

products & more



SUSTAINABILITY PERSPECTIVE

Sales: The future is green

POLYTAN'S BRAND WORLD

Our global product labels

GREEN TECHNOLOGY

Neutral CO₂ balance easily understood



Content

POLYTAN – THE COMPANY

The company

- 4 All about Polytan
- 6 Polytan's brand world
- 8 Polytan – a global player

People & Polytan

- 10 The future is green
- 20 Emergency brake applied
- 22 Towards a climate-smart synthetic turf

Sustainability

- 14 Continuous improvement
- 16 The future of sports surfaces is renewable
- 18 The world's first 100 % CO₂ neutral football turf

References

- 21 For Tokyo. For the planet.
- 24 Socca World Cups
- 27 Big Stadium Hockey wins SAPCA award
- 30 Sport with a view in Naples & High-tech sport in Teramo
- 32 For all uses
- 35 Top-class high-speed synthetic surface for Doha

Latest from the sportgroup

- 26 The US Open will be played on sports flooring from the Sport Group in the future

Extras

- 28 Polytan SmarTracks
- 34 PolyPlay Arena mini pitches

SYNTHETIC TURF

36 Synthetic turf

- 37 Certified and preferred
- 38 Structure and technology
- 40 Elastic layers for synthetic turf
- 41 PolyBase GT
- 42 Infill compass
- 43 Turf fibres
- 44 Product overview

SYNTHETIC SURFACES

50 Synthetic surfaces

- 51 "IAAF" is now "World Athletics"
- 52 Structure and technology
- 54 Certified and award-winning
- 55 Show your colours!
- 56 Product overview

SERVICES

- 62 Properly maintaining synthetic turf
- 64 Our new service products
- 66 Service for synthetic surfaces
- 67 Accessories / Project support / Training

Ready for new challenges!

As Polytan, we have been a reliable partner for you for over 50 years. This is more important than ever, especially in difficult times. Just like everyone else, we at Polytan are impacted by the corona crisis. But we are still continuing to do what has made us stand out for more than half a century: We see the crisis as an opportunity.

Our installation teams are on the move. We have been talking to our customers for months and together we have made possible what is possible. We are not putting our heads in the sand, instead we are looking to the future.

We are continuing to develop new products, we are expanding our Green Technology sustainability programme and remain in constant contact with you, our customers.

And our „products & more“ magazine also takes this forward-looking view. It provides you with an overview of everything that makes Polytan what it is. We inform you about our product range, our service and our technologies. We show you what we mean by sustainability and what our strategy is for the future. We will give you with an insight into development and an outlook on the latest trends. And we remain very close to our athletes, who now have to take a one-year stopover on their way to Olympia.

„Future starts now“ was our motto at the big FSB trade fair last November. And this motto continues to apply now.

*We are making
the most of the crisis and
would like to take you
with us on our journey ahead!
Enjoy reading the magazine*



Mathias Schwägerl
Managing Director Polytan GmbH



All about Polytan

Everything from a single source: Polytan GmbH's global product brands are LigaTurf (football), Poligras (hockey) and Rekortan (running tracks). From research and development to recycling: With over 50 years of experience worldwide, we are the most reliable partner for anyone looking for high-quality sports surfaces and system solutions.

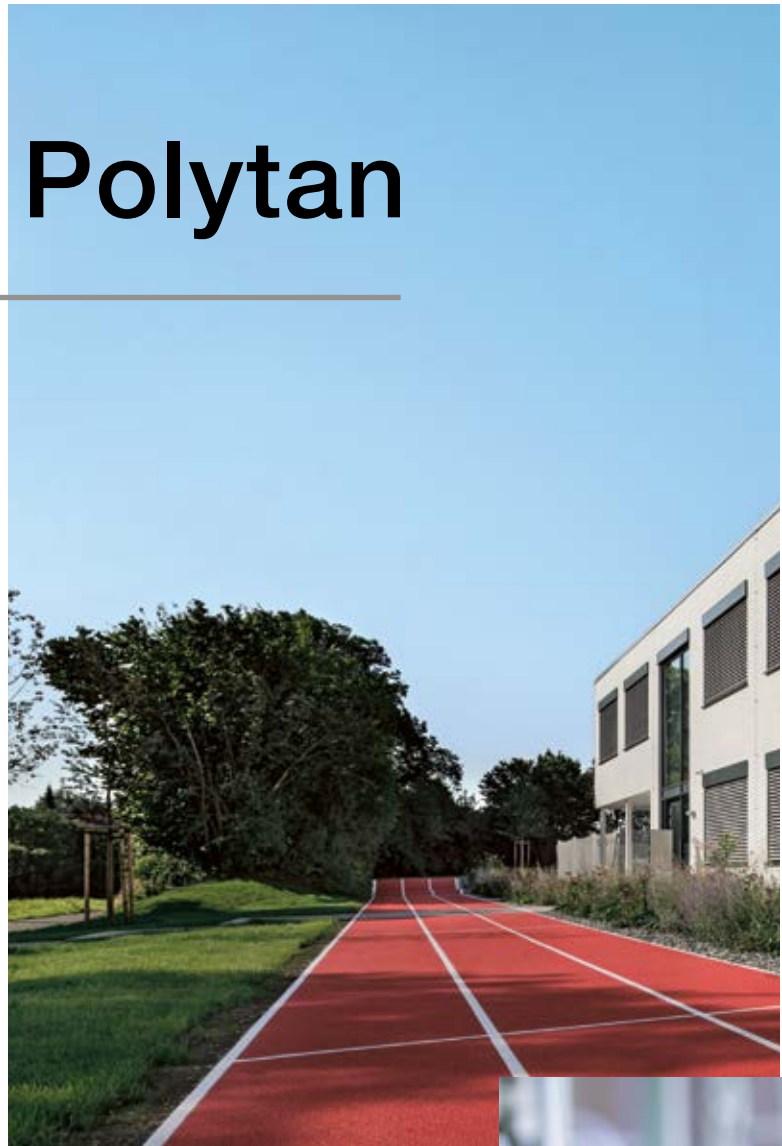
Thanks to the continuous development of our product range, Polytan is also one of the world market leaders in the field of sports flooring and ground coverings. Today, our specialities include, among other things, running tracks, all-weather fields, fall-protection systems and state-of-the-art synthetic turf systems. SmarTracks from Polytan additionally provides athletes with the possibility to digitally record their performances and optimise their training schedules.

For us, it was always important to not only sell a product but to also understand it.

Which is why research and development play an important role within the company. Because only those who understand their product can work sustainably and responsibly with it.

We see ourselves as a partner to sport and, at the same time, we always assume responsibility for the environment. On the one hand, this means providing athletes with optimal and functional sports conditions. On the other hand, the responsible usage of resources is also an important part of the company philosophy.

In recent years, Polytan has brought more and more products that mainly consist of renewable resources to market. This was only made possible through our intensive research and development work. The products of the Green Technology series represent the greatest achievements so far in this regard. Poligras Tokyo GT will be utilised at the Olympic Games in Japan, which have been postponed to 2021 as a result of the corona crisis. The 2021 Olympic Games are to be the first CO₂ neutral games in history. And the hockey turf from Polytan is part of this project.



Polytan is a system provider. The customer can, if they wish, place the entire lifecycle of the system including recycling into the hands of one provider. From installation to maintenance, dismantling and recycling: Sports facilities by Polytan are sustainable, high-quality products accompanied by us over the entire lifespan. This offer is just one part of our sustainability philosophy.

We use all our brands worldwide to ensure the consistently high quality of our products and systems. All components are manufactured in our own production facilities and installed by our teams around the world. No other manufacturer can provide the latter service. This is where the expertise acquired over half a century begins to pay dividends.





We are sports partners because we can see the social relevance of sports worldwide. The beneficiaries of our involvement are children as they discover the joy of movement, which sport provides, as well as top athletes who set records or participate in world championships on Polytan surfaces. Recreational sports in their present form would not be possible without Polytan.

CERTIFIED ACCORDING TO RAL AND ISO

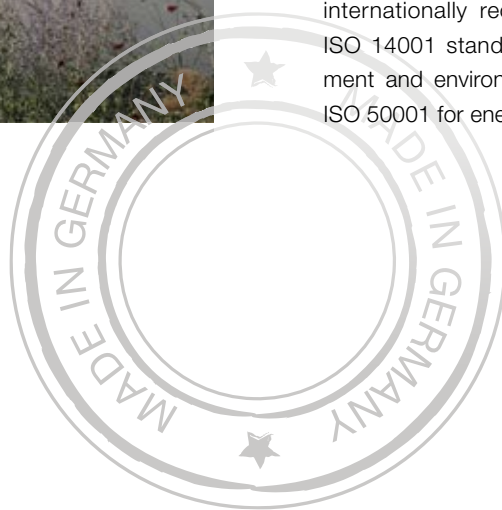
All our products are, of course, certified. They have all been issued with the RAL quality mark as an indication of the highest possible quality, from production up to installation. Polytan GmbH has also been awarded the internationally recognised ISO 9001 and ISO 14001 standards for quality management and environmental management and ISO 50001 for energy management.

Since 1969, we have been designing and producing sports flooring and writing a global success story from Upper Bavaria.

Since the founding of the company, the goal has always been to provide our customers with an optimal product. We are a worldwide innovation leader. Challenges of the future have long been a present concern for us. We are working passionately in all areas of our company in order to make our actions more sustainable as a whole and provide optimal conditions for our most important customers, the athletes.



Further information about Polytan is available at www.polytan.com



RAL quality mark 943,
synthetic surfaces



RAL quality mark 944,
synthetic turf systems

Polytan's brand world

Polytan has been one of the leading manufacturers of sports flooring for over 50 years. Our products enjoy an excellent reputation around the world. In recent years, our success and associated growth have resulted in the continual addition of new products, which have now established themselves as brands in various markets worldwide.

Brands such as Rekortan or Poligras now have a fixed place in the history of sports floors. A Rekortan running track was used at the Olympic Games in 1972 at the Olympic Stadium in Munich and in 1984 at the Los Angeles Memorial Coliseum.

Poligras hockey synthetic turf is regularly used as a playing field surface at the Olympic Games. More recent product brands such as LigaTurf are however now also known worldwide for synthetic turf systems in football or rugby.

*Our brands
at a glance*

polytan

THE BEST PERFORM ON POLYTAN

FOOTBALL
LigaTurf

TRACKS
Rekortan

HOCKEY
POLIGRAS

Regional product brands

Demand and requirements for sports flooring vary widely around the world. On the one hand, the preference for different types of sport plays a role here, and on the other hand, our sports floors must also fulfil different national standards. Furthermore, very specific use cases and areas of application must also be taken into account. All of these aspects have led to an enormous diversification of our product range in order to coordinate our products perfectly to the customer's application. For example, texturised synthetic turf is particularly popular in Germany, but also in other markets. We combine these

products under our **LigaGrass** product family. Fall protection surface coverings and synthetic surface coverings with smooth surfaces, which are often used in school yards on multifunctional playing fields, are marketed under the **PolyPlay** brand. **Tartan** is the synonym for running track surface coverings in Europe. In the Polytan brand world, this brand is therefore synonymous with special running track structures. In France, **Laykold** is an established brand for tennis floors. Outside of Germany, **GYM** is another regional product brand which stands for our indoor surfaces.

LigaTURF®

Polytan combines special products for professional football and rugby synthetic turf pitches under LigaTurf. With the introduction of sand and rubber-filled turf systems, LigaTurf started its success story more than 12 years ago and served as a playing field in top-division stadiums, as it still does today. A new milestone has been recently announced with the world's first CO₂ neutral synthetic turf, LigaTurf Cross GT^{zero}.



Rekortan®

Polytan's running tracks have always been good for records. The word record is also the origin for the name Rekortan. The „tan“ comes from the name „Tartan“ – also a Polytan brand. Tartan was first used at the 1968 Olympic Games in Mexico City. A Rekortan running track from Polytan is still laid in many Diamond League stadiums today.



POLIGRAS®

Hockey fields have a long tradition at Polytan. Apart from one exception, all Olympic hockey tournaments have been held on Polytan synthetic turf this millennium. Poligras Tokyo GT will also be used in Tokyo. In addition to its excellent playing properties, it is also characterised by its good CO₂ balance thanks to the use of renewable raw materials. The international hockey elite has already gained experience on the turf, for example during FIH Pro League matches. The Poligras brand has existed for several decades and also has its origins in Germany.



Polytan – a global player

Polytan has continued to expand during its 50-year history. In addition to its headquarters in Bavaria, new locations have been opened in Germany, and many more have been established abroad in Europe for many years, as well as in Australia, New Zealand and Hong Kong. Find all locations here at a glance.

5 | POLYTAN FRANCE

We moved into the new premises at the end of 2019 after the old company head office became too small. Polytan France's 33 members of staff are now based in Glisy, 5 km from Amiens.

6 | POLYTAN SPORTS SURFACES UK

Leicestershire is home to Polytan's sales subsidiary for the British market.

Most of our locations are in Europe

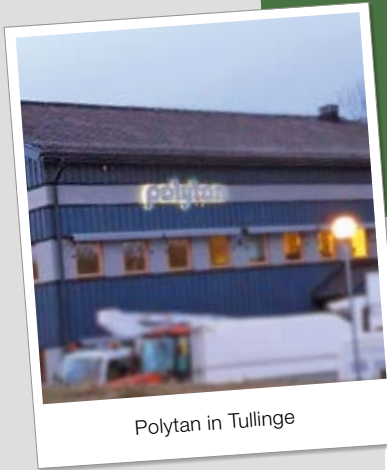


Polytan in Glisy

8, 9, 10 | POLYTAN ASIA PACIFIC

Polytan has subsidiaries outside of Europe at its disposal in Melbourne (Australia), Hong Kong and Wellington (New Zealand).

You can find contact details for the individual locations at: <https://www.polytan.com/locations>



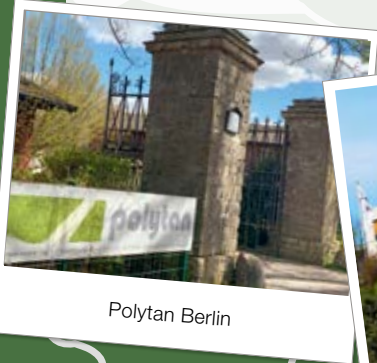
Polytan in Tullinge

7 | POLYTAN SCANDINAVIA AB

Polytan Scandinavia AB's new head office has been located in Tullinge near Stockholm since the end of 2019. Sales activities and installation for the Nordic market are managed from here.

2, 3 | NORD BRANCH & POLYTAN BERLIN

In Halle in Westphalia, a total of around 35 members of staff are employed – including the sales team, construction management and dedicated installation teams. The East is managed by colleagues at the Ahrensfelde site near Berlin.



Polytan Berlin



Nord branch



4 | POLYTEX – SYNTHETIC SURFACES

Synthetic turf has been produced here since the 1990s and it is where our sports flooring products continue to be developed.



Polytan in Burgheim

1 | POLYTAN REGISTERED OFFICE

Polytan GmbH and Sport Group Holding GmbH have had their head office in Burgheim, Upper Bavaria, since the 1970s.



Production in Grefrath

Here we use green electricity

The future is green

Interview with Fred van Wijk and Peter Herbig

Times are changing, and the same is true for the sports flooring industry. This also creates new challenges for Sales. Reason enough for us to have a conversation with Polytan's Heads of Sales, Fred van Wijk (EMEA) and Peter Herbig (DACH).

Gentlemen, a general question to start: What is the future of synthetic sports floors?

Peter Herbig: The future is green. Sustainability will also play an increasingly important role in our industry. We always need to take that into account. But we are pioneers in our industry and can provide the right answers.

Fred van Wijk: Environmental protection is a major subject, but we must not forget the athlete when developing our products.

Sustainability and the best-possible conditions for sport: That is the challenge which we have to face



How do you want to achieve this?

Peter Herbig: We are on the right path. Our LigaTurf GT^{zero} is the first CO₂ neutral synthetic turf. Our Green Technology campaign is a clear indication that we are tackling the issue in a holistic manner.

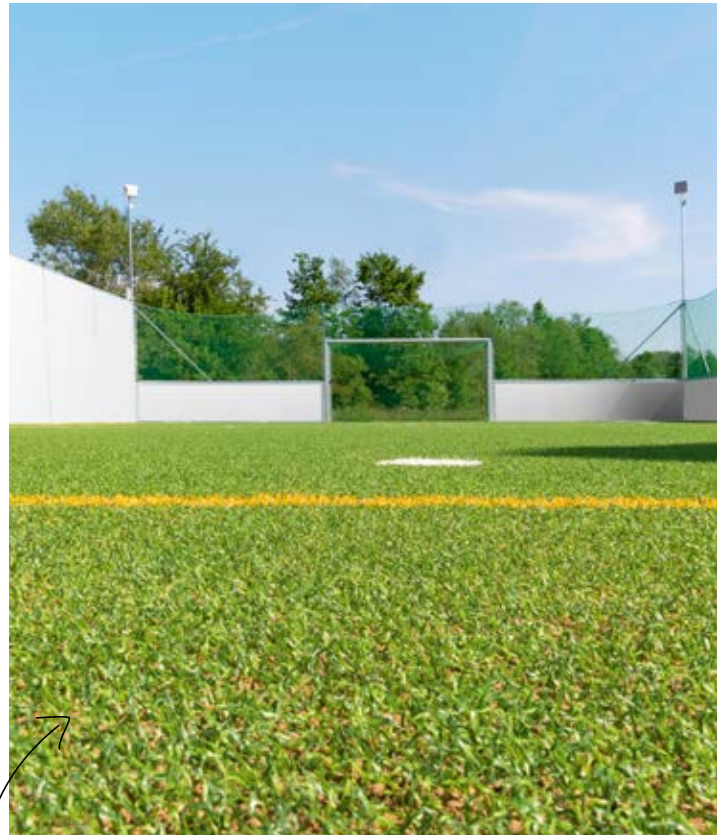
Fred van Wijk: We master the entire value chain. We research and develop our products ourselves, we produce them and we install them. We can take care of the system and recycle it on request. We are ahead of the competition in this respect. Even the laboratories which test and certify our products do not know their composition. When I joined Polytan eight years ago, I often wondered why the products were so durable and high-quality. Now I know why. We know the products better than anyone else.

Peter Herbig: That is true. We possess the expertise, the drive and a unique value chain. That makes us strong and is why we have a lead on the issues ahead. Our new products are the best proof of this. Polytan products are often copied but never equalled.

Fred van Wijk: Our qualitative standards are extremely high, as are the demands we place on ourselves.

The granulate, which is used as a component in synthetic turf systems, is under discussion. The European Chemicals Agency is currently investigating whether artificially introduced microplastics should be banned. This also includes the rubber granules on synthetic turf pitches. What is your opinion?

Fred van Wijk: The discussion is only happening with this level of intensity in Germany. Germany is at the forefront of sustainability with its construction methods. Low turf height so that significantly fewer infill granules are required: This could be a role model for other countries.



Fusion GT infill comprises renewable raw materials

Peter Herbig: In Germany, the discussion, which was mainly fueled by an incomprehensible study by the Fraunhofer Institute (note from the editorial office: the Fraunhofer Institute has now admitted that the figures in the study are not sustainable for Germany), has meant that surfaces with rubber granules as infill are no longer being funded. We can, however, offer alternatives such as sand and cork. Customers accept that.

Fred van Wijk: 95 percent of customers are municipalities and cities. They finance the systems. Politicians ultimately decide on the construction of a synthetic turf pitch in such cases. Environmental responsibility plays an important role for them. More and more demands are being placed on environmental aspects in tenders. Polytan is a German company with a great reputation throughout Europe. With our expertise in advising our customers, we offer real added value. —>

In Germany in particular, there have been an increasing number of voices in recent months that have spoken out against synthetic turf in favour of natural turf. Your opinion?

Peter Herbig: Quite simply: Particularly in metropolitan areas, synthetic turf is the only way to maintain playing surfaces. Synthetic turf can be played on all year round, even in winter or when there is a drought in summer. It is clear to everyone involved that the required hours of play, especially in metropolitan areas, can only be achieved with synthetic turf pitches.

Fred van Wijk: In addition, playing hours on synthetic turf pitches are cheaper than on natural grass.



FRED VAN WIJK,
HEAD OF EMEA SALES

I have been working for Polytan as Head of EMEA Sales for eight years. They have been very instructive years for me. Because today I have a better idea of what determines success and what matters in the sports flooring business. I am excited to be able to further develop products, open up new markets and continuously expand as part of the team. I am still an enthusiastic tennis player in my spare time. I owe this passion to my parents, who brought me from football to tennis as a child. After my military service, I was even a tennis professional and organiser of tennis events. Today, together with my team, I am a Belgian champion in the 55 years and older class. I have been working on the subject of sustainability in the sports flooring industry for a very long time. In my opinion, sustainability is one of the great social challenges and I am pleased that Polytan sees itself as a global leader in this area in our industry.



PETER HERBIG,
HEAD OF DACH SALES

At the beginning of 2020, I took on sales responsibility for Germany, Austria and Switzerland. I am a passionate sales person. I don't just sell from my desk, I also like to be outside with the customers. Intensive exchange within the team and with my sales colleagues is particularly important to me. We live in a very difficult time with great challenges. However I see Polytan as well prepared on the big issues of sustainability and innovation – which, incidentally, was one reason why I chose this company as my new employer. Climate change and sustainability will also remain key issues in our industry. We have strong messages, innovative products and solutions and can provide our customers with planning certainty. In my spare time, I am a real family man and, of course, also a football fan. My heart beats “royal blue” and, from time to time, you can find me in the stadium at Schalke, which unfortunately will not be possible in the foreseeable future.



Sustainability is a major trend in sports flooring. Are there any others?

Fred van Wijk: Yes, sport is moving to cities. Space is scarce, which is why you need robust floors that can be used for sports. Teams are getting smaller, sport is becoming more spontaneous. Five-a-side football, hockey5s, which has now even made it to the Tokyo Olympics as a demonstration competition, and other multifunctional facilities: For me, these are clear trend-setters.

Peter Herbig: The big trend in Germany is sustainability. This affects all sports, and therefore all products which we can provide. In terms of products, I see great potential in mini-pitches. Covered, small fields open to the side such as the Mac arenas we are building with a partner are also trending.

Fred van Wijk:

One of Polytan's strengths is the early recognition of trends. We understand what the market wants and can react quickly

Peter Herbig: Fred, I agree 100 % with you. We have the expertise from A to Z in all of our products and services, enabling us to respond optimally to the wishes of our customers.

Continuous improvement

What is sustainability? Sustainability has been a part of the company philosophy of Polytan GmbH for many years. As an enterprise in the synthetic materials-processing industry, we are especially critical and question our conduct in this regard.

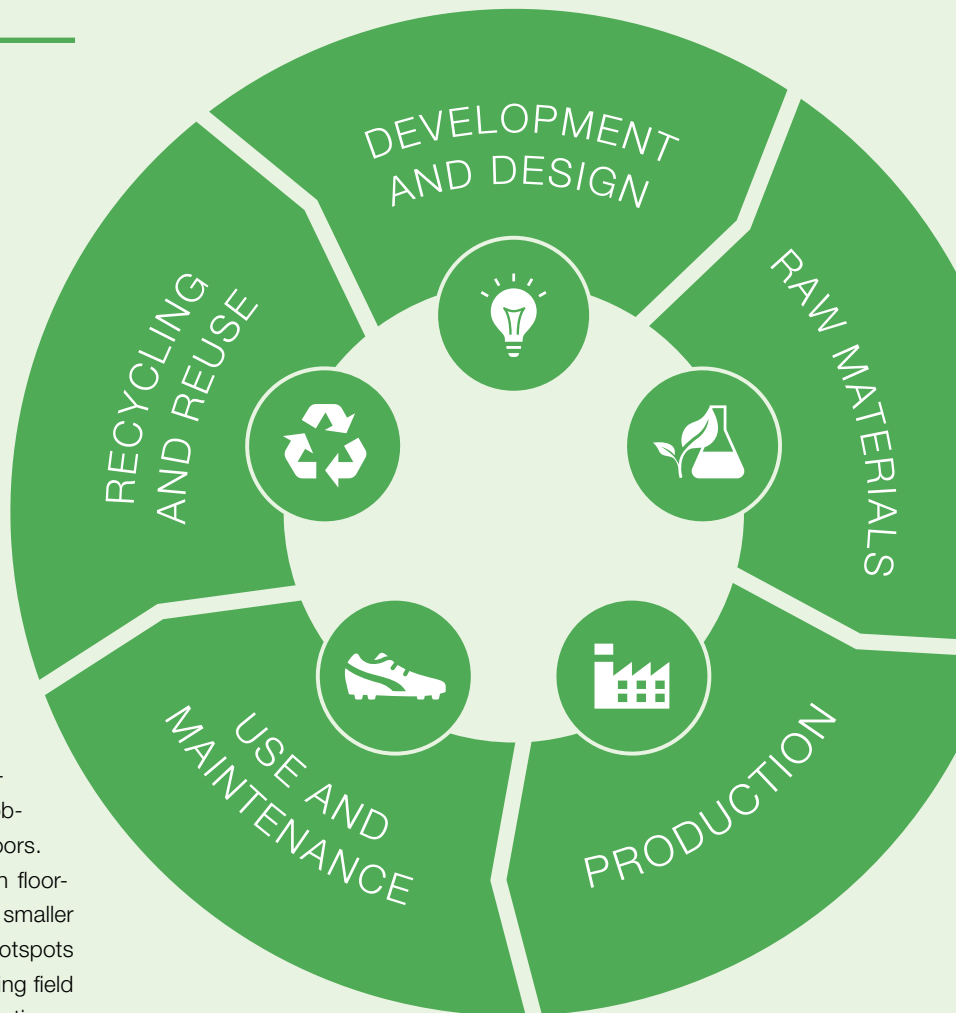
USAGE

We do not merely reduce the concept of sustainability to environmentally friendly products. For us, sustainability means much more – including social responsibility. Our products allow athletes all over the world to pursue their hobby or profession year-round – indoors or outdoors. We make playgrounds safer with fall-protection flooring. On account of our synthetic turf products, smaller clubs in densely populated areas and social hotspots that often only have enough space for one playing field can offer significantly more playing and training times. Getting the kids off the streets and onto the pitch, this as well is sustainable and social conduct. We want to offer athletes the best-possible conditions, also in regard to sports functionality. A modern synthetic turf and a high-quality running track protect joints and thereby the health of athletes.

The ecological aspect is just as important as the social aspect.

A synthetic turf field or a running track by Polytan requires little or no water at all. Our fields do not have to be fertilised, and therefore chemicals do not pollute the soil. Modern drainage systems allow rainwater to reach the soil while preventing harmful substances such as nitrates from entering the groundwater. The surface is not sealed off.

A synthetic turf field or a running track by Polytan requires little or no water at all. Our



Depending on utilisation, a synthetic turf field can provide the same usage capacity as up to three and a half natural grass fields and lasts up to 15 years before merely the top turf carpet layer and the infill must be replaced. Valuable and scarce natural surfaces can be preserved.

DEVELOPMENT AND RAW MATERIALS

For years, Polytan has worked on minimising the share of synthetic materials in its products. Modern granulate that is used as infill on synthetic turf pitches already now has a share of up to 70 percent of natural substances. This development is the result of many years of internal research and development. And Polytan is also pursuing

new paths with respect to turf: Together with the Brazilian company Braskem, we have developed the new product Poligras Tokyo GT, which mainly consists of sugar cane residues which are no longer suitable for foodstuff production. This new turf will also be used in the hockey pitches for the Olympics in Tokyo, which has been postponed to 2021. The new turf material is also available for football pitches – e.g. as LigaTurf Cross GT^{zero}. As the first football turf worldwide, this wholly new design provides a positive CO₂ balance. These are only two examples from Polytan's Green Technology product portfolio.

We are continuously reducing the usage of non-renewable resources through new and innovative products

For Polytan, environmental protection does not merely apply to the product, but rather encompasses the entire company including production and services. Sustainable economic activity is a commitment that we consistently fulfil, which also includes avoiding harmful emissions and the intrusion of pollutants into the environment. For some years, Polytan has provided retaining systems for granulate discharge from sports fields. Discharged rubber granulate or other infill mainly remains in the field area and can be swept up and reused, as special gutter systems additionally capture the material.

PRODUCTION

One of our major goals is to only use renewable energies for the entire production process. Despite numerous dependencies on external factors, significant progress has already been made: Thus, production sites for synthetic turf in the Rhenish town of Greifrath were completely converted to green electricity this year.

RECYCLING

The further development of the recycling economy is also on the agenda. Polytan is pursuing new paths in this area, e.g. with respect to recycling. Thus, the company will prospectively offer to remove and reuse materials from synthetic turf pitches. Accrued materials are separated directly on-site. Sand and possibly also granulate no longer have to be transported but can be reinstalled with the new turf, which saves CO₂ emissions. Materials that cannot be directly reused on-site are returned to the reusable material cycle. The premium synthetic material of the turf carpet can also be reused for new products.



For Polytan, sustainability is a wide field. Merely focussing on the environmental compatibility of products is not sufficient. Sustainability is a task that concerns all areas of the company. We are on a good path, but have certainly not achieved all our goals just yet. Responsibility for humans and the environment has shaped our behaviour over the first 50 years and will continue to do so over the next 50 years as well.

The future of sports surfaces is renewable

Polytan's Green Technology (GT) line is the result of many years of research and development with the goal of protecting resources and the climate. A new generation of highly developed products and procedures that combine state-of-the-art expertise from the synthetic materials industry with the functional and ecological advantages of renewable raw materials and new resource-conserving technologies. Our services are also an integral part of this innovation programme, which is to ensure the sustainable usage of synthetic turf over the entire usage duration. This encompasses a holistic recycling programme at the end of use, which includes reusing individual components and practical recycling solutions for the complete synthetic turf system.



OUR GREEN TECHNOLOGY PRODUCTS

The hockey turf Poligras Tokyo GT, the football turf LigaTurf Cross GT^{zero}, the elastic layer PolyBase GT, the infill granulate Fusion Infill GT and the soft-impact surface PolyPlay FS GT are five products from our Green Technology line.

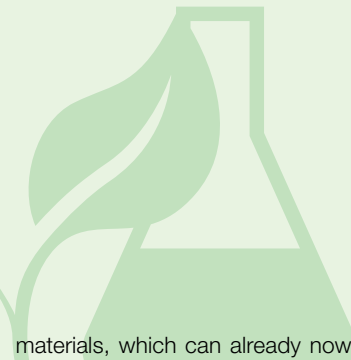
We are working feverishly to further expand our Green Technology product portfolio – with the requirement that the products tick all the boxes, not just in terms of sustainability, but also in the areas of player health and safety and performance



SUSTAINABLE RAW MATERIALS

Our current products include considerable shares of natural substances. The goal is to additionally increase this share in new products. One example is the Poligras Tokyo GT turf, which will also be used at the Olympic Games in Tokyo (recently postponed to 2021), consists of up to 60 percent of the renewable raw material sugar cane. For Polytan, it was important that no foodstuffs are used for production. This is why only the third pressing of the sugar cane, which is no longer useful for foodstuff production, is used for the production of I'm green™ polyethylene. By providing this turf, Polytan is contributing to the CO₂ neutral Olympic Games in Tokyo. Meanwhile the surface has also proven itself in numerous other sports venues.

However, Green Technology at Polytan goes well beyond just the product. In line with the objectives of the EU Commission's Plastics and Bioeconomy Strategy, we are also intensely researching the utilisation of bio and CO₂ based synthetic



materials, which can already now meaningfully supplement our petroleum-based product portfolio and, in the long term, even gradually replace it. We are working on this initiative together with leading companies from around the world such as Braskem, Covestro and the infill specialist Melos who, just like Polytan, is part of the Sports Group. Moreover, we have introduced an energy management system in accordance with ISO 50001 into our production process, as well as an environmental management system in accordance with ISO 14001, in line with our ongoing commitment to consistently reusing and recycling production waste. Moreover, our sports surfaces are extremely robust, durable and require little maintenance – while allowing intensive usage over many years.



Green Technology by Polytan provides more than just sustainable products.

Natural material hemp (top)
Natural material sugar cane (right)

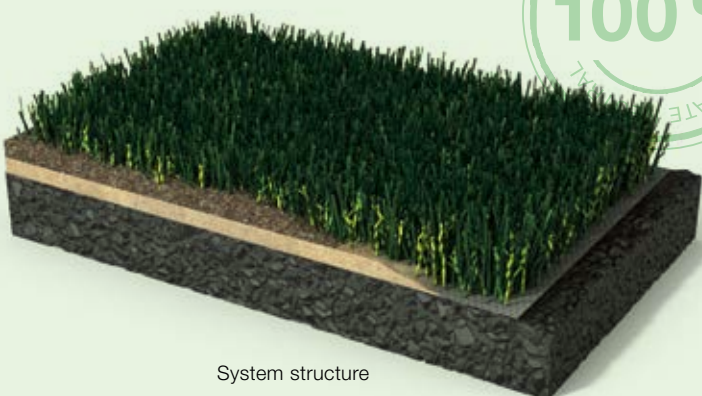


The world's first 100 % CO₂ neutral football turf

LigaTurf Cross GT^{zero} is Polytan's first CO₂ neutral football turf for professional and amateur sports. Without sacrificing durability and performance characteristics, Polytan has created a product which combines the challenges of environmental sustainability, climate compatibility and player demands.

The LigaTurf Cross GT^{zero} combines the needs of local or private investors and the requirements of players and users. The combination of crimped LigaGrass Pro filaments with Polytan PreciTex Technology and the smooth LigaTurf RS+ filament, which is considered the benchmark for football turf filaments, is a real bestseller in the Polytan portfolio. The reasons for the success of LigaTurf Cross GT^{zero} are, in addition to the natural grass-like appearance and the perfect playing characteristics, simplified maintenance, approx. 50 percent lower use of rubber granulate and improved retention of the infill granules in the turf system.

LigaTurf Cross GT^{zero}

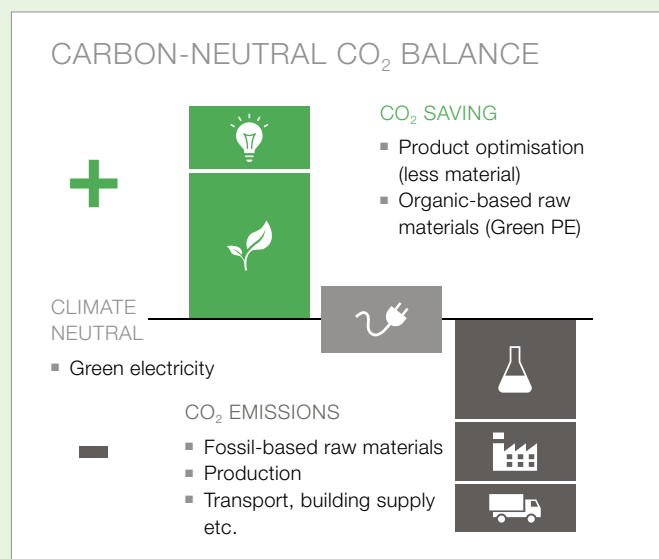


System structure



CLIMATE NEUTRAL FOR THE FUTURE

Polytan is now taking the next giant step with LigaTurf Cross GT^{zero}. The neutral CO₂ balance of LigaTurf Cross GT^{zero} 240 22/8 is achieved through the interaction of numerous measures.



RAW MATERIAL

For the LigaTurf Cross GT^{zero}, Polytan uses the sustainable and bio-based I'm green™ PE material from our partner Braskem. This raw material has been used in the Poligras Tokyo GT turf since 2018 and has become very popular, especially abroad. The LigaTurf Cross GT^{zero} consists of up to 70 percent bio-based I'm green™ polyethylene derived from sugar cane. This is certified by an independent laboratory for each turf system. This is the basis for its CO₂ neutrality.

What does CO₂ neutrality actually mean?

CO₂ neutrality is the balance between CO₂ emissions and CO₂ savings. This means that only as much CO₂ can be emitted as can be recovered and bound elsewhere. For our LigaTurf Cross GT^{zero} football turf, this means that CO₂ emissions are generated during production, through fossil fuels, transportation and building supply. However, these emissions are saved and offset by organic-based raw materials and through our product optimisation. This makes our LigaTurf Cross GT^{zero} 240 22/8 the world's first 100 % climate-neutral synthetic turf.

ENERGY MIX

Polytan's energy management is certified in accordance with DIN EN ISO 50001. Production was converted to green electricity in the summer of 2019. This is a measure that benefits all the products in our portfolio, including the LigaTurf Cross GT^{zero}. Of course, this positive climate contribution will also be certified and verified.

COATING

The new PolyCoat polyurethane wear coat with TuftGuard adds another element to the positive energy balance of the LigaTurf Cross GT^{zero}. With a lower wear coat weight, lower residual moisture and better heat absorption, the energy consumption in the coating system, the final step in the process to the finished football turf, also decreases.

But the LigaTurf Cross GT^{zero} offers even more benefits. The new LigaTurf Cross GT^{zero} system have a higher stitch density than their predecessors and offers even better coverage for protection against falls and tackles. Furthermore, the infill granules are better fixed in the turf, preventing the so-called splash effect. The benefit: less rubber granulate is needed and discharge is significantly reduced. Even for the natural infill granulates such as cork and sand, the additional number of fibres means better stabilisation of the materials.

Polytan already has the ability to control and optimise all of these processes, so there is no compromise when it comes to the performance characteristics of the turf. As a pioneer in the field of bio-based raw materials and as a competent, experienced producer in PU chemistry, we have the necessary expertise to master this challenging combination of functional requirements and sustainability in production and raw materials.

With the LigaTurf Cross GT^{zero}, we are taking a step into the climate-neutral future of the football turf



Fibre thickness: approx. 360 µm



Fibre thickness: approx. 250 µm

I'm green
Biobased
Verified by ASTM D6966

Emergency brake applied



There is no greater goal for any athlete than to compete at the Olympic Games. The same goes for Elisa Gräve, a national hockey player from Düsseldorf HC. Until mid-March, the budding psychologist oriented her life more than usual towards sports.

And then came the news that had long been feared: The IOC (International Olympic Committee) applied the emergency brake. Because of the coronavirus, the Games were postponed until next year. „First I asked myself, what am I going to do now?“, says the 23-year-old.

Her daily routine revolved around the games. Everything else took a back seat. Training camps, test matches, a free semester, no indoor season, but rather individual training: Life was completely focused on Tokyo. And suddenly it was everything back to zero. „It was the right decision to cancel the games in these circumstances.“

It was the right decision to cancel the games in these circumstances



Further information about our Polytan brand ambassadors at www.polytan.com

Reasonable preparation with hockey training was already out of the question. The restrictions were already too severe for this. The Polytan ambassador completed her sports work at home or put on her jogging shoes. „Fitness studios have provided us with bar bells and medicine balls so that we can continue to train.“ It was still strange not to be with the team on the pitch anymore. There are now shared workouts via video instead. Elisa Gräve can at least see her team members on the screen.

„The German Federal trainer called us all and asked us what we are currently doing. One cannot sustain such a peak performance for a whole year until the 2021 Games.“ He wanted to prevent the players from falling into a hole. Not the case for Elisa Gräve. After the cancellation, she called the University of Düsseldorf and received immediate support from there. The next day she already had a topic for her Master's dissertation, which the prospective psychologist would like to write by the end of the year. „I was very fortunate there,“ she says, thanking her university for its quick help.

And when the masters degree is completed, the plan will start again: Full speed ahead for the 2021 Olympic Games in Tokyo. The player from Düsseldorf now has a plan.



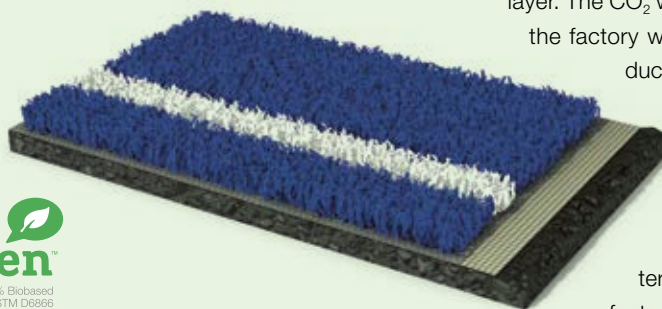
ホッケー

FOR TOKYO FOR THE PLANET



Tokyo 2020 set itself the goal of organising the first ever climate-neutral Olympic Games. This decision was a major challenge, including for the builders of the sports facilities. Polytan took up the challenge and is delivering the turf for the hockey competition, a domain of the company for many years.

The teams will compete on the first sustainable hockey turf in the Olympic Games. The turf is made up of 60 % leftover sugar cane which is no longer usable for the production of syrup. This will guarantee that no food is destroyed or repurposed. A revolutionary bioplastic is created from the natural material. Polytan is also following new paths when it comes to the elastic layer. The CO₂ which is generated during production at the factory will be captured and flows into the production of the plastic layer as a component of the binding agent.



I'm green
60 % Biobased
Verified by ASTM D6866

However, Poligras Tokyo GT would not be a real Polytan turf if it didn't also offer the highest requirements in terms of wear-and-tear and weather effects. Thanks to its special composition, the temperature on the field is reduced. Compared to older complexes, water consumption could also be significantly reduced.

The best hockey players in the world always expect the best playing field in the world. It was therefore very clear to Polytan from the beginning that we wanted to not only build the most ecological playing field, but also the one with the best playing conditions. In the development of Poligras Tokyo GT, Polytan also thought about the entire life cycle of the field and thereby created a recycling concept. Large portions of the field will serve as raw material for new products. The thermal utilisation of the turf is climate neutral, as no more CO₂ is generated than is linked to the growth of the plants.



Towards a climate-smart synthetic turf

Sport Group is working with an international team of experts in Germany, the United States and Australia to develop the latest generation of synthetic turf products. Stephan Sick, Director of Research and Development at the Sport Group, leads the team and is one of the driving forces behind new Polytan products. In addition to providing the best-possible conditions for athletes, he has also placed great emphasis on the subject of environmental protection. In recent years, the CO₂ balance of many Polytan products has improved significantly and now extends to the CO₂ neutral synthetic turf. At Polytan, we combine all of this under the term Green Technology (GT). But the journey is not over yet, as Stefan Sick confirms to us in an interview.

What is the vision behind the Sport Group's Green Technology project?

Our vision is to develop a completely green chain for sports flooring so that we will be able to produce climate-smart products for synthetic turf and running tracks. We have many years of experience in dealing with renewable resources for binding agents and are striving for even more environmentally friendly products and greener technology. In the area of synthetic turf, Poligras Tokyo GT hockey turf was the initial significant step in this transformation process. We then went one step further with LigaTurf Cross GT^{zero}. It is the world's first CO₂ neutral synthetic turf.

What will it take to implement this vision?

This transformation requires material science-oriented and procedural development across the entire value added chain of synthetic turf manufacturing. We can achieve unrivalled quality control by utilising the industry's unique and fully integrated global supply chain. We can rely fully on the value added chain in order to follow a holistic approach. This therefore takes all aspects of sustainability into account such as, for example, the play-related performance of the surface covering, the long-term value for the customer and the ecological footprint.

Of course, the new surfaces will also be certified according to the strictest guidelines. We are also looking for products in our natural raw materials which require fewer fertilisers, pesticides and water during production and growth. We invest in the supply chain in order to create added value for our customers and a sustainable future for sport.

How do you see the development of Tokyo GT and LigaTurf Cross GT^{zero}?

Pioneering products such as this synthetic turf require a variety of internal and external experts as well as strong, dedicated business partners. Internally, we have brought in our in-house expertise, consisting of research teams and members of staff from our global research and development network. Externally, we have created a network of competent partners consisting of external testing laboratories, universities, polymer scientists and material scientists.



We have many years of experience dealing with renewable resources for binding agents and are striving for even more environmentally friendly products and green technology

With Poligras Tokyo GT, you initially developed a hockey turf which was based on these benchmarks. Why hockey in this case?

There are basically three reasons for this. Firstly, hockey clubs possess many years of experience with synthetic turf. This is why the sector has focused on sustainability and durability for many years. The hockey community not only understands the challenges but also the benefits provided by synthetic turf and is constantly looking for even better products. Secondly, we decided on hockey turf because it is a complex structured product with perfectly matched performance requirements. For us, it was a sort of litmus test: If we can manage to produce a top-quality hockey turf using green technology, then we will also succeed in this for all other sports. We were convinced of this. We have gained experience with Tokyo GT, which was then incorporated into LigaTurf Cross GT^{zero}. Last but not least, we wanted to support Tokyo's ambitious goal of climate-neutral Olympic Games in the city. Unfortunately, the games had to be postponed because of the coronavirus, but the objective of the climate-neutral Olympics still remains.

Sugar cane is an important raw material for both synthetic turfs. How did you arrive at the sugar cane solution?

There are a number of alternatives to sugar cane such as, for example, starch or cellulose. We decided on sugar cane-based PE technology because it enabled us to achieve the highest share of renewable raw materials while simultaneously fulfilling all technical performance requirements. The PE we use comprises 85 percent residual sugar cane and only 15 percent common petrochemical components. Our partners have provided us with a product which we could additionally develop into a PE formulation of organic-based raw materials which fulfil our requirements for a high-performance synthetic turf yarn.



What else is Green Technology all about?

It is not only about the raw material, but also about which energy sources are utilised to produce it. For example, has the electricity for the production of polymers and yarns, and therefore ultimately the turf, been generated with wind power, solar energy or hydropower? Our production location in Greifrath, for example, only uses green electricity with a high proportion of wind power and hydropower, as well as energy from non-fossil fuels. This is very important for the calculation of the CO₂ balance.

Who worked on the development of the two synthetic turfs?

Over a period of three years, many heads of the Sport Group from Europe, the United States and Australia were involved in the development of technology and products. This included chemical engineers, material testing engineers, extrusion engineering experts, chemists and process engineers. In order to ensure that the turf is always well laid and playable at the end, we have also jointly worked with our civil engineers, sports mechanics experts and hockey, football and rugby players.



How did it feel when you realised that it functions?

It is very satisfying to be able to manufacture products which make a positive contribution to the community. And, of course, we were delighted with the positive feedback from the players, trainers and clubs. It is also professionally satisfying to apply theoretical knowledge and to establish that it works in practice.

What is the future of Green Technology?

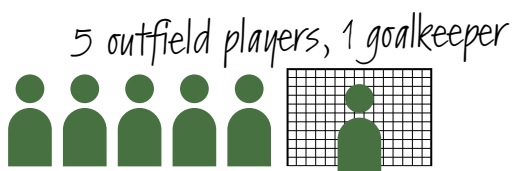
In order to be able to achieve a "fully-green supply chain", we need to additionally refine the green technologies and apply them to all other components in addition to yarn. Green Technology is a holistic approach which can be found in different forms in all product families. But it's not just about products, it's also about production, for example.

Green Technology starts in the laboratory and ends with recycling!



Socca World Cups

**Real sport spectacles in
temporary stadiums**



Five outfield players, a goalkeeper, a temporary football stadium on the beach and a Polytan synthetic turf without infill: This has been the recipe for success of the Socca World Cup events which have been organised by the International Socca Federation (ISF) for two years. The participants are amateur footballers and they come from all over the world. In October 2019, a total of 40 teams played for the coveted world championship title on the beach of Rethymno on Crete. In eight groups, five teams competed against each other in the „Everyone vs. Everyone“ mode. The first two teams in each group then moved on to the knock-out stage and the current, small-pitch world football champion Russia was ultimately the winner. Polytan synthetic turf was played on in the final – and in all other matches – on a LigaTurf Socca RS, which was specially developed for the World Cup of the Socca Federation (ISF).



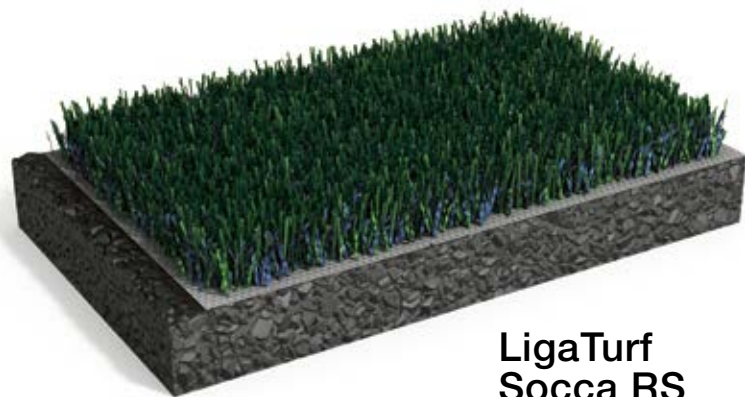
PROFESSIONAL FOOTBALL TURF WITHOUT INFILL, TEMPORARILY INSTALLED

Major sporting events are no longer just taking place in large football and athletics stadiums, which are often located outside the metropolitan areas. They are now also being relocated to public spaces in city centres, where the action creates excitement for the locals. A prerequisite for such tournaments is temporary sports flooring systems, such as those which Polytan provides with both synthetic turf and Tartan flooring. The decisive factor is that the temporary sports facilities offer similarly good playing properties and player protection as fixed surface coverings. Polytan has succeeded in doing this with the LigaTurf Socca RS synthetic turf. A robust, low-maintenance sports floor covering which enables rapid dribbling, exciting tackling and exact passing in confined spaces, also providing a high level of protection against injuries due to its physical properties.



A DISTINCTIVE APPEARANCE

LigaTurf Socca RS synthetic turf combines smooth and textured filaments – the best of both worlds for us. The unique colour scheme provides the synthetic turf with its extraordinary appearance: All smooth fibres are green, all textured blue. As a result, the playing surface has already become the distinctive brand of the Socca World Cup. Due to the particularly dense turf surface, the synthetic turf can be used without infill. Thanks to the patented CoolPlus function, the playing field heats up less on hot days.



**LigaTurf
Socca RS**

The special design was used for the first time in the Portuguese capital of Lisbon in 2018. The 47 x 28 m small pitch was set up on Praça do Comércio and was the venue for the Socca World Cup in 2018. At that time, 32 teams were already competing for the most important title in small-pitch football. In an exciting final, the German national team achieved a 1:0 win over Poland to lift the renowned World Cup trophy.

This year, the Socca World Cup in Cozumel, Mexico is planned for November 2020. It will then be time for another dynamic and exciting small-pitch football tournament on Polytan synthetic turf.

*We are excited to
see who will succeed Germany
and Russia*

The US Open will be played on sports flooring from the Sport Group in the future

Polytan GmbH is part of the Sport Group corporate group, which is one of the world's leading providers of sports flooring. Our colleagues in the USA have now been able to celebrate a great success. After 42 years, the prestigious US Open Tennis tournament will switch its playing surfaces. In future, the Grand Slam tournament will be played on Laykold acrylic synthetic surfaces.

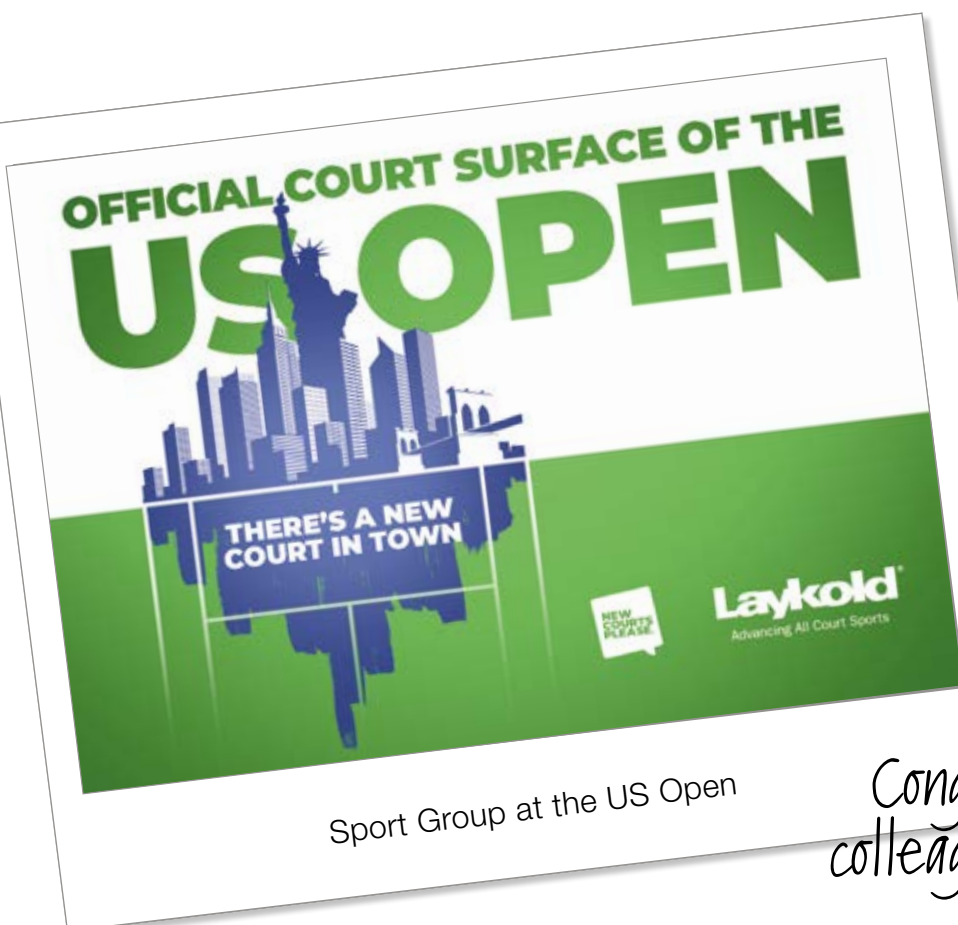
sportgroup
THE SURFACE SPECIALISTS

A TRUST-BASED SUCCESS STORY

The reasons why Laykold was selected as the new sports surface by the US Tennis Federation (USTA) for the tournament in the New York district of Queens are varied. Trust, however, plays the greatest role. With Laykold, USTA has found a partner which also relies on high standards and strict quality control, as well as fulfilling the high demands of top sports. Last but not least, this once again confirms a long history of success from Laykold, which ranges from the Miami Open through to Fed Cups and up to, and including, the Olympic Games.

LAYKOLD AND THE US OPEN: WHAT IS THE DEAL?

Laykold is now the official playing surface of the US Open. A five-year partnership has been signed for this purpose. Laykold sports surfaces will be utilised for the first time at the US Open 2020 (24 August to 13 September) at the USTA Billie Jean King National Tennis Center in New York and will accompany us through to the tournament in 2025. As part of the partnership, Laykold Advantage will be installed as a surface in Flushing Meadows in a total of 46 playing areas.



Sport Group at the US Open

Congratulations to our colleagues in the Sport Group on this success!

Big Stadium Hockey wins SAPCA award and is on the shortlist for the sports industry's "Cutting Edge Award"



Big Stadium Hockey has set itself the goal of revolutionising sports events and surface area utilisation – so that hockey can be played anywhere in large stadiums, in new places and in a sustainable way. Big Stadium Hockey was shortlisted for the coveted „Cutting Edge Award“ from the sports industry and won the award for the most innovative project from the Sports and Play Construction Association (SAPCA) on 24 February.

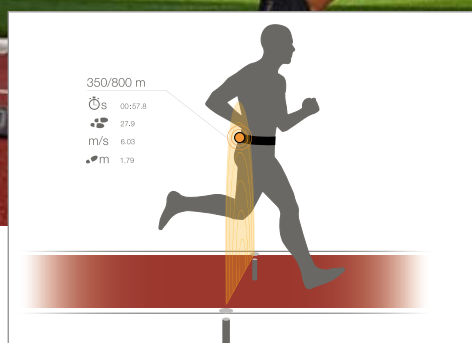
as to how field hockey performance requirements without compromising on the quality of playing fields and matches. A major challenge which Polytan – which is part of the Sport Group – was all too willing to help resolve. The answer to the question was forward-looking.

This collaboration resulted in the breakthrough technology which has transformed The Stoop, a London rugby stadium where the Harlequins play their home games, into a world-class hockey arena. There have been as many spectators present at two international games as there have been since the 2012 Olympic Games. The playing field was perfect, even though it had been used as a rugby pitch just a few days earlier. Field hockey can now be played anywhere, which will additionally increase the popularity of this sport.

Field hockey can now be played anywhere, which will additionally increase the popularity of this sport.

Polytan SmarTracks

Whether it's the classic running disciplines of athletics or team sports like football and rugby, increasing numbers of athletes are relying on the possibilities afforded by digital performance diagnostics to optimise their performance.



SMARTRACKS BY POLYTAN – THE INNOVATIVE IN-GROUND SYSTEM FOR PROFESSIONAL PERFORMANCE DIAGNOSTICS

With SmarTracks, Polytan offers an innovative, highly precise and easy to use system that is installed directly into the sports surface. In combination with the latest sensor technology, training activities in a variety of disciplines can be individually documented and analysed down to the millisecond.



SMARTRACKS SYSTEM COMPONENTS

The Polytan SmarTracks system consists of SmarTracks timing gates that are invisibly integrated into the track or the field, a wearable sensor weighing just 12 g and the tried and tested SmarTracks diagnostics software produced by our partner Humotion. Alternatively, the system can also be used directly on a smartphone and the SmarTracks Athlete app. The number of users of each system is unlimited.

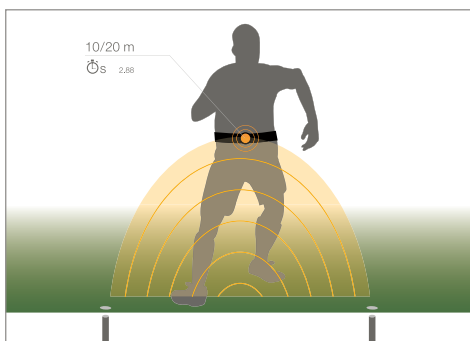


Scan QR code
and learn more



One system – endless possibilities

In addition to practising linear runs, so called change-of-direction tests can also measure the nimbleness of athletes. These tests are mainly important in sports such as football, hockey and rugby. Although athletes in these sports must be able to run fast in a straight line, it is essential that they also have the ability to quickly change direction, stop and accelerate at maximum speed with various manoeuvres. SmarTracks offers 5 different options to test this ability so that multiple tests are available for each of these sports.



VARIOUS APPLICATIONS FOR ATHLETICS AND TEAM SPORTS

SmarTracks provides fully automated performance tests for team sports such as football, rugby or hockey. Sprinting, jumping and agility tests can thereby be performed in a more efficient and targeted manner. We would be happy to advise you in person so that you can select a setup that suits your requirements.



THE FOLLOWING TESTS HAVE BEEN IMPLEMENTED

- Three cone drill
- Arrowhead agility test
- Illinois agility Test
- 5-10-5 shuttle
- Custom agility test
- Counter-movement jump
- Drop jump
- Squat jump
- Tapping
- Linear sprints

Sport with a view in Naples

The circular running track in the „Parco Virgiliano“ is certainly one of the most beautiful sports facilities in Europe: a terraced, ancient park located in the hills of the Italian port city of Naples. The athletes are provided with a breathtaking view over the Gulf of Naples, the Amalfi Coast, Vesuvius and the city of Naples. Polytan built this running track on historic ground.

It was named in honour of the Roman poet Virgil, who was born in 70 B.C. and whose tomb is located in the park.

The athletics complex with its natural grass playing field has been used as a training facility by „Virgilian Athletics“ for 40 years or so. In June 2019, the six-lane circular running track was re-surfaced with the high-tech Rekortan M plastic covering from Polytan. A classic brick red was chosen as the colour, which contrasts perfectly with the intense green shades of the surrounding hills and the blue of the Mediterranean. The challenges that the Polytan team faced with recoating the tartan track were, on one hand, the short installation time of just 21 days and, on the other hand, the fact that the historical and archaeological environment called for sensitive working methods and logistics. This is where Polytan's experience paid off.



*We had two premieres
for Italy at the construction
site in Teramo*

SMARTRACKS IN THE BONOLIS STADIUM IN TERAMO

In the summer of 2019, the Stadio Gaetano Bonolis in Piano d'Accio was extensively renovated and maintenance was carried out. New seats and a synthetic turf playing surface were the biggest innovations. The synthetic surface, LigaTurf RS Pro II, is however different from other kinds of football turf. For the first time in Italy, Polytan's SmarTracks performance diagnostic system was installed under the synthetic turf. This enables the players from the Teramo Calcio football club to digitally record, analyse and document their training performance.

As in the other Lega Pro stadiums with Polytan synthetic turf (Entella in Chiavari and Viviani in Potenza), an elastic layer was installed under the LigaTurf RS Pro II, which plays an important role in the sports performance-related properties such as shock absorption. In Teramo, Fusion GT Infill was used for the first time in Italy as infill granulate; it consists of around 70 percent natural materials. Just like the natural turf substrate, the new Fusion GT infill is able to store moisture and release it again evenly. This results in natural evaporation that keeps the synthetic turf nice and cool, even in high temperatures.

High-tech sport in Teramo



The largest indoor PolyPlay Arena Pro football pitch ever created by Polytan is now located in Altdorf (Germany).



For all uses

When a small town with fewer than 2,000 inhabitants decides to build a multi-purpose hall, special care needs be taken with regard to financing. The Swabian town of Altdorf has shown that this can be done.

The municipality, located in the Esslingen district, chose an unusual way, one that was also unknown territory for the architect. The people of Altdorf opted for an industrial hall which was expanded into a multi-purpose hall. The challenge for the architect Werner Krepela was to equip this functional hall so that it complies with all current safety regulations and, at the same time, fulfils its new function as a sports and multi-purpose hall.

At the centre of the 50 x 28 m hall, there is a football pitch measuring almost 1000 square metres. An unfilled LigaGrass Synergy with mineral support grain was laid as turf. The 978 square metre pitch, the largest indoor football pitch ever built by Polytan, is surrounded by a system of boards and a piping netting system at the sides and above the pitch.

The boards and nets can be easily removed to enable the hall to also be used for other public purposes.

From the very beginning, this was a very important point for those people with responsibility for planning the hall.

Altdorf's mayor Joachim Kälberer is delighted, because up until now events and sports have taken place in the old multipurpose hall, which only measures 12 x 20 metres. „Above all, users are delighted with the size of the pitch: Both the synthetic turf and the board and net systems are greatly appreciated by the users of the pitch.“ Multiple usage is almost an obligation for such an important project undertaken by such a small community. „The majority of events are sporting, but thanks to the very quick removal of its existing boards and nets, the unheated hall can be used as an event marquee, especially for larger festivities on our ‚Altdorfer Wasen‘ sports premises.“



Colour-coordinated nets and add-ons in black and anthracite were a customer request



Architect Werner F. Krepela summarise the special features: „The combination of a prefabricated hall planned by the supplier for commercial or agricultural operations and the unusual use for sports purposes was completely new. No one had any experience for a project like this. We have upgraded the hall in such a way that it can also be used for purposes other than just sports. I am sure that the hall will soon be attracting other activities as well.“ Numerous strip windows and the translucent roof ridge maximise the daylight that enters the hall. In the evening hours, shadow-free pitch lighting is assured by economical LED lights.



Fully closed net system on the sides and above the playing field



44 x 22 m
978 m²

Joachim Kälberer has personally tested the Polytan pitch. „The boards mean that the ball is constantly in play. As a nearly 60 year-old, out-of-practice football player, you quickly realise you don't have the stamina that you once had,“ says the Mayor, who has been in office since 1988, and who has created completely new opportunities for his community with the new hall.



GREAT FUN ON SMALL PITCHES

From the very beginning, Polytan was a project partner and general contractor for the DFB campaign “1,000 mini-pitches for Germany”, which was held in 2007 and constructed mini pitches within the context of the campaign. Polytan has now further developed these pitches with leading boarding system manufacturers so that they are still usable today in varied form – as PolyPlay Arenas!

PolyPlay Arena mini pitches

MULTIFUNCTIONAL ON EVERY SURFACE

As well as the classic DFB mini-pitch, which is being completely rebuilt with foundations, an elastic base layer and synthetic turf, we also offer a foundation-free version for mini-pitch boards. The courts, which are also stationary, can be installed without a solid foundation; this enables their use in new building projects or even on existing surfaces. The range is supplemented with the Multi mini-pitch, which is equipped with a high-performance synthetic surface in place of the turf. This also opens up the idea of mini-pitches for sports such as basketball, handball, badminton, volleyball and hockey.



In addition to a variety of features, PolyPlay Arena is also available in a vandalism-protected version as well as with an option for noise-reducing boards.



**POLYPLAY
ARENA**

polytan

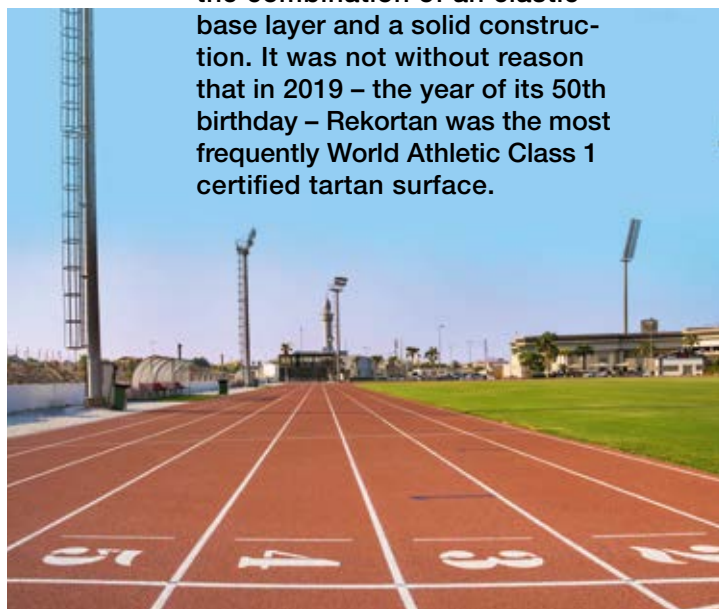
Top-class high-speed synthetic surface for Doha



In summer 2019 Polytan laid new Rekortan synthetic surfaces on no less than two athletics tracks in the Qatar Sports Club in the Qatari capital Doha: the main track in the Qatar SC Stadium and the warm-up track immediately beside it. They were installed ahead of the 17th World Athletics Championships in order to give athletes an opportunity to prepare for their competitions. Both facilities are certified World Athletics Class 1 (formerly IAAF Class 1). The installation was carried out by the contractor Bilal Al Abdalla of Waves Trading & Contracting W.L.L. in record time. It is an experienced local Polytan partner which has already been able to deliver more than 20 running tracks within the space of a few years.

The Qatar Sports Club has been involved in major sporting events for almost a decade: it was where the Qatar Athletic Super Grand Prix, the first stop on the Wanda Diamond League athletics series (formerly the IAAF Diamond League), was held for the first time in 2010. The Rekortan synthetic surface was already providing the optimum base for top achievements back in 2010. In 2020 the Diamond League will be returning to the Qatar Sports Club, having found a temporary home in the Khalifa International Stadium – the venue for the World Athletics Championships – in 2019.

The choice when it came to the new installation in 2019 again fell on the Rekortan PUR system from Polytan. It is a 15 mm-thick solid synthetic surface which also delivers optimum force reduction and acceleration values thanks to the combination of an elastic base layer and a solid construction. It was not without reason that in 2019 – the year of its 50th birthday – Rekortan was the most frequently World Athletic Class 1 certified tartan surface.



Synthetic turf

Whether it's football, rugby, American football or hockey, Polytan synthetic turf systems have become established in modern ball sports and have been successfully used in stadiums, tennis centres and clubs for many years.

The synthetic turf system developed by Polytan, consisting of straight or textured turf fibres, infill granules and an elastic base layer ensures an astonishingly natural-feeling surface for play, a high level of protection against injury, and outstanding wear resistance – tried and tested, and certified in accordance with all the usual standards.

With our wide range of products, we offer perfect solutions with optimum play properties for every demand and every budget – from multipurpose pitches for amateur clubs through to premier league stadiums.

PRODUCT	FOOTBALL	RUGBY	AMERICAN FOOTBALL	MULTISPORT	HOCKEY	TENNIS	FILAMENT
LigaTurf RS Pro II	■						Straight filaments, infill: S+R, S+C
LigaTurf RS+	■	■	■				Straight filaments, infill: S+R, S+C
LigaTurf Cross	■	■	■				Straight and textured filaments, infill: S, S+R, S+C
LigaTurf Cross GT ^{zero} 	■	■	■				Straight and textured filaments, infill: S, S+R, S+C
LigaTurf Legend Pro	■						Straight filaments, infill: S+R, S+C
LigaTurf Motion	■			■			Straight and textured filaments, unfilled *
LigaGrass Synergy	■			■			Textured filaments, infill: unfilled, S, S+R, S+C
LigaGrass Pro	■			■	■		Textured filaments, infill: S, S+R, S+C
Poligras Tokyo GT 					■		Textured filaments, unfilled
Poligras Platinum CoolPlus					■		Textured filaments, unfilled
Poligras Mega CoolPlus				■	■		Textured filaments, unfilled
Poligras Terra				■	■	■	Textured filaments, infill: S

S = Sand-filled, S+R = Sand and rubber-filled, S+C = Sand and cork-filled

* The turf is filled with approx. 15 kg/m² of sand for fastening to the elastic layer.

Certified and preferred

The high quality and excellent play properties of our synthetic turf systems have also been verified by numerous seals of quality and certificates. For example, all Polytan synthetic turf systems meet current national and international standards and have also been certified by a number of international sporting associations.

FOOTBALL

As a licensee in the FIFA Quality Programme, our football turfs can also be certified according to the FIFA Quality and FIFA Quality Pro standards and approved for use in national and international football championships, including the UEFA CHAMPIONS LEAGUE and FIFA. Polytan has received the world's highest number of re-certifications in accordance with the FIFA Quality Pro Standard, the highest level of quality covered by FIFA.

RUGBY

Polytan is the Preferred Turf Producer to the World Rugby Association, which has created a consistent set of rules for synthetic turf pitches, with the key aim of ensuring player protection. The Preferred Turf Producers and accredited test labs appointed by World Rugby play a particularly important role in ensuring that turf systems meet high standards for quality, performance and innovative development.

TENNIS

The International Tennis Federation analyses the most important criteria for all types of tennis court; it assesses surfaces by categorizing them according to court pace ratings for use on tennis courts. Polytan has several systems in this area that have been certified in speed classes from "Slow" to "Medium Fast" by the ITF.

FIELD HOCKEY

Synthetic turf has already become established as the standard in the world of field hockey, replacing natural grass for all performance classes, and Polytan has been a committed partner in this process from the outset. The logical consequence of this is that Polytan was appointed official global supplier to the International Hockey Federation (IHF) in May 2016. Polytan is therefore the exclusive supplier of hockey turfs for the 2018 and 2022 world championships, as well as for the 2020 Olympic Games in Tokyo.

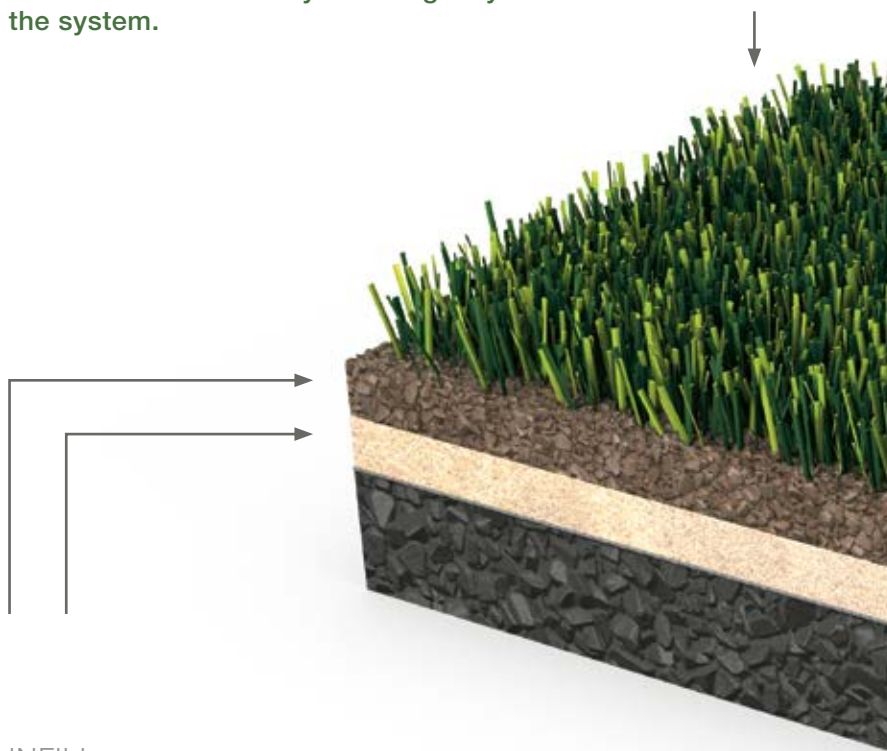


Synthetic turf systems: structure and technology

Synthetic turf systems from Polytan are high-tech products that are made up of different components depending on the intended use. The Polytan Anti-Compaction System (ACS) is a precisely defined combination of a synthetic turf surface, infill granules and an elastic layer. The combination selected has significant influence on the preferred play properties, as well as the durability and longevity of the system.

TURF FILAMENTS

Together with the infill and elastic layer, the turf filaments tufted onto a backing determine the protection and playing properties of the turf system. Depending on the relevant application, smooth or textured turf fibres with precisely defined properties are used. In recent years, combinations of both filament types have been increasingly installed that combine the benefits of both forms of filament.



INFILL

Depending on the system, different filling materials such as elastic rubber granules, natural infill materials or quartz sand ensure an authentic play experience, grip and traction for rapid changes of pace or direction, clean ball rolling behaviour and a high degree of player protection. Professional hockey turfs are usually laid down as unfilled turf carpets and do not require any infill at all due to the high fibre density. Unfilled turfs with higher pile heights and somewhat lower stitch densities have also been used very recently for football turf systems. The absence of granules is compensated by a high filament count and a significantly higher yarn mass.



ELASTIC (BASE) LAYER (IN-SITU)

Directly below the turf, there is a 25-35 mm elastic layer made of rubber granules and a PU bonding agent produced by Polytan. This provides a long-term guarantee for the elasticity required to ensure player safety, while the system's structure in-situ levels out any unevenness in the subfloor.

Subfloor preparation



Polytan football, rugby and hockey turf systems are generally installed on a base layer without a binder in conjunction with a bound elastic base layer. Standard DIN 18035-7 describes the requirements that the substructure has to fulfil.

A BOUND, ELASTIC BASE LAYER

Bound, elastic base layers 35 mm thick and up are produced in situ – that is, directly on site – from crushed stone and an elastic component in conjunction with a binder. They are water-permeable and completely flat and entirely seamless due to the in situ construction method.

B UNBOUND BASE LAYER

On top of the elastic base layer, there is a single or multi-level base layer that is around 200 mm thick and is made of natural aggregates; this layer has a stable central framework without the use of a bonding agent. In combination with the elasticised base layer, this ensures the load-bearing capacity of the turf system, while its water-permeable design enables rainwater to quickly disperse.

C FOUNDATION

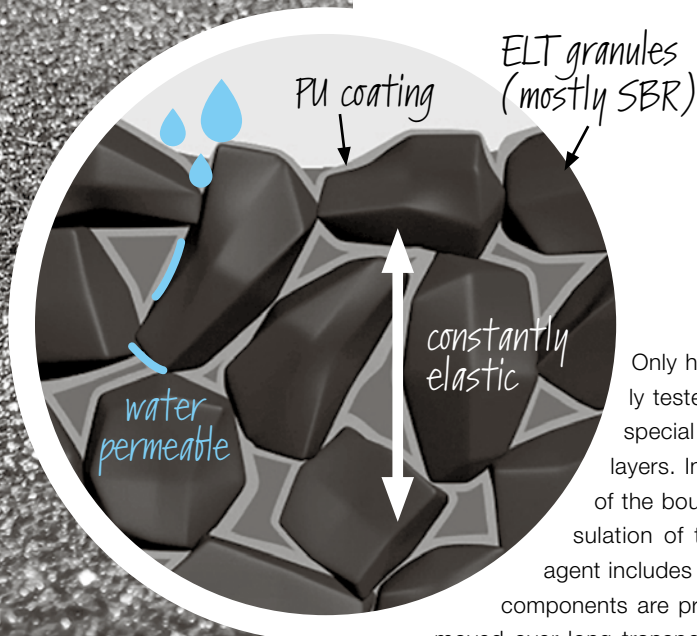
The foundation, consisting of the substructure and subfloor, must have load-bearing capacity, and in particular must ensure that the layers above it are even. It also absorbs seeping water or, in combination with a drainage system, supplies it to a run-off area.



Elastic layers for synthetic turf

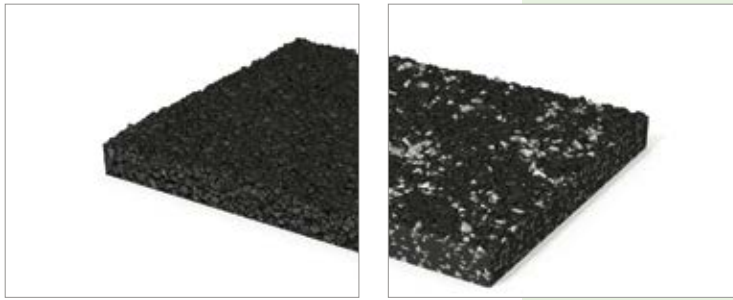
An overall system which is structurally coordinated and optimised in its individual components always guarantees optimal long-term use and consistently good playability of the synthetic turf system. The elastic layer and/or elastic base layer in an in-situ design plays a decisive role in this. For over 25 years, they have been a sustainable solution for the elastic substructure of synthetic turf at Polytan.

With the even shock absorption and controlled damping of the elastic layer, the playing field retains excellent playing properties and, at the same time, a perfect protection function for the players throughout the entire service life. The elastic substructure prevents the joints, tendons and ligaments from becoming overloaded during walking, jumping or quick twisting and stopping movements. With adjustable shock absorption values, the elastic layers can be adapted to the respective types of sport and therefore fulfil the different requirements of sports associations such as FIFA, FIH and World Rugby.



A high-quality, sustainable, environmentally friendly system component.

Only high-quality, quality-monitored and environmentally tested ELT (End of Life) rubber granules (SBR) and a special Polytan PU bonding agent are used in our elastic layers. In the case of the elastic base layer, which is one of the bound base layers, grit is also mixed in. The encapsulation of the rubber granules with polyurethane bonding agent includes all components of the SBR granules. All of these components are processed on site (in situ) and do not need to be moved over long transport routes. Over 90 percent of our elastic layers are therefore a post-consumer recycled product, i.e. a product which has already been subjected to a usage cycle. The service life of such an elastic layer is generally more than 35 years. It is therefore available for at least 2-3 synthetic turf generations and can also be quickly and easily upgraded for additional use if necessary.



GREEN
technology

For decades now, the elastic layer has proven itself as an optimal solution for third-generation synthetic turf systems. Its properties contribute to a massive reduction of the filled rubber granules. But also for the unfilled or sand-filled synthetic turf fields, it offers playability that is gentle on the joints and elastic. The components for the elastic base layers are mixed by our experts, who then lay this mixture with special machines using the in situ installation procedure. Modern installation finishing machinery equipped with automatic levelling ensure absolutely precise installation and the right evenness. There are no joints or cuts created. Furthermore, the elastic (base) layer is water-permeable, so that the synthetic turf playing field can be used again immediately after heavy rainfall. Particular features of the in-situ elastic layers are the „fail-safe properties“. Even when the turf is completely played out or the coverings are heavily compacted, the elastic layers made of rubber granules and PU mixtures still ensure the minimum requirements for shock absorption and deformation in accordance with the standard – comparable to the RunFlat technology of car tyres. An important component for the protection of players and the health of users throughout the entire service life of the turf system.

PolyBase GT

ELASTIC LAYER MADE FROM RECYCLED MATERIAL AND CARDYON®

Polytan PolyBase GT, the next step to the perfect elastic layer: Polytan's latest Green Technology development combines the well-known benefits of in-situ elastic layers with the environmental benefits of a recycled product and a revolutionary new technology for carbon dioxide utilisation. This will further improve the already excellent environmental performance of our elastic layers.

cardyon® is the name of the product from German polymer manufacturer Covestro, which is the first company in the world to successfully use CO₂ as a raw material for the manufacture of plastics, thereby conserving fossil resources such as crude oil. cardyon® is used in Polytan's PolyBase GT to achieve permanently elastic binding of the rubber granules.

Overview of benefits

Recycling

- SBR rubber granules made of over 90 % post-consumer recycled products
- European quality-tested SBR granules
- Simplified reprocessing

Sustainability

- Polytan PU binding agent saves 20 % CO₂
- Lifetime over 35 years
- Positive environmental impact compared to combustion

Health and environment

- Rigorous testing regarding soil and groundwater compatibility
- Perfect player protection due to permanent elasticity
- Encapsulating the SBR granules includes all components in the granules





The Fusion GT infill consists of up to 70 percent natural materials such as hemp and chalk.



The small infill compass

A synthetic turf system is more than just a carpet made of green blades. The so-called infill is found on almost all synthetic turf playing fields. It is incorporated into the turf carpet and makes the synthetic turf pitch playable.

The filling material has several functions: it stabilises the blades of the carpet, ensures that they do not lay flat and improves the rolling properties of the ball. Depending on the type of infill, it also provides an athlete the best bio-mechanical conditions, for example by its damping properties.

The fill material is comprised of one or two layers. The lowest layer consists of sand on every pitch. The weight of the sand is required to stabilise the turf carpet. Sand is used exclusively as infill on many pitches, which is inexpensive and does not require too much maintenance. However, sand does not provide the athlete with the same comfort as a second layer that is applied over the sand.

The second layer can consist either of cork or rubber granules. Both have significantly better damping properties than pure sand, and they differ in their other properties.

Cork granules are a pure natural product. Since cork is very light, the granules float, during heavy rain faster than other infills and can be flushed from the pitch as a result. Strong wind can also result in the discharge of the cork. The intensity of maintenance is greater than with pitches filled purely with sand or the alternative for the damping layer, rubber granules.



Sand



Cork



Rubber granules EPDM ST

Rubber granules offer the best option due to their physical properties. Although they fall into the category of microplastics due to their size, Polytan products such as Fusion GT consist of up to 70 percent natural materials such as hemp and chalk and meet the toy safety standard EN 71-3. Due to their special shape and weight, they also do not float or blow away.

Turf fibres

All turf fibres made by Polytan are produced using a premium PE polymer formulation which has been developed in-house. Special fibre geometries and cross-section designs make our turfs particularly resilient, and feature extraordinary shock absorption, a great deal of wear resistance and reliable fibre resilience. The particularly soft PE formula guarantees that it feels comfortable against the skin. Depending on the intended use, Polytan offers synthetic turf systems with straight or textured turf fibres, while two-colour filaments help to create a more natural grass look.



Straight turf filaments

The ideal choice for football pitches or playing fields used only for football. They feel soft for the players and create a natural feel for the match with perfect ball rolling and rebound properties. Almost exclusively straight turf fibres are used in professional football, rugby and American football.



Textured turf filaments

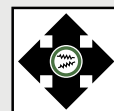
Although they previously mainly occupied the hockey pitch, textured turfs have undergone significant development over recent years, and become even softer due to special formulations and fibre designs. The textured structure efficiently holds sand and infill in place and ensures long-lasting volume. This means that these turfs enable intensive use while also providing a high level of availability and reduced costs for maintenance and care.



Technologies for a safe, dynamic game

With a huge number of innovations, Polytan continues to ensure that the play properties of artificial turf systems are increasingly similar to those of natural grass.

ENTANGLEMENT TECHNOLOGY



Our ENTANGLEMENT Technology cross-links the molecule chains in the turf fibres with each other to create an additional non-directional molecular link. This results in improved abrasion protection and protection against UV ageing, no splaying of thinner fibre areas and improved strength in all stress zones.



COOLPLUS

Polytan synthetic turf systems equipped with the CoolPlus function reliably prevent the playing field from getting too hot. This is made possible by pigments incorporated on the surface of the turf fibres, which effectively reflect the infrared part of solar radiation – which is responsible for heating up the turf – on an ongoing basis.

PRECITEX TECHNOLOGY



PreciTex Technology enables precisely controlled crimping of textured fibres, regardless of the fibre cross-section. The result is a multi-directional and tightly sealed surface with optimum ball rolling behaviour, which simultaneously supports the cooling effect of the CoolPlus function.

Product overview

PRODUCT	PROPERTIES
LigaTurf RS Pro II LigaTurf RS Pro II is the new elite product for professional football turf systems. Thanks to its intelligent yarn design and exclusive material composition, it is in a league of its own. Our innovative ENTANGLEMENT Technology helps to ensure that the filament remains soft despite the larger cross-section thickness, while also providing excellent protection against wear and tear.	▪ Long-lasting natural playing qualities ▪ Improved fibre resilience ▪ Reduction in temperature due to CoolPlus function ▪ Reduced maintenance costs
LigaTurf RS+ The LigaTurf RS+ synthetic turf system has been successfully used around the world for many years and is preferred by professional and amateur athletes alike. LigaTurf RS+ is the world's leading product with FIFA Quality Pro certification. At the same time it can be used in many different ways and also has certifications according to the requirements of World Rugby.	▪ Long-lasting natural playing qualities ▪ Improved fibre resilience ▪ CoolPlus function and real grass appearance
LigaTurf Cross Polytan LigaTurf Cross offers the incomparable playing properties of a real football turf, combined with the robustness and uncomplicated care of a crimped synthetic turf. The ideal solution for heavy-use professional training facilities, amateur and pro clubs and sports universities.	▪ Pleasant surface feel ▪ High wear resistance ▪ Reduced infill splash ▪ Lower maintenance costs
LigaTurf Cross GT^{zero} The grass is always greener with Polytan turf: LigaTurf Cross GT^{zero} is now also being produced from bio-based fibre raw material. I'm green™ polyethylene is a plastic with the same product properties as our conventional polyethylene, but it is made from sustainably grown sugar cane.	▪ Positive ecobalance with a share of up to 70 % bio-based raw materials in the filament ▪ Ideal system for all application areas due to simple maintenance and high durability ▪ Combination of textured and smooth turf filaments ▪ Increased stitch density for better granulate support and optimised player protection ▪ Reduced granule splash

Key

S = Sand-filled

S+R = Sand and rubber-filled

S+C = Sand and cork-filled

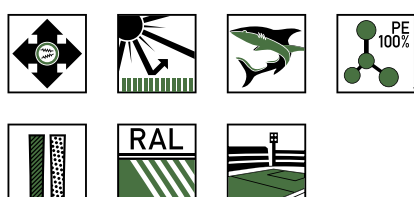
ICONS

SPORT

FILAMENT

INFILL

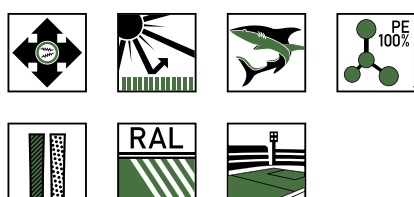
QR CODE



▪ Football

Straight

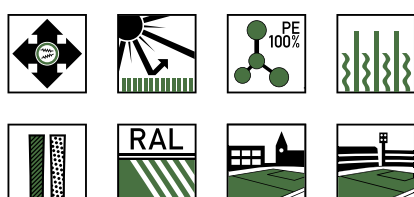
S+R
S+C



▪ Football
▪ Rugby
▪ American Football

Straight

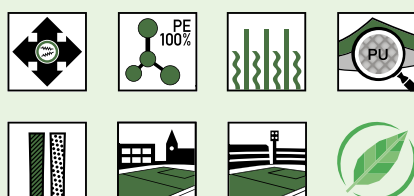
S+R
S+C



▪ Football
▪ Rugby
▪ American Football

Smooth/
Textured

S
S+R
S+C



▪ Football
▪ Rugby
▪ American Football

Smooth/
Textured

S
S+R
S+C



PRODUCT	PROPERTIES
LigaTurf Legend Pro LigaTurf Legend Pro fully meets the demanding requirements of professionals and amateurs alike. Thanks to its redeveloped multi-shape filament cross-section, LigaTurf Legend Pro football turf achieves optimum fibre resilience.	▪ Improved fibre resilience ▪ Long-lasting natural playing qualities ▪ High wear resistance
LigaTurf Motion Polytan's latest artificial turf development does not require filling and still offers playing properties that are similar to the long-established sand/rubber-filled artificial turf. Additionally, Polytan combines three different filament types in a single artificial turf system.	▪ Unfilled artificial football turf* in mono-filament technology ▪ Properties similar to natural grass with three filament systems ▪ Simple maintenance, no filling with infill granulate required ▪ High wear protection and maximum UV stability ▪ Natural fibre optics with three different colour components
LigaGrass Synergy Durable, low-maintenance, multifunctional – the advantages of a textured turf system are obvious. With LigaGrass Synergy, Polytan has further developed its benchmark turf LigaGrass Pro and has combined for the first time two texturised filaments of different shapes and fineness into a single functioning system.	▪ Reduced infill quantity and splash ▪ High wear resistance ▪ Natural turf-like appearance ▪ Lower maintenance costs
LigaGrass Pro Polytan is quite rightly regarded as a pioneer in developing texturised turf systems for football pitches. With LigaGrass Pro, we are adding another milestone to the successful history of our company. The infill is carefully secured between the blades to prevent the granules and infill material from jumping up.	▪ More texture with PreciTex texturing technology ▪ Better stability thanks to ENTANGLEMENT and a functional cross section ▪ A perfect turf look with two-tone filaments
Poligras Tokyo GT Poligras Tokyo GT is the sustainable revolution in hockey. Polytan is bringing to the market the first synthetic turf that features filaments made from over 60 % renewable raw materials.	▪ Filaments made from over 60 % regrowable raw materials ▪ An even, multidirectional surface for dynamic, precise play ▪ Optimum climate regulation ▪ Protection against abrasion and wear

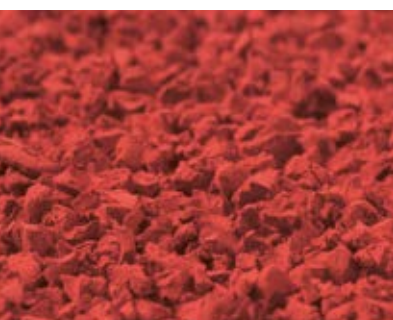
* The turf is filled with approx. 15 kg/m² of sand for fastening to the elastic layer.

ICONS				SPORT	FILAMENT	INFILL	QR CODE
				▪ Football	Straight	S+R S+C	
				▪ Football ▪ Multisport	Smooth/ Textured	Unfilled*	
				▪ Football ▪ Multisport	Texturised	Unfilled S S+R S+C	
				▪ Football ▪ Hockey ▪ Multisport	Texturised	S S+R S+C	
				▪ Hockey	Texturised	Unfilled	

PRODUCT	PROPERTIES
Poligras Platinum CoolPlus Precise, fast and safe – Poligras Platinum CoolPlus is setting new standards for hockey. The stitch density has been increased to create an even more compact appearance. The result is a multidirectional closed surface with unbeatable ball rolling properties.	▪ High abrasion protection and a cool surface ▪ Speed and precision thanks to closed surface ▪ Soft to the touch ▪ Permanent crimping
Poligras Mega CoolPlus Poligras Mega CoolPlus, Polytan is a fully synthetic turf system that meets all the requirements for a professional hockey pitch. It provides a dense and even surface, which means that ball rolling behaviour is not distorted by directional factors, allowing players to play a fast and accurate game.	▪ High wear resistance ▪ Good water storage ▪ Soft to the touch ▪ Permanent crimping
Poligras Terra Sand-filled Poligras Terra is suitable for tennis and hockey according to the filling volume or filling height in each case. Fine yet extremely strong filaments ensure a level of surface softness previously unheard of for texturised products.	▪ Robust and versatile ▪ Permanent crimping ▪ Reduced maintenance costs

ICONS	SPORT	FILAMENT	INFILL	QR CODE
      	▪ Hockey	Texturised	Unfilled	
      	▪ Hockey ▪ Multisport	Texturised	Unfilled	
   	▪ Hockey ▪ Multisport ▪ Tennis	Texturised	S	

The perfect basis for sporting achievements



Synthetic services from Polytan are tried-and-tested, high-performance products that have been in use world-wide for decades – in professional competitive stadiums, on club pitches and in recreational sport.

As a result of the system structure Polytan employs, its products offer fantastic sports-specific properties, as well as high load-bearing capacity and long product lifecycles – tried and tested, and certified in accordance with all the usual standards. We offer synthetic surfaces with an optimum price/performance ratio, tailored to your individual needs.

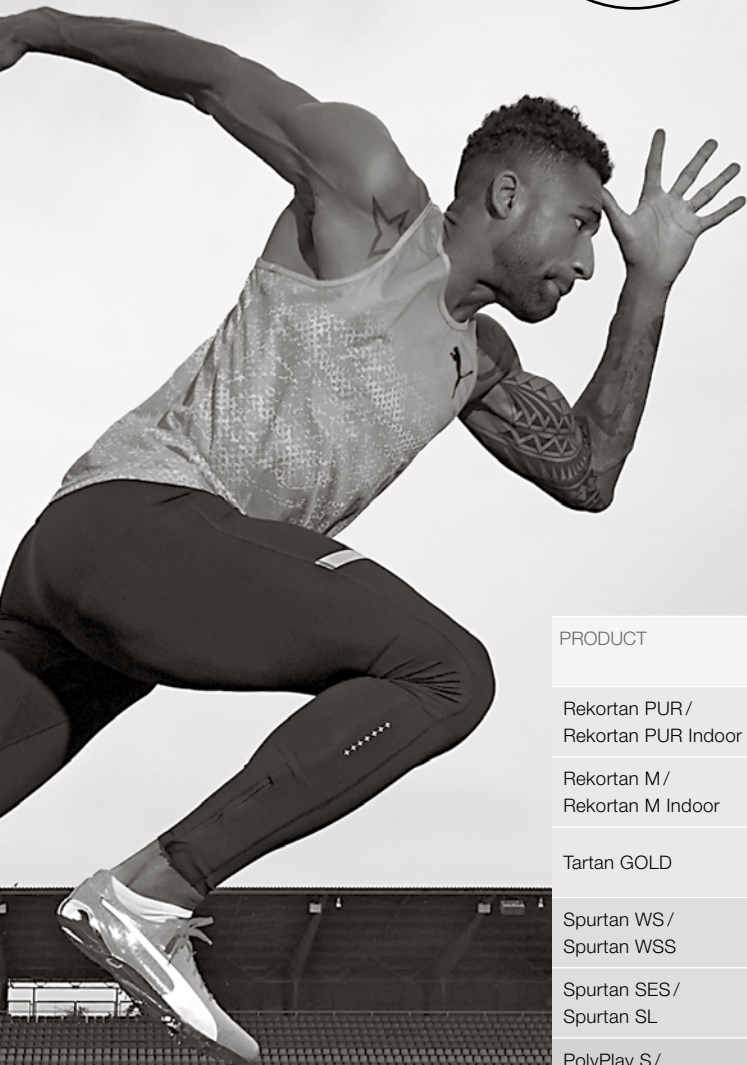
As well as traditional running track surfaces, our product portfolio also includes multifunctional sports surfaces as well as those for tennis, hand-ball and soft-impact surfaces.



“IAAF” is now “World Athletics”: The World Athletics Federation has a new name

The somewhat cumbersome “International Association of Athletics Federations” - IAAF for short - has now become the more memorable World Athletics, also with a new association logo. By making this change, the highly renowned world athletics association would like to “reach more young people and make athletics more appealing,” says World Athletics President Sebastian Coe as he explains the decision.

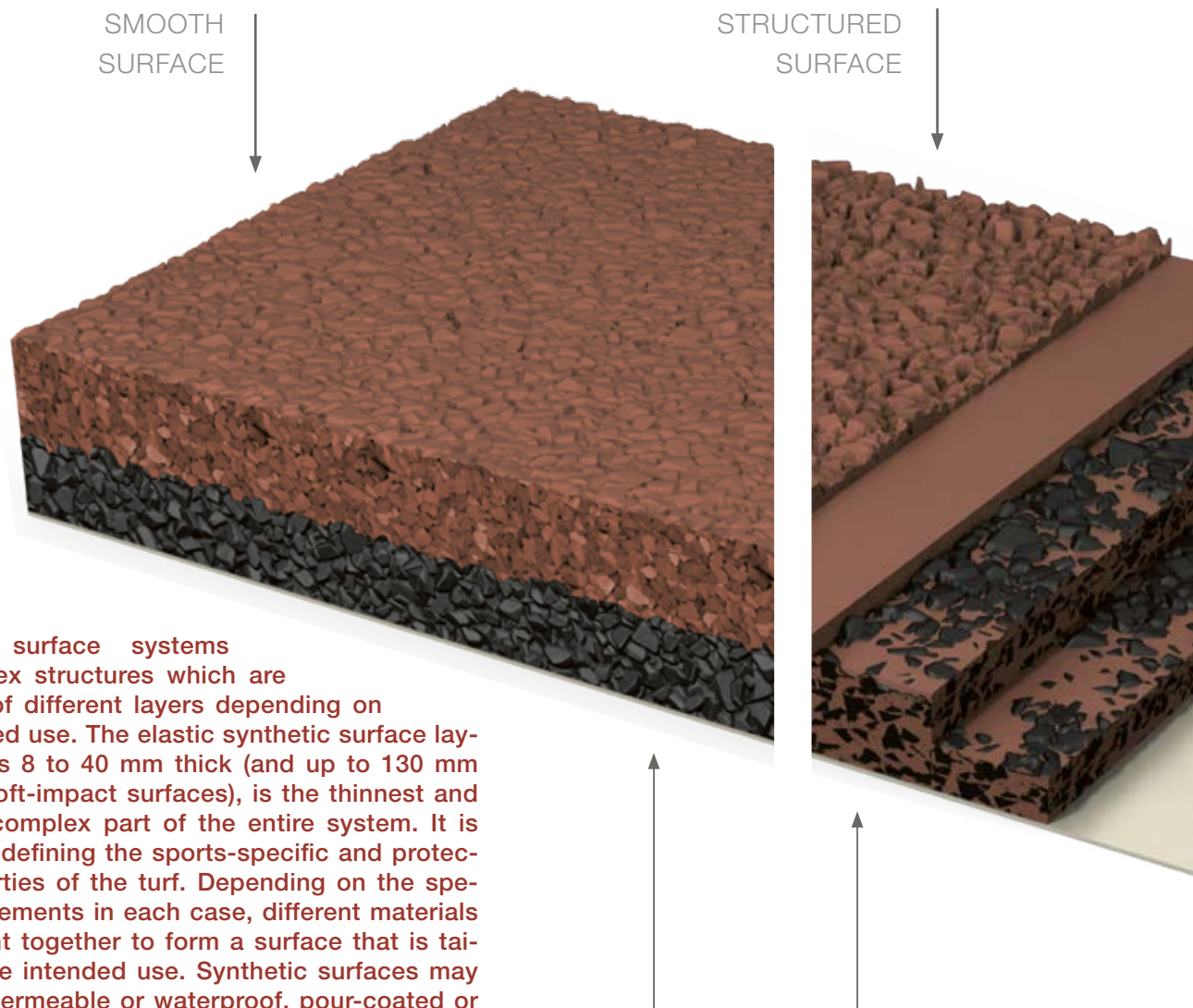
We, as a manufacturer of synthetic tracks from the very beginning, are also closely associated with the world athletics association: 25 percent of all the IAAF or, as they are now known, World Athletics certified sports facilities come from the Sport Group Holding, which also includes the tartan track manufacturers Polytan, APT and AstroTurf.



Patrick Schneider, German
400 metre sprinter and Polytan
brand ambassador

PRODUCT	ATHLETICS	MULTIPURPOSE/ SCHOOL SPORTS	SOFT-IMPACT SURFACE	INDOOR	
Rekortan PUR/ Rekortan PUR Indoor	■				Waterproof, structured surface
Rekortan M/ Rekortan M Indoor	■	■			Waterproof, structured surface
Tartan GOLD	■				Waterproof, structured surface
Spurtan WS/ Spurtan WSS	■	■			Waterproof, structured surface
Spurtan SES/ Spurtan SL	■	■			Waterproof, structured surface
PolyPlay S/ PolyPlay SE		■			Waterproof, smooth surface
PolyPlay FS GT 			■		Waterpermeable, smooth surface
PolyPlay FS Nature / PolyPlay FS Fun			■		Waterpermeable, textured synthetic turf surface
Re-Topping systems	■	■			Waterpermeable and waterproof, structured surface
GYM Point				■	Point elastic
GYM Area				■	Area elastic
GYM Combi				■	Combined elastic

Synthetic surfaces: structure and technology



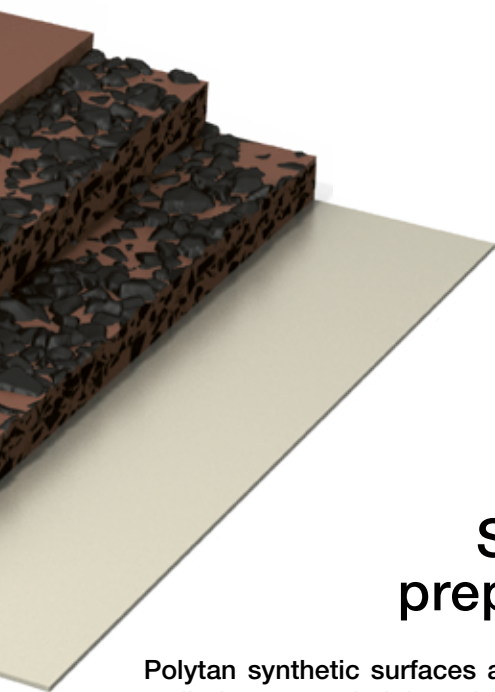
Synthetic surface systems are complex structures which are made up of different layers depending on the intended use. The elastic synthetic surface layer, which is 8 to 40 mm thick (and up to 130 mm thick for soft-impact surfaces), is the thinnest and yet most complex part of the entire system. It is crucial for defining the sports-specific and protective properties of the turf. Depending on the specific requirements in each case, different materials are brought together to form a surface that is tailored to the intended use. Synthetic surfaces may be water-permeable or waterproof, pour-coated or granulated, and solid or multi-layer. Whatever the design, it is always installed as a seamless, secure structure.

BASE LAYER

The base layer made of rubber granules and a polyurethane bonding agent provides the material with the required elasticity. Depending on the installation thickness and particle size, the surface achieves precisely defined damping, therefore offering ideal and tailored conditions for the intended sports disciplines, or soft-impact surfaces.

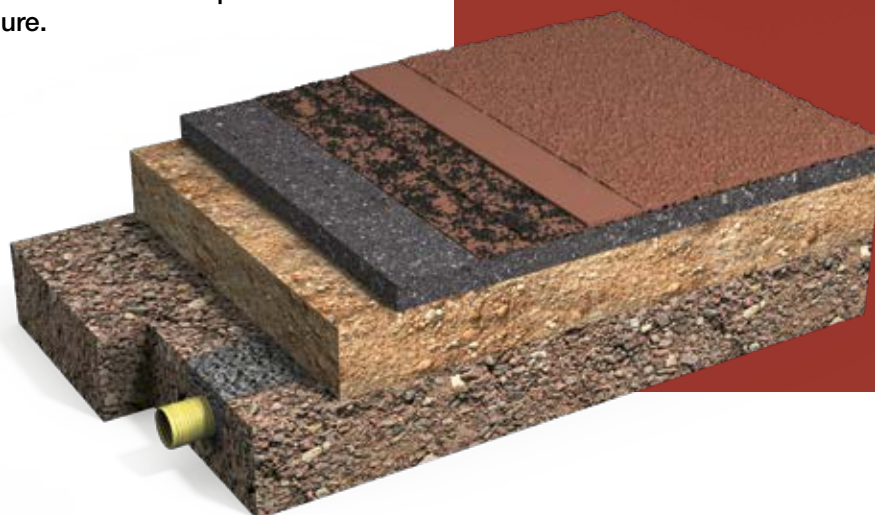
SURFACE – SMOOTH OR STRUCTURED

The final surface coating consists of premium EPDM granules, in either a smooth or structured design. The coating's structure and thickness as well as form, quantity and how the granules are interspersed play a crucial role in the sport function-specific properties such as energy enhancement and shock absorption. Stable properties with respect to temperature stability, colour-fastness, UV stability, abrasion resistance and tensile strength are important factors in ensuring the longevity of a surface system. Polytan EPDM granules provide peak performance for all of these material properties.



Subfloor preparation

Polytan synthetic surfaces are generally installed on an asphalt base layer, which again sits on an additional, unbound base layer and – where applicable – a filter layer. Standard DIN 18035-6 describes the requirements for the substructure.



A ASPHALT BASE LAYER (BOUND BASE LAYER))

Below the synthetic surface, there is generally an asphalt base layer made of aggregate, filler and bitumen, which is 65 to 100 mm thick and consists of one or two layers. The choice must be made between a water-permeable or waterproof asphalt base layer, depending on the planned surface system. A concrete floor can also be used for certain surface types.

B BASE LAYER WITHOUT BONDING AGENT

On top of the asphalt base layer, there is a single or multi-level base layer that is 200 mm thick and made of natural aggregates; this layer has a stable central framework without the use of a bonding agent. In combination with the bound asphalt base layer or elastic layers of 24 mm, it ensures the load-bearing capacity of the synthetic surface system. The water-permeable version enables rainwater to quickly disperse.

C FOUNDATION

The foundation, consisting of the substructure and subfloor, must have load-bearing capacity, and in particular must ensure that the layers above it are even. It also absorbs seeping water or, in combination with a drainage system, supplies it to a run-off area.

← A
← B
← C

Certified and award-winning

Synthetic surfaces from Polytan fulfil the strictest requirements, as well as complying with all the usual national and international standards and environmental guidelines. International sport associations also rely on Polytan and enable official certification for many surfaces in accordance with association regulations.



ATHLETICS

The high quality and performance of our synthetic surfaces is proven by the trust placed in our products by the International Association of World Athletics (WA): there is not a single manufacturer worldwide that equips more Diamond League stadiums with competitive tracks than Polytan. Currently, this includes the Alexander Stadium in Birmingham, the Qatar Sports Club in Doha, the Bislett Stadium in Oslo, the Olympic Stadium in Stockholm and the Prince Moulay Abdellah Sports Complex in Rabat.

SYNTHETIC SURFACES IN ACCORDANCE WITH WORLD ATHLETICS CATEGORIES

- Structural spray-coated surface (spray coating) – EN 14877 type A
- Poured surface (sandwich) – EN 14877 type D
- Poured surface (full PU) – EN 14877 types E & F
- Prefabricated surface – EN 14877 type G
- Other



HANDBALL

Polytan also offers surfaces appropriate for handball courts; these surfaces can be certified in accordance with International Handball Federation (IHF) regulations.



TENNIS

The International Tennis Federation (ITF) also certifies our products.



DIN / EN CERTIFICATES

- DIN / EN 14877 / DIN 18035-6
- DIN / EN 14904
- DIN / EN 1177
- DIN / EN 71-3

With inspections in accordance with DIN / EN, we make sure that our products for outdoor and indoor installations achieve a high level of sporting performance as well as athlete / surface interaction. All Polytan surfaces are also free of harmful substances.

Show your colours!

Synthetic surfaces from Polytan are proven high-performance products that have been in use worldwide for decades – in professional stadiums as well as for club facilities and recreational sports. Whether it's pink hockey turf, a green synthetic running track or multicoloured track and field facilities, Polytan's innovative materials and sealing processes mean that today there's hardly any limits to freedom of design. The properties of our new, high-colour formulations are equal to those of the more traditional colour variants with respect to weathering influences such as heat, UV radiation, frost and rain, or mechanical impacts during ongoing operation.

Red makes a comeback: Polytan chili red

The trend of new, noticeable colours in sports surfaces continues to rise. It's high time for a fiery comeback for red – as an exclusive on-trend colour Polytan Chili red!

This powerful, brilliant red is much more striking than the classic brick red, and offers significantly more colour intensity. Polytan Chili red is available both for poured and granulated surfaces, and will bring a new shine to running tracks, school playgrounds and multifunctional areas alike. For sports with added spice!

Pour-coated (structured)



Chili red



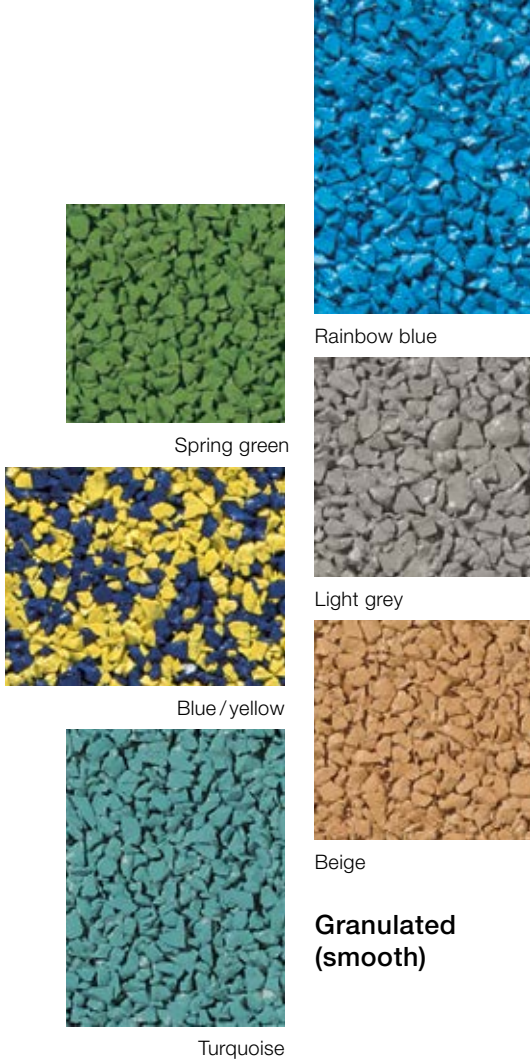
Brick red



Hertha blue



Reseda green



Product overview

PRODUCT	BENEFITS
Rekortan PUR / Rekortan PUR Indoor The Rekortan PUR is the ideal foundation for best times, records and international elite sport. The special solid PU structure offers optimum acceleration ensuring maximum performance.	▪ Solid construction for durability ▪ Optimum acceleration and maximum tread elasticity ▪ World Athletics certification ensures suitability for competitions ▪ Very suitable for use with spikes
Rekortan M / Rekortan M Indoor The Rekortan M is an authentic professional sports surface for athletics stadiums, competitive running tracks and school-sports facilities recognised worldwide as the ideal competition surface. The Rekortan M offers exceptional acceleration performance and enhanced tread elasticity.	▪ Excellent values when it comes to sports medicine ▪ The preferred surface of elite athletes the world over ▪ World Athletics certification ensures suitability for competitions ▪ Very suitable for use with spikes
Tartan GOLD The first Tartan running track in Europe was installed in Letzigrund, Zürich, in 1968. It premiered at the Olympic Games in Mexico City that same year, and Germany's first Tartan running track was put in place in Stuttgart in 1969. This new surface set world records on the production line.	▪ Optimum conditions due to the combined structure ▪ Maximum acceleration performance and excellent force absorption ▪ World Athletics certification ensures suitability for competitions ▪ Very suitable for use with spikes ▪ Long lifespan
Spurtan WS / Spurtan WSS The Spurtan WS and WSS are the only sports surfaces with a structured and water-permeable top layer. This makes it the ideal solution for facilities where the local conditions or other circumstances prevent the construction of a waterproof surface.	▪ Water-permeable running track for professional training ▪ Structure-coated from top-quality raw materials ▪ WS: World Athletics certification ensures suitability for competitions
Spurtan SES / Spurtan SL Spurtan SES and SL are water-permeable, structured surfaces for professional athletics training facilities.	▪ Quick and easy installation ▪ Long lifetime ▪ Structural spray-coating using high-quality raw materials

ICONS	SPORT		QR CODE
    	▪ Competition / Stadium ▪ Training	Waterproof	
     	▪ Competition / Stadium ▪ Training ▪ Multipurpose / School sports	Waterproof	
    	▪ Competition / Stadium ▪ Training	Waterproof	
     	▪ Competition / Stadium ▪ Training ▪ Multipurpose / School sports	Water-permeable	
     	▪ Competition / Stadium ▪ Training ▪ Multipurpose / School sports	Water-permeable	

PRODUCT	BENEFITS
Re-Topping systems Polytan offers a professional solution for worn running tracks in need of renewal. With the product types Rekortan M RT and Spurtan WS RT, old surfaces can be physically and visually renewed to provide optimum training and competition conditions once more.	▪ Professional physical and visual upgrade of the sports surface ▪ Minimal installation time ▪ Reduced costs – no asphalt work, no disposal of the old surface ▪ Independent of the manufacturer of the existing old surface ▪ World Athletics certification ensuring suitability for competitions is possible
PolyPlay S The durable all-round PolyPlay S surface is primarily used for playing fields and facilities for ball sports and leisure activities. Its smooth surface and good ball bouncing response make it the ideal surface for ball sports in schools and a variety of outdoor facilities.	▪ Durable multi-function surface ▪ Optimum ball bouncing response due to its smooth surface ▪ Low-maintenance and year-round use
PolyPlay SE Like its sister product the PolyPlay S, the PolyPlay SE is a durable, all-round surface primarily used on playing fields and facilities for ball sports and leisure activities. Its smooth surface and good ball bouncing response make it the ideal surface for ball sports in schools and a variety of outdoor facilities.	▪ Durable multi-function surface ▪ Optimum ball bouncing response due to its smooth surface ▪ Low-maintenance and year-round use
PolyPlay FS GT The PolyPlay FS GT is a classic soft-impact surface offering a hygienic, safe solution for a wide variety of applications, from children's play areas to amusement parks and rehab facilities. The soft-impact surface is available in various colours.	▪ Low maintenance costs and long lifespan ▪ Greater protection due to shock-absorbing effect ▪ Hygienic, low-maintenance solution ▪ Elastic layer made from recycled material and cardyon®
PolyPlay FS Nature / PolyPlay FS Fun Whether you want a natural look or a playful colour scheme, PolyPlay FS Nature and FS Fun offer architects and planners myriad design options for play areas, educational facilities, adventure playgrounds and landscaping. With these products, Polytan is expanding its range of soft impact surfaces. Both products feature a textured artificial turf surface.	▪ Long lifespan ▪ Greater protection due to shock-absorbing effect ▪ Low-maintenance ▪ Individual design: natural or playful

ICONS

SPORT

QR CODE



- Competition / Stadium
- Training
- Multipurpose / School sports

Water-permeable/
Waterproof



- Multipurpose / School sports

Water-permeable



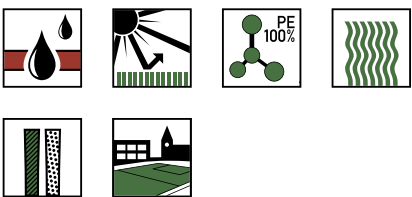
- Multipurpose / School sports

Water-permeable



- Soft impact surface

Water-permeable



- Soft impact surface

Water-permeable



PRODUCT

BENEFITS

GYM Point

The point elastic sports floor is a flexible, yielding floor that is particularly well-suited for amateur and recreational sports. The soft surface cushions falls immediately. In addition, the point elastic layers only require a small mass to exhibit their shock-absorbing effect.

- Seamless surface
- Soft, point elastic surface
- Can be certified according to international sports association requirements

GYM Area

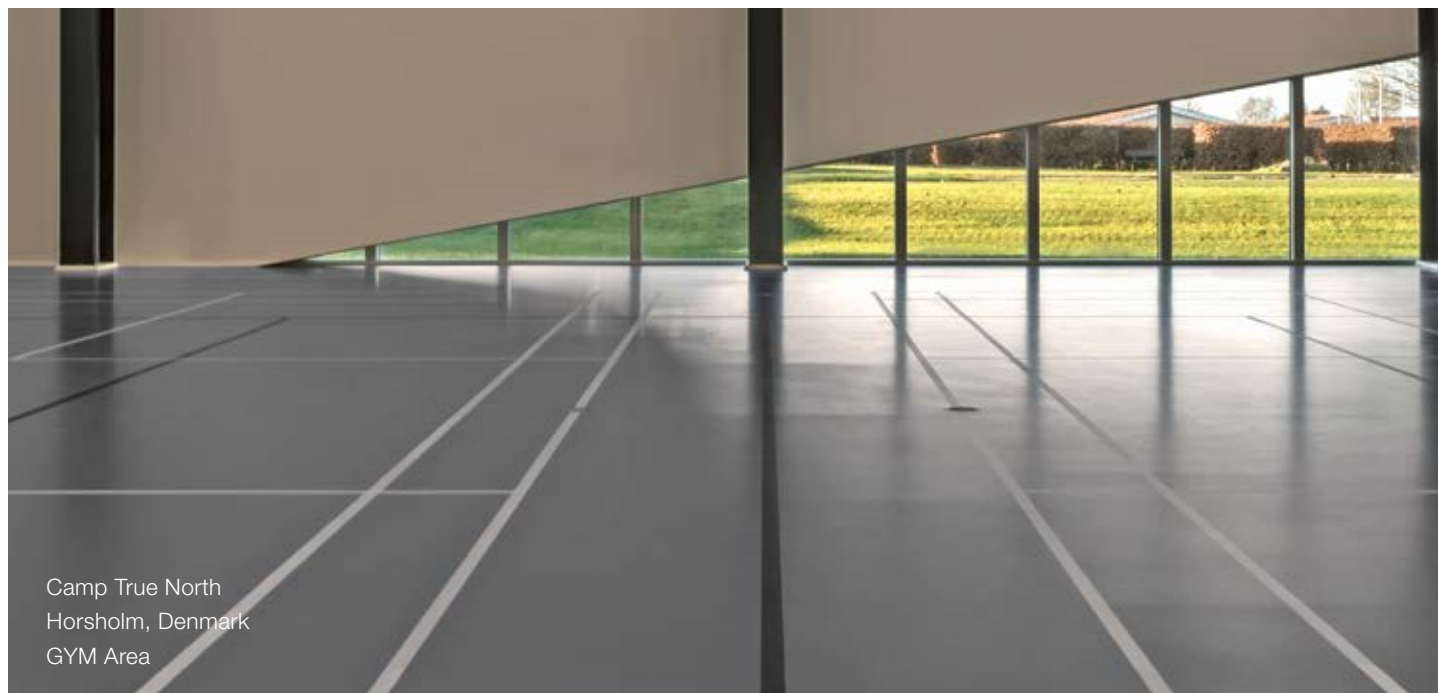
Polytan GYM Area is a true high-performance sport floor that is suitable for multi-purpose use by adult athletes. This area elastic indoor surface offers very high shock-absorption. Quick turning, running and jumping movements are cushioned across a broad area.

- Seamless surface
- Hard, area elastic surface
- Can be certified according to international sports association requirements

GYM Combi

Polytan GYM Combi combines the positive protective function characteristics of point elastic systems with the benefits of the sport function properties of area elastic systems.

- Seamless surface
 - Soft, point and area elastic surface
 - Can be certified according to international sports association requirements
-



ICONS

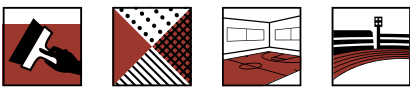
SPORT

QR CODE



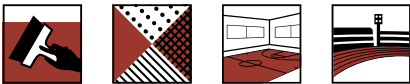
- School and recreational sports
- Types of sports with a greater need for a protective function, e.g. handball or volleyball

Point elastic



- Multipurpose facilities
- Sports and multipurpose halls with mobile grand-stands
- Types of sports that place priority on ball bouncing properties, e.g. basketball
- Cycling and roller sports

Area elastic



- School and recreational sports
- Multipurpose sports floor surface for all sport types

Combined elastic



Properly maintaining synthetic turf

In choosing Polytan, you have selected high-quality sports surfaces that are precisely tailored to your needs, combined with the security of always having a reliable service partner at your side.

We are a one-stop provider with service teams we have trained in-house and our own special machines for efficient cleaning, care and repair of your Polytan sports surfaces. We would also be delighted to provide you with a Polytan care protection letter – our maintenance and service contract for ensuring consistently high quality in the use of our products, and maximum value retention.

Routine visual inspections and the immediate removal of surface dirt are among the duties of any groundsman. In addition to this, the surface should also be cleaned thoroughly on a regular basis. To support you in this task, we offer training and special cleaning equipment, or in fact will just perform the cleaning for you – with trained specialists, who can also quickly and expertly perform repairs when needed.





DRY CLEANING & GRANULATE

Polytan also provides intensive cleaning for synthetic turf and partial refilling for rubber granules as a service or as part of a fixed maintenance contract.

Polytan recommends intensive cleaning in intervals of 1-3 years depending on the location.

A suitable sweep-vacuum is used to capture rubber granules on dry turf systems and then reintroduce them into the football pitch system.



NON-ROUTINE CARE

We offer a variety of wet and dry cleaning services performed by our qualified experts for an intensive deep clean. This should be performed once a year by RAL-certified company such as Polytan GmbH.



REPAIRS

Our Polytan service representatives perform expert repairs, such as replacing worn-out penalty spots, repainting lines or preparing stress zones.



ROUTINE CARE

In order to ensure that your Polytan synthetic turf always retains its optimal playing properties in the long term, the synthetic turf should be regularly brushed up in routine maintenance care and the filling material levelled and loosened. For this purpose, we recommend our ACS care device. We have recently launched our TurfRob care robot for fully automatic maintenance. We will introduce you to the practical helper on p. 64.



REMOVING OLD SYSTEMS / RECYCLING

We will also remove all systems for you – quickly and expertly: the old systems are removed in sections, broken up into their components, and then sorted and further processed, recycled or made use of.



Our new service products



TurfRob: The new-generation greenkeeper

Robots can be of assistance in many areas of life, bring our society forward and are simply part of it as useful supporters. Automation is not just advancing in industry. Robots are also improving our quality of life on a daily basis. And now they are also being used for synthetic turf maintenance. TurfRob will now take care of this.

Whether its recreational or competitive sport, great sport and great emotions can only be achieved when the synthetic turf is perfectly maintained and cared for. With TurfRob, we want to make our contribution to this and perfect the care of your synthetic turf system. Constant and consistent playing characteristics in all areas of the playing field are our goal. A long service life with outstanding playing characteristics is the requirement, 365 days a year.

TurfRob can be operated via an app and it navigates fully automatically. Simply select a maintenance program and TurfRob will work completely unattended, even at night. Brushing and grooming for hours on end with powerful battery capacity. TurfRob can be charged rapidly in the morning and is then immediately ready for perfect playing field care and maintenance: This maximises playing time operation while simultaneously guaranteeing a sustainable service life of the synthetic turf system. Fully automatic maintenance and care, perfect greenkeeping: TurfRob.



Polytan ClearTurf M1: Efficiently descaling hockey turf



Many pitches have a problem: Unsightly discolourations tarnish the overall impression. This is caused by lime in water. On hockey systems, this leads to discolouration and residue on the surface through regular watering. However, water with a high iron content can also lead to reddish brown deposits. This not only looks unpleasant, but can also damage the filaments in the long term. Furthermore, the deposits can impair how the ball rolls and the hockey match itself.

Polytan provides a mobile and easy solution with the new ClearTurf M1 care and maintenance system. Specially developed for this purpose, the cleaning solution removes colour alterations on the hockey turf surface which have been caused by the water. This care and maintenance solution is environmentally friendly and poses no risk to health. The cleaning effect is long-lasting and, if necessary, will be directly incorporated into the annual basic cleaning of the hockey turf. Depending on the degree of hardness and/or degree of contamination of the water, longer cleaning intervals are also possible and this can be determined more precisely by our experts using water analysis.



Hockey turf before (above) and after (below) cleaning.

Polytan ClearTurf M2: Prevention reduces cleaning effort



Regular watering of the synthetic hockey turf, in conjunction with possible contamination or pollution caused by environmental influences, enables algae to form and multiply, particularly on the turf surface and in the gaps between the hockey turf fibres. In extreme cases, this can endanger the health of players and considerably increase the risk of injuries when the playing surface is overly exposed. The sport-related functional properties of synthetic turf are also therefore negatively affected.

The ClearTurf M2 system is a water treatment system which is integrated into the water circuit for irrigating the sports facility. A special care agent is added to the water cycle in extremely small quantities and also prevents further algae infestation when used regularly. Care and maintenance work on the synthetic hockey turf is significantly reduced, since additional problematic components in the water can be filtered out by the system before the hockey pitch is irrigated.



Service for synthetic surfaces

Over the course of time, even the surfaces of running tracks and multifunctional services can be impacted in that the surface becomes weathered or encrusted, or moss accumulates, for example. Although this contamination is usually only superficial and is mostly very easy to remove, any damage should be remedied as soon as possible by our Polytan specialists.



REPAIRS

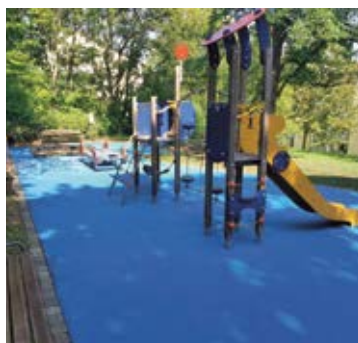
Damage due to vandalism, incorrect use or wear is expertly repaired by our Polytan service teams. We also quickly and efficiently renew pitch lines.

CLEANING

Normal dirt due to environmental influences can be removed using mechanical high-pressure wet cleaning. This process quickly restores the sports-specific functions and look of the running track.

REMOVING OLD SYSTEMS / RE-TOPPING

The Polytan Re-Topping system means it is no longer necessary to remove and dispose of old systems at great cost; instead, they can be used as a subfloor for new coatings.



Playground in Körschstraße in Stuttgart. Before and after cleaning.



Further tips and information on maintaining synthetic turf and synthetic surface systems are available in our maintenance handbooks. Just get in touch and we'll be happy to help.

May it be something more?

ACCESSORIES

As well as maintenance equipment for our synthetic turf systems and synthetic surfaces, we also offer a wide selection of premium sports equipment and accessories.

- Goals, baskets, nets and markings for all the usual ball sports
- Protective grating, mats, take-off boards, starting blocks, hurdles, etc. for athletics
- Players' tunnels, winners' podiums, transport vehicles and much more

PROJECT SUPPORT

Planning sports facilities is a complex task that needs to take into account a wide range of factors depending on the planned use. We will be happy to support you right from the planning phase for your project, e.g. with respect to

- The creation of CAD plans and technical drawings
- Measurement and line marking
- Advice on financing

TRAINING AND SEMINARS

Every groundsman can become a Polytan maintenance expert with our seminar programme. We offer different training for each product:

- General maintenance seminar
- Deep cleaning of synthetic turf
- Surface cleaning of synthetic surfaces



Imprint

PUBLISHER

Polytan GmbH

Gewerbering 3
86666 Burgheim
Germany
www.polytan.de

V.i.S.d.P.: Tobias Müller

CONCEPTION & DESIGN

Königreich
Konzept. Kommunikation. Design.

Seestraße 10
71638 Ludwigsburg
Germany
www.koenigreich.com

PRINTING

Das Druckteam Berlin

Gustav-Holzmann-Straße 6
10317 Berlin
Germany
www.druckteam-berlin.de

ISSUE 01 / 20

This magazine has been produced on Vivus 100, no. 157 (100 % recycled paper with Blue Angel, FSC® recycled credit and produced climate neutrally).



Climate neutral

Print product

[ClimatePartner.com/11854-2005-1006](https://climatepartner.com/11854-2005-1006)

VISIT US ON



Polytan GmbH ■ Gewerbering 3 ■ 86666 Burgheim ■
T: +49 (0) 8432/87-0 ■ info@polytan.com ■ www.polytan.com

*Liga***TURF**®

Rekortan®

POLIGRAS®