WonderfulVinyl

ecvm
The European Council
of Vinyl Manufacturers

PVC in architecture and design

SPECIAL EDITION

ISSUE

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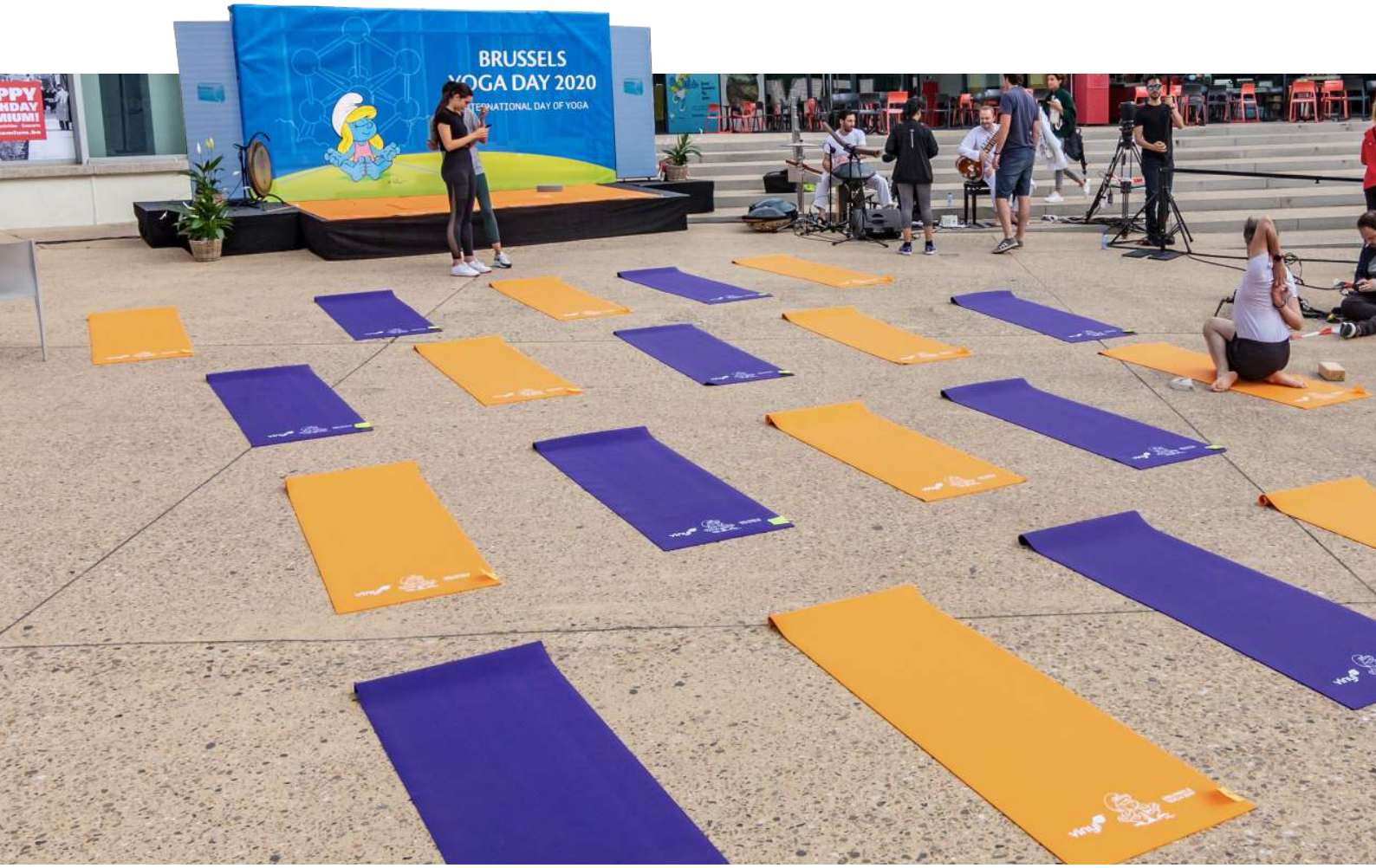
CONTENT



IT IS TOUGH TO IMAGINE A WORLD OF SPORTS WITHOUT PVC, NEARLY IMPOSSIBLE.

This versatile and durable material has become indispensable across various athletic disciplines.

PVC's non-slip surfaces and excellent cushioning make it perfect for yoga mats, in tracks or training equipment, providing support for everything from gentle poses to intense flows.

In athletics, PVC's smooth and resilient nature enhances performance and reduces injury risks.

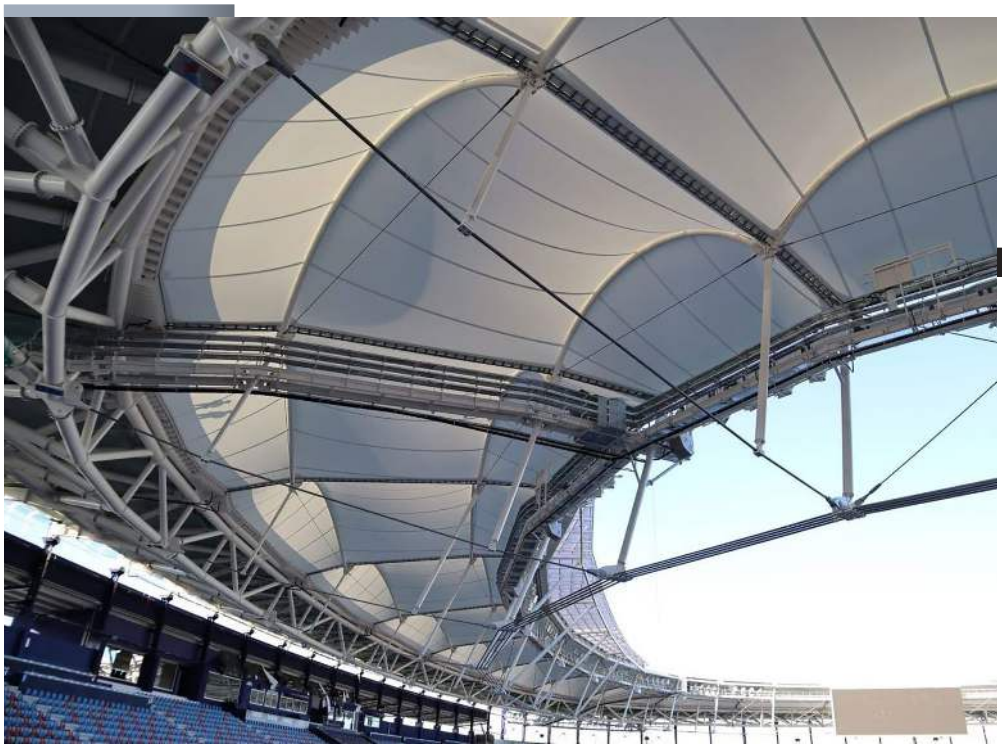
Moreover, PVC is significantly relevant when it comes to sustainability. Its long lifespan and weather-resistant properties mean fewer replacements, saving money and reducing waste.

Events like the Paris 2024 Olympics highlight its role in creating sustainable, recycled plastic infrastructure. By using PVC, the sports industry not only enjoys functionality and safety, but also makes strides in environmental responsibility.

PVC is more than just a material; it's a versatile, eco-friendly champion in the world of sports. Its applications range from small items to event structures and safety equipment, all while supporting sustainability and cost-efficiency.

As the sports industry continues to evolve, PVC will undoubtedly remain at the forefront, helping athletes perform their best while caring for our planet.

LEVANTE STADIUM



TECHNICAL INFO

PVC Membrane

ARCHITECTS

IDOM,
Sevilla,
Spain
idom.com

LOCATION

Valencia,
Spain

The Ciutat de Valencia stadium is now one of the most modern stadiums in the Spanish league.

First built in 1969, the stadium can receive up to 26,354 visitors and is home to Levante UD football club.

As part of a project to renovate and upgrade the stadium, the building has been completely covered with a PVC-coated polyester tensile roof structure.

The stadium had already been renovated in the past, but no structural changes were made to the construction.

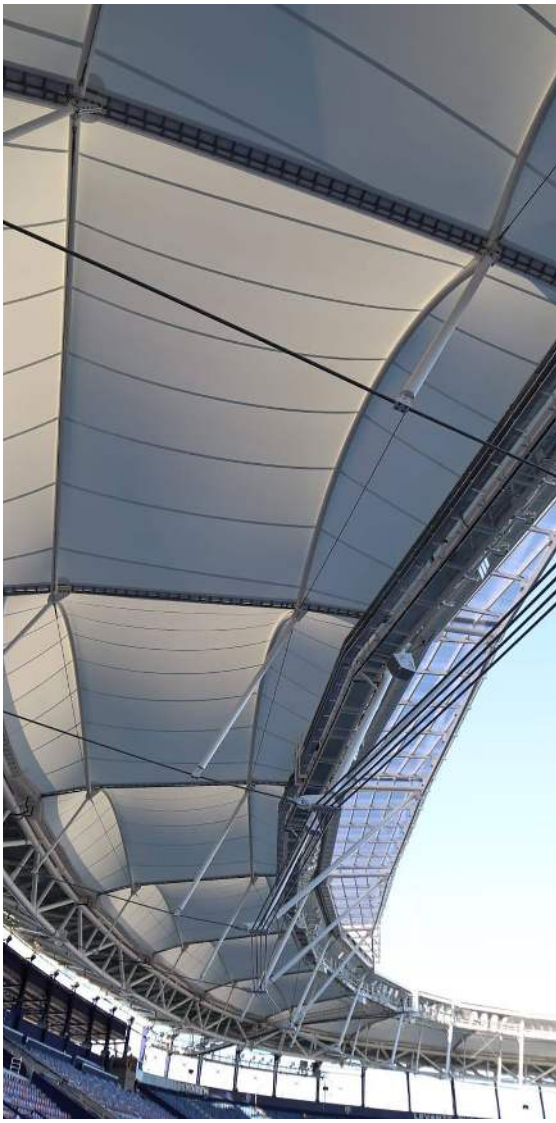
The assembly of the new roof structure was particularly challenging considering the stadium's central location. For this reason, special care went into the choice of materials, remarkably lightweight to minimize the overall weight of the structure.

Additional steel columns were added around the stadium's concrete shell to support the load of the new roof structure.

The PVC roof was installed once a new compression ring was built around the stadium and the cable net structure was in place.

In the case of Levante, the design phase was the most challenging.

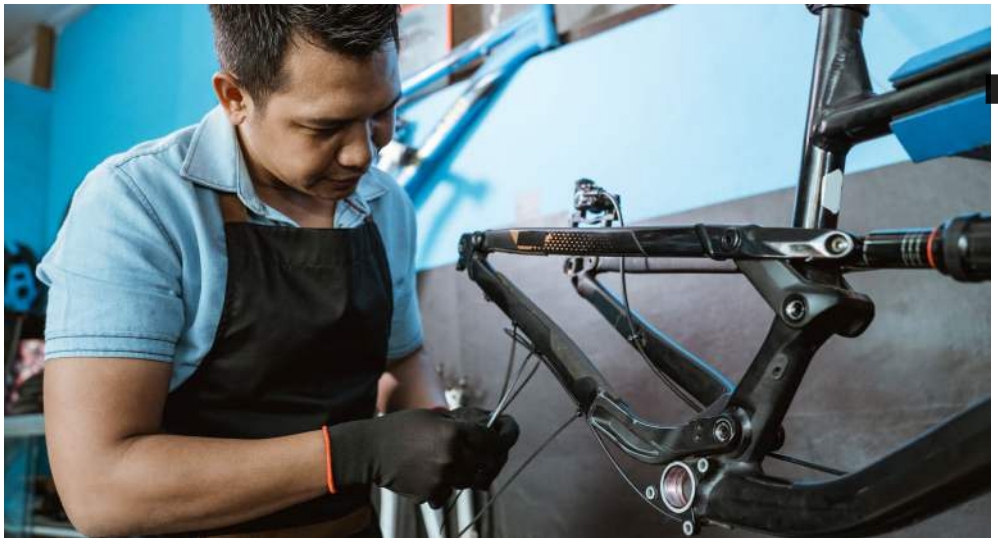
Connection details between the PVC membrane and its boundaries, dewatering systems, and maintenance access were the main features that required special attention to provide the best solution possible.



PICTURE CREDITS

IDOM, Taiyo

CYCLING WITH PVC



ARTICLE

vinylplus.eu/sustainability/our-contribution-to-sustainability/partnering-with-the-sports-community/pvc-in-cycling

Cycling is widely recognized for its recreational and health benefits, as well as its environmental advantages. It is a sport that involves people of all ages, professionals, amateurs, children, and adults; bikes are both used as a practical mode of transportation for commuters and as an eco-friendly solution for transporting goods across urban centres.

Upon arrival, the visitor is PVC is integral to various aspects of cycling; for example, a comfortable saddle is critical for both professional cyclists and daily commuters, and PVC is a preferred material for saddles because of its robustness and ability to endure prolonged exposure to environmental elements.

Iconic images of cyclists ascending renowned European mountain passes are often complemented by large crowds. To maintain safety and order, PVC crowd control barriers are deployed. These barriers frequently feature advertising banners, facilitating effective sponsor messaging; these banners are often made of PVC as well.

In terms of bicycle components, PVC's versatility is evident. It is a key material for handlebar grips, which require safety, comfort, and durability. PVC rim tape, used to cover spoke holes on wheels, helps prevent punctures, a persistent issue for cyclists.

Brake and gear cables, essential for safe and efficient cycling, benefit from PVC's flexibility and durability. PVC is also used in the construction of brake levers, ensuring long-lasting performances.

For carrying essentials, bike bags made from waterproof PVC provide reliable protection from rain and snow. Some manufacturers use upcycled truck tarps to produce these durable bags, contributing to sustainability efforts.

Lastly, PVC is instrumental in manufacturing high-quality bike locks. These locks, which typically feature a reinforced steel core with a PVC jacket, offer robust security against theft.

In summary, PVC's durability, flexibility, and versatility make it a crucial material in the cycling industry, enhancing both the functionality and sustainability of the sport.

ALLIANZ RIVIERA

ARCHITECTS

Wilmotte & Associates
wilmotte.com

LOCATION

Nice,
France

Completed in 2013, the Allianz Riviera stadium in Nice, France, is a multi-functional venue home to local football club O.G.C. Nice, as well as rugby matches, lawn tennis, and motorsports; concerts, shows, and other large-scale events happen here.

The stadium seats 35,000 people and hosted several matches in the UEFA Euro 2016.

Resembling a flying bird, Allianz Riviera is a magnificent piece of architecture that fits perfectly with its surroundings in the middle of the Éco-Vallée, an ambitious long-term development plan for the Plaine du Var centered on sustainability.

At the 2015 edition of the European PVC industry's VinylPlus Sustainability Forum in nearby Cannes, the stadium's architect Marco Punzi from Wilmotte & Associés explained how the extensive use of PVC enabled state-of-the-art design with environmental stewardship:

"For us, PVC was a natural choice. First of all because it allowed us to design a fifth-generation stadium that is well-functioning and hopefully aesthetically pleasing. For instance, we used a transparent PVC tensile fabric membrane for the façade, which lets daylight pass through and make the building appear open and inviting. And for the roof, we chose PVC for its acoustic qualities. Second, mitigation of greenhouse gas emissions must be integrated in modern stadium design as a lot of energy is consumed during events. It was actually one of the requirements in the bid for the contract. And we succeeded. In fact, Allianz Riviera is a positive energy building and one of the first European stadiums to bear the EnergyPlus label. We achieved this by using a wooden structure for the building and installing 7,500 m^2 photovoltaic cells on the roof. Air conditioning is partly assured by natural ventilation, just as rainwater is recovered. And of course, PVC was used throughout the building, since it is long-lasting and can be recycled.

Indeed, by employing PVC as the main building and construction material, the architect's grand visions have been fulfilled.

PVC IN THE WORLD OF PADEL

ARTICLE

vinylplus.eu/sustainability/%20our-contribution-to%20sustainability/partnering%20with-the-sports-community/%20pvc-in-sports/#padel

PVC significantly contributes to the sport of padel by offering robustness and flexibility in various uses.

For example, tents and temporary structures at padel tournaments frequently use PVC materials due to their durability, weatherproof qualities, and ease of setup and mobility. These tents provide crucial shelter and amenities for participants, officials, and spectators alike.

Additionally, while padel rackets are mainly constructed from materials such as carbon fiber and fiberglass, certain parts like grips and protective bumpers may incorporate PVC for their resilience and shock-absorbing characteristics.

PVC's application in these areas highlights its role in enhancing the functionality and sustainability of padel sports facilities and equipment.

PVC: THE HERO OF ATHLETICS

ARTICLE

vinylplus.eu/sustainability/our-contribution-to-sustainability/partnering-with-the-sports-community/pvc-in-sports

It is difficult to imagine a sporting world without PVC. The material's hard-wearing properties, long lifespan, and suitability for all types of weather are the main reasons why PVC is popular in the world of sports.

During the "She Runs" events in 2019 and 2021, aimed at empowering young women through sports, PVC played a crucial role in various applications, showcasing its versatility and sustainability.

In particular, the start and finish lines of the run were realised using inflatable arches made from PVC, marking significant points and providing clear, visually striking indicators for participants and spectators alike.

These custom inflatables, crafted from durable PVC materials, are essential in such events for their resilience and ability to withstand outdoor conditions.

Additionally, PVC was used in promotional banners and temporary shelters, demonstrating its multifunctional utility.

One cannot imagine the amount of equipment in athletics that uses PVC. For example, athletic tracks often incorporate PVC in their construction due to its durability and smooth surface, which enhances performance and reduces injury risk.

PVC is also used in various training equipment, such as cones, hurdles, and mats, which benefit from its lightweight yet robust nature, ensuring longevity and ease of handling.

Moreover, the material's water-resistant properties make it ideal for outdoor equipment and signage, ensuring it remains intact and legible in various weather conditions.

PRACTICING YOGA

ARTICLE

vinylplus.eu/sustainability/our-contribution-to-sustainability/partnering-with-the-sports-community/vinylplus-and-sporting-events/#yogaday

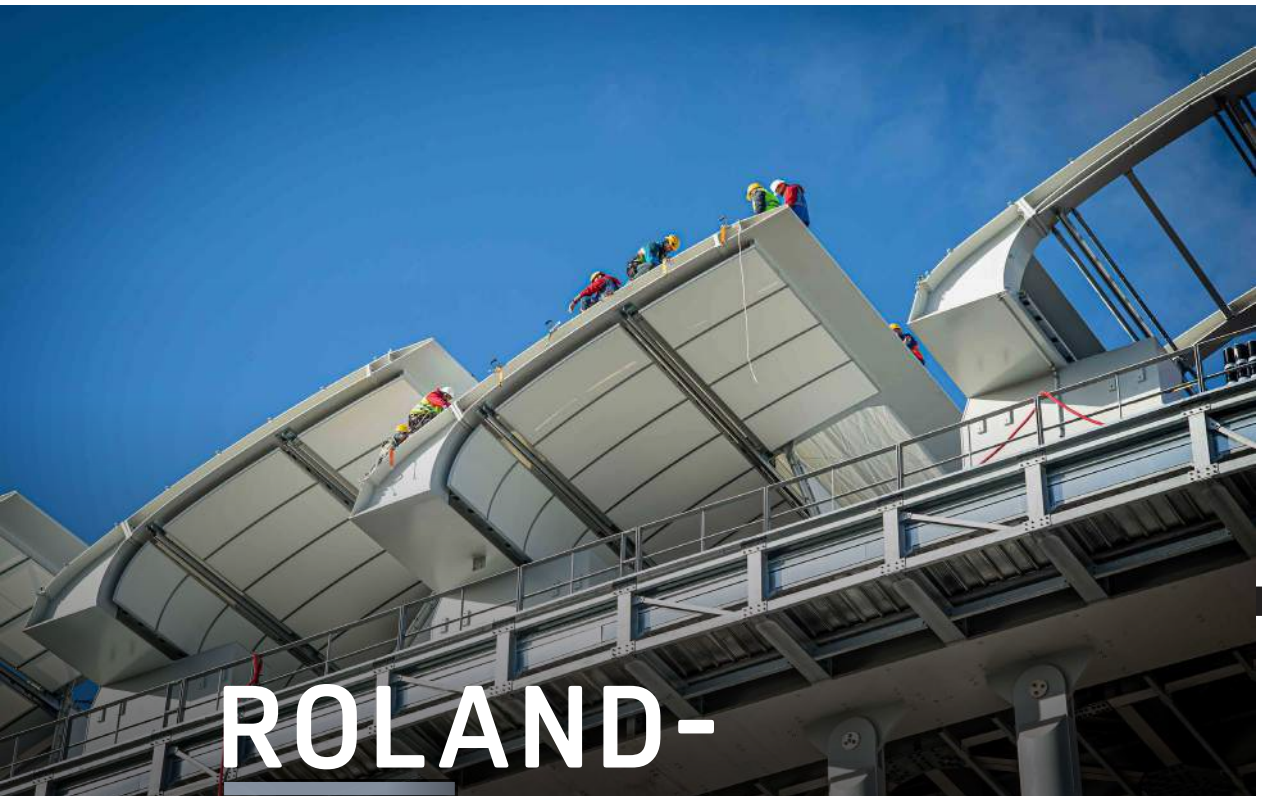
PVC is commonly used in the production of yoga mats because it durable, it entails non-slip properties, and is widely affordable. PVC yoga mats provide excellent cushioning and support, making them ideal for various yoga practices, from gentle Hatha yoga to more intense Vinyasa flows. Their non-slip surface helps practitioners maintain stability in poses, reducing the risk of injuries.

Additionally, PVC mats are easy to clean and maintain, ensuring a hygienic practice environment and long-lasting facilities to use and reuse over time.

Yoga, an ancient practice that combines physical postures, breathing exercises, and meditation, aims to promote physical and mental well-being. It helps improve flexibility, strength, and balance while reducing stress and enhancing mental clarity.

The use of PVC in yoga mats supports this practice by providing a safe and comfortable surface for practitioners to perform their poses and exercises.

PVC's role in yoga mats underscores its importance in creating functional, reliable, and accessible fitness equipment, contributing to the widespread adoption and enjoyment of yoga worldwide.



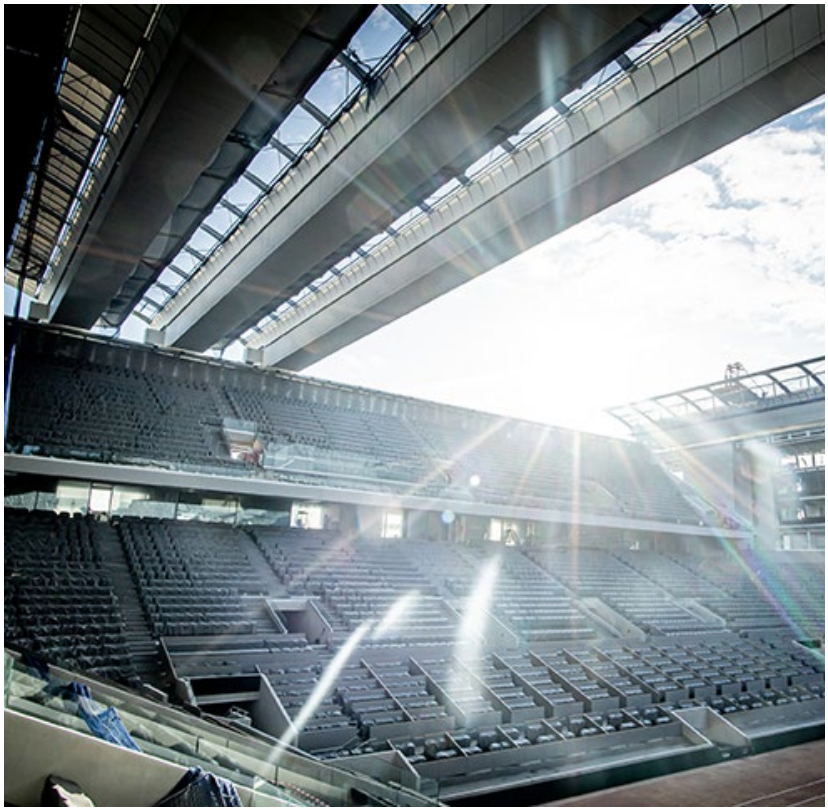
ROLAND-GARROS

WEBSITE

rolandgarros.com/fr-fr

LOCATION

Paris,
France



The prestigious Roland-Garros tennis complex in Paris welcomes thousands of visitors every year.

Built in 1928, the Philippe-Chatrier Court is the venue's main court, offering seats to 15,000 spectators.

While the court has seen significant restructuring and improvement works since 2018, it recently underwent an even more dramatic transformation: installing a retractable roof to ensure matches can go undisturbed despite bad weather or nightfall.

The retractable roof, built for the 2020 tournament, constitutes of 11 steel wings, covered with a translucent and waterproof membrane made of PVC. The roof covers a total surface equivalent to 1 hectare and requires around 15 minutes to be fully deployed.

FOOTBALL STADIUM SALIF KEITA

ARTICLE

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LOCATION

Cergy-Pontoise, France

The structure of the tribune of the stadium Salif Keita, which can welcome 1,000 spectators, is made of reinforced concrete.

The roof, made of a tensile PVC membrane, protects the public from the sun and rain while allowing soft, natural light to enter.

The roof structure constitutes of two arched beams, reinforced by steel tubes above the PVC membrane. Its variable geometry allows the central part to expand over the tribunes.

WonderfulVinyl is the European Council of Vinyl Manufacturers' magazine for PVC in architecture, art, and design.

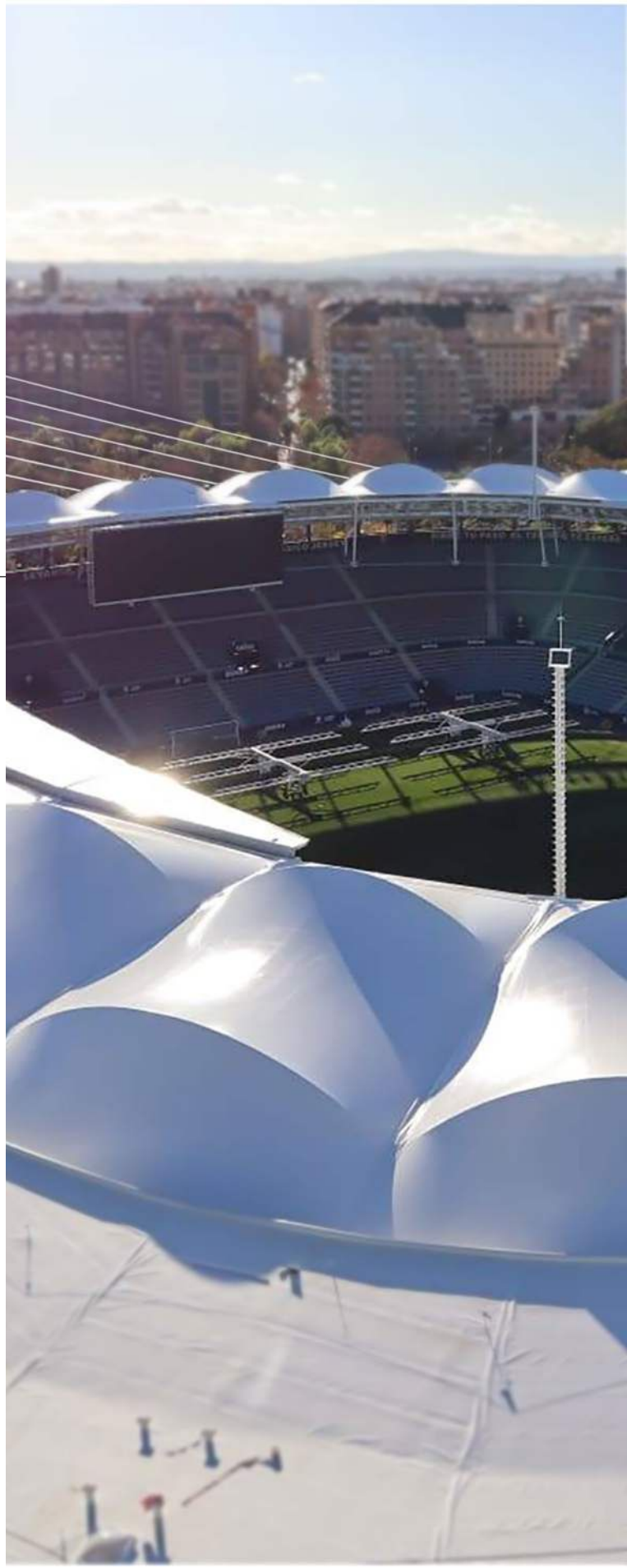
The European Council of Vinyl Manufacturers (ECVM) represents the seven leading PVC resin producers in Europe, accounting for around 85% of the PVC resin manufactured in Europe.

ECVM is a division of Plastics Europe, the trade association representing plastic manufacturers in Europe. ECVM is committed to sustainable development, and to address and promote health, safety, and environmental best practices over the PVC life cycle.

ECVM is also founding member of VinylPlus®, the European PVC industry's commitment to sustainable development. VinylPlus works to improve the sustainability performance of PVC, one of the most widely used plastics in the world with a wide range of long-life applications such as window frames, pipes, flooring, cables, sport equipment, furniture, and a range of lifesaving medical devices.

Find out more about WonderfulVinyl

WonderfulVinyl



THE EUROPEAN COUNCIL OF VINYL MANUFACTURERS

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