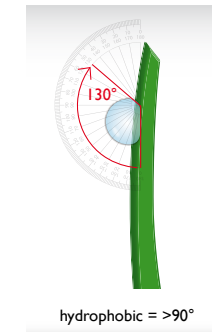
Our investment in the future



With the launch of **Desso iDNA**, Desso is introducing the very first artificial turf system that takes a step towards hydrophile (water-retaining) artificial grass. Hydrophilic fibres do not repel water, but, just like natural grass, they hold on to it, providing an extra protective layer on the surface of the fibres.

A first step towards HydroTec technology

Until now, no artificial turf maker has succeeded in imitating the hydrophile (water-retaining) characteristics of natural grass. Such characteristics enhance the playing pleasure on a natural surface. Ask any footballer what kind of field they prefer to play on and the answer will almost always be the same: a tight, green grass surface that is a bit damp. Sprinting, jumping, sliding, falling...everything is better on such a surface. With its HydroTec research project, Desso is focussed on the technological breakthrough that will make a 100 % true-to-nature playing experience possible on artificial turf.





From lab to football pitch

The drive to develop and produce the perfect artificial turf grass for sports has, since its founding in 1980, propelled Desso Sports Systems from one innovation to another. A strong focus on the players' interaction with the surface has led us to use increasingly specialist and advanced methods.

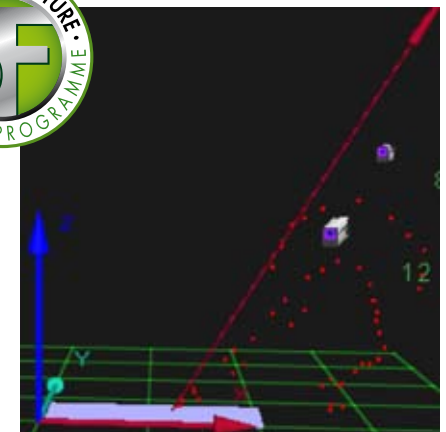
The company emphasised such aims in 2004 with the start of its own, far-reaching innovation programme with partners that include the University of Ghent. Through this programme, known as 3F – Fit For the Future – Desso has continued to invest heavily in the search for even better systems.

Fit For the Future

A research programme that calls itself Fit For the Future naturally keeps its sights firmly on the future. We regularly re-double our efforts with the setting of even more ambitious goals. The cooperation with the University of Ghent, for example, has recently been expanded with the addition of a 'real-life' testing centre. Here the playing characteristics of artificial turf on a real playing field can be screened scientifically. An extensive team of Desso's own specialists and university researchers from the faculties of sports sciences, medicine and bio-mechanics is regularly augmented with a selection of true stars: players and trainers.

...and also tested on the pitch

In the newly founded 3F Pitch Test Centre, an ingenious system has been installed to record, in great detail, the interaction between the player and the pitch. The centre has a number of mini-sports fields with different grass systems that have sensors incorporated to monitor the shock absorption and the loading. At the same time, high-speed cameras record every movement of the players. All of this data is collected and processed using scientific formulas specifically developed for this purpose. The findings are matched with the 'human' findings of the players and converted into a treasure trove of information that can be used to guide the development, testing and fine-tuning of potential new products.



3F Pitch Test Center at the University of Ghent



1980

Desso pioneers with development artificial grass



1985

Start in-house production of yarn



1986

First artificial grass pitch designed for football: curled fibrillating fibre



1990

First monofilament fibre: tape extruded High Performance Fibre



1993

Spin extrusion monofilament : Desso Crown fibre



1999

Desso SoccerGrass: first monofilament system for football with curled Desso Crown fibre



2001

Desso SoccerGrass TD: with first straight monofilament fibre Desso Crown



2006

- Development of scientific sliding testing method
- Desso Challenge Pro²: upgrade of successful, resilient fibre



2009

Desso D-Vision: new system with soft fibre and consistent playing characteristics



2010

- **Desso iDNA**
Your IDea, our DNA
- New innovations to come ...

Desso. The DNA of the athlete, for 30 years.

With Desso, you always get an artificial turf surface that is infused with our unique Desso DNA. Our pure passion for the game, built into our genes, has driven us for 30 years to stay ahead of the pack in pioneering artificial turf developments. Throughout this time, we have succeeded in building up a solid reputation as a stand-up partner who is not afraid to develop new ideas. We look back with pride on the many milestones and innovations that are behind us, but also look, with ambition and confidence, into the future. A future in which we wish you and your players unlimited sports enjoyment!

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