

Exciting foil

ETFE for foil construction from TEXLON HSP







Sheer elegance

Light and transparent, almost like the air itself. That's the effect that architecture can have. Roofs and facades as emblems, statements, marketing tools. Foil construction as a counterpoint to other construction elements or in the surrounding area.

That's why TEXLON HSP builds with ETFE foils. The Swiss company custom produces these in its in-house welding plant for building contractors and contracting authorities throughout Europe.

Foil elements

The foils are edged with aluminium profile frames and, if required, are statically strengthened with a rope network. As they are designed in a multilayer way, such foil constructions have good insulation properties. The substructure of the roof or the facade can be made from wood, steel, aluminium or similar.

Assembly

ETFE foils can be welded. TEXLON HSP is the first company in Switzerland and one of few in Europe to have an ETFE welding plant. It corresponds to the latest generation of technology and meets the highest requirements. As such, production can be flexibly and efficiently controlled and special customer wishes and requirements can be taken into consideration insofar as possible.

Properties

ETFE foil roofs are highly transparent, light and can be designed in many ways. Here are the most important properties of ETFE foil in summary:

- weather-resistant
- permeable to light
- flame resistant
- self-cleaning
- chemical-resistant.

Uses

ETFE foil roofs and facades have proven themselves in practice as being an ideal method for the transparent roofing of large areas. New usage and design opportunities are also opening up in hall construction.

Some important usage areas for ETFE foil structures are: botanical facilities, greenhouses, sport and leisure facilities, events, exhibitions, trade fairs, gastronomy, industry facilities, communal buildings, technical institutes and photovoltaics.

Variations

In recent times, ETFE foils have become available in almost all colours and degrees of saturation. Staining the foils with colours and certain patterns can be done easily. The foil can also be used for playful coloured light effects.



Cable car station Penkenbahn Forecourt roof Mayrhofen – Austria



Indestructible aesthetics

Remains resilient for decades. As clean and aesthetically pleasing as it was on day one. Roof and facade structures covered with ETFE have proven themselves over time. The immense foil construction design opportunities inspire modern architecture.

TEXLON HSP supports architects in making daring plans a reality with advice, and the production and assembly of the ETFE foils in the in-house welding plant.

Life time

Thanks to its resistance to the weather, UV rays, ageing and chemicals, ETFE foils have a very long life time.

ETFE foils have been being subjected to natural and artificial weather tests for more than 30 years. To this day, they have not undergone any significant changes.

Tear resistant

ETFE foils are extremely tear resistant. They also exhibit excellent resistance to further tears after one has occured. This property prevents small damages from becoming big tears.

Repairs

ETFE foil roofs and facades are very stable. Nevertheless, damage can occur occasionally. Small tears and holes can be repaired immediately with a special ETFE adhesive tape. In the event of bigger damages, individual elements can be easily replaced.

Cleaning

ETFE foils are broadly self-cleaning. However, should the outer layer become dirty, then the rain will usually wash this away. Dirt on the inside can be cleaned using water.





Hospital interior courtyard Transparent roof Knittelfeld – Austria



Tear-resistant and competent

The assembly and use of ETFE for foil construction is just one of TEXLON HSP's many competences. The company, from Giswil in Switzerland, plans and builds halls and hangars, textile roofs and facades, air domes and other lightweight constructions throughout the whole of Europe. Services provided range from planning to production and project management to assembly and upkeep.



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TEXLON HSP for roofs and facades with ETFE

- □ Life expectancy of more than 30 years
- □ Self-cleaning thanks to extremely high surface tension; practically no cleaning work required
- \Box UV transmittance: UV A = 100 %, UV B = 50 %, UV C = 0 %
- □ Grid sizes: width is limited without rope support, depending on the inclination of the roof. Length is almost unlimited. The substructure can be done dependent on grid size and can thus be cheaper than with other transparent materials.
- □ Fire behaviour: fire performance indicator is 5.2, DIN 4102 B1, flame resistant, no burning droplets; in the event of fire, the foil disintegrates and a ventilation hole appears. There is no risk (as there is with glass) of building parts falling off.
- □ Hail resistance: deformations to the upper foil are possible in the event of very big hailstones, however, destruction is not to be expected.
- Price: significant cost savings in comparison to using conventional transparent roof solutions.