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**For Immediate Release**

## **Word Cup Venue to Feature Birdair's PTFE Membrane, ETFE Film and Tensotherm™ Insulated Tensioned Membrane**

In order to host some of the world's most anticipated events, world-class stadiums require expertise in design and use of top-of-the-line products. With more than five decades of experience, [Birdair](#) is the leading specialty contractor for tensile membrane structures throughout the world, and its stadium portfolio is unrivaled. Based upon this wealth of experience, including expertise using world class products, [Taiyo Middle East](#), a Birdair subsidiary, was selected to provide the design, fabrication, supply, and installation of the membrane roofing system for the renovation of [Khalifa International Stadium](#) in Doha, Qatar, which has been named a [2022 FIFA World Cup™](#) venue.

The Khalifa International Stadium was first constructed in 1976 as a 20,000-seat stadium and hosted the Gulf Cup in that same year. It returned to hosting prominence in 1992, when it received an upgrade to again host the Gulf Cup. A third renovation took place in the early 2000s and Birdair was awarded the design and supply of the PTFE membrane roof system for the stadium.

Three decades later, Qatar will have the honor of hosting the first ever FIFA World Cup™ in the Middle East., where Khalifa International Stadium is expected to play an important role by hosting many of the FIFA World Cup™ matches through to the quarterfinals. Prior to the World Cup, the stadium will be the host venue for the 2019 IAAF World Athletics Championship.

### **Match-Winning Renovation**

With [Projacs](#) serving as the project manager and [Dar Al-Handasah](#) as the design consultant, the renovated stadium will have a unique, modern design and aesthetic, containing a combination of three major product lines for the roof system: PTFE fiberglass membrane, single ETFE film and Tensotherm™, a translucent insulated tensioned membrane system. Birdair will provide the design, fabrication and supply of all three membranes. The majority of the roof system will feature approximately 500,000 square feet of PTFE fiberglass membrane. An approximate 35,000 square foot portion of the south leading edge of the roof will utilize a single-layered ETFE film supported by a cable net. Lastly, another portion located on the lower edges near the compression ring will incorporate Birdair's Tensotherm system in order to provide thermal performance. The installation of all three membrane systems will be performed by Birdair's subsidiary, [Taiyo Middle East](#), located in Dubai.

The renovated stadium will include seats for 40,000 spectators. New cooling technologies will guarantee a comfortable fan experience and ideal conditions for players and officials. The

stadium will also host the [3-2-1 Qatar Olympic and Sports Museum](#), to celebrate Qatar's culture of sport and the global sports heritage represented by the Olympic Games. As a special addition, the development will include a new building which will be added to the stadium's east wing, and which will contain food courts, shops, multi-purpose rooms, VIP lounges and a health center.

“The renovation of Khalifa International Stadium will create a state-of-the-art facility—a true sports destination,” said David Capezzuto, Director of Business Development, Birdair North America. “Birdair's products are designed to be both eye-catching and long-lasting. They will add a durable and unique element to the modern design of the stadium.”

### **A Sustainable Goal**

Many green technologies have been developed since Khalifa International Stadium was first built and the building team wants to take advantage of these technologies as part of the renovation. To ensure that Qatar achieves its goal of hosting an environmentally friendly FIFA World Cup™, Khalifa International Stadium will seek Global Sustainability Assessment Systems (GSAS) certification. To further reduce the tournament's carbon footprint, a new metro will be available for fans at Sports City Station, located directly adjacent to the stadium.

### **Great Coverage on the Field and Above**

The project team chose all three next-generation materials for a variety of reasons including aesthetics, performance and sustainability. Specifically, extreme temperatures in the Middle East require the use of products that can withstand intense heat from the sun.

Extremely durable and weather resistant, [PTFE \(polytetrafluoroethylene\) or Teflon®-coated fiberglass](#) membrane can be installed in climates ranging from the frigid arctic to the scorching desert heat with a project life in some cases exceeding 30 years. The low-surface free energy of the material creates a surface which is readily cleaned by rainwater. It is also completely immune to UV radiation. This unique combination of thermal stability and surface properties make Birdair's PTFE-coated fabric membrane ideal for projects requiring superior weather and fire resistance.

[ETFE \(Ethylene Tetrafluoroethylene\) film](#) is durable, highly transparent and very lightweight in comparison to glass structures. The transparency of the ETFE membrane allows daylight to flow into the space below while providing cover for players and fans. The film is UV transparent. Therefore, exposure to UV won't discolor or structurally weaken the film. In addition, due to the inert nature of its surface, it resists adhesion of airborne pollutants, dust, dirt and chemicals. [Tensotherm](#) is a composite system comprised of a PTFE fiberglass membrane exterior skin, a thin translucent insulation blanket embedded with aerogel, and a lighter liner. The system provides invaluable benefits directly to people living and working, or in this case playing, under it. These include: diffused glare-free natural daylight; enhanced temperature control, even in the most extreme environments; and innovative sustainability.

Fabric membrane structures are not only visually appealing and durable but are also environmentally sensitive and economically competitive. The lightweight membrane provides a cost-effective solution requiring less structural steel to support the roof or façade, enabling long spans of column-free space. In addition, membrane offers building owners reduced construction costs and maintenance costs compared to traditional building materials.

\*Teflon<sup>®</sup> is a registered trademark of E. I. Du Pont De Nemours and Company, Delaware.  
**About Birdair:** *Birdair, Inc. is the leading specialty design build contractor of custom tensile structures throughout the world. In addition to pre-construction services such as design assistance, budgeting, construction methodologies and project scheduling, Birdair provides design-build solutions in all aspects of project design, fabrication, installation and maintenance. The company offers a selection of architectural fabric membranes, including PTFE fiberglass, ETFE film, PVC and Tensotherm<sup>™</sup>, an insulated tensioned membrane system. Birdair, based in Buffalo, NY, is a member of the Taiyo Kogyo Group, with operations serving North and South America and other international locations. For more information about Birdair, [like us on Facebook](#), call 1-800-622-2246 or visit [www.birdair.com](http://www.birdair.com).*

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