

TENTS AND TEXTILE ARCHITECTURE

ARCO

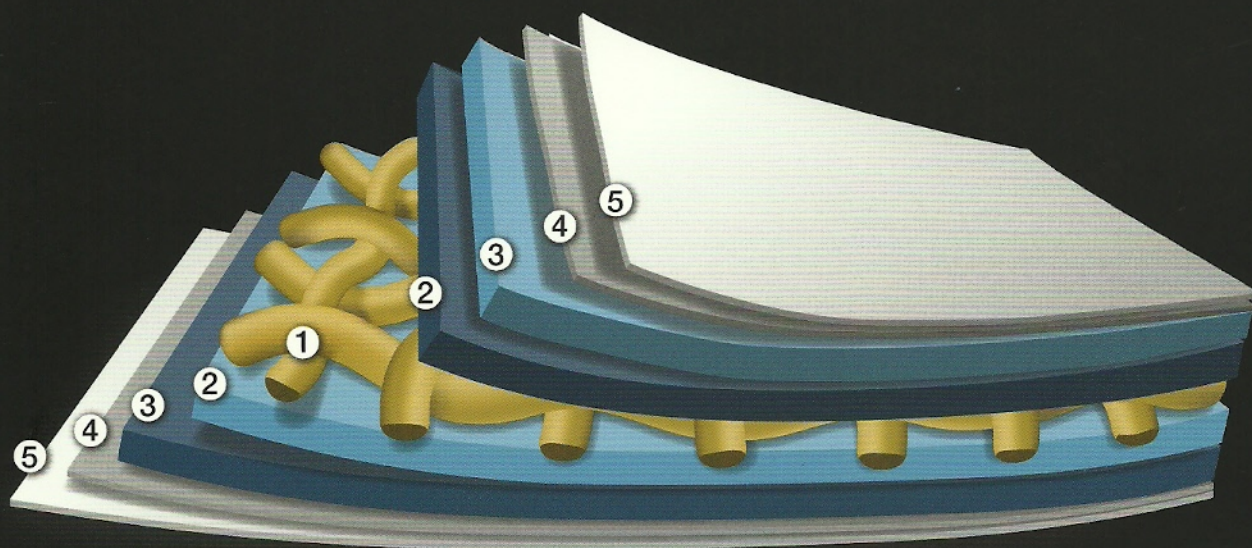
SIOEN

**TEXTILE ARCHITECTURE MEMBRANES FOR TENTS • ROOFTOPS •
TENSIONED STRUCTURES • INFLATABLE HALLS • SILOS • HALLS •
SLIDING ROOFS • ARCHITECTURAL CONSTRUCTIONS • ...**

Types 0 - 1 - 2 - 3 - 4

SIOEN TEXTILE ARCHITECTURE MEMBRANES “THE 9-LAYER FABRIC”

As a fully integrated coater, Sioen fine-tuned and dedicated its machinery in such a way that today Sioen is capable of producing high quality textile architecture membranes with the utmost care. The success of the technology is based on the full integration of each critical process step such as the spinning of the yarns, the weaving, the fabric pre-treatment, chemicals and the formulation of the topcoats used.



- 1** Pre treated base fabric PES high tenacity yarn – extra strong, stabilised and flattened.
- 2** First coating layer with extra adhesion characteristics
- 3** Second coating layer highly pigmented with a UV stable pigmentation

- 4** Siofluo lacquering layer – extra UV and weather resistance
- 5** Siofluo lacquering layer – extra UV and weather resistance

YOUR ADVANTAGES:

- Clear white visual effect
- Perfect weldability
- Cleaning ability greatly enhanced
- Perfect UV resistance
- Protection against moisture
- Resistant to temperature variation
- High abrasion resistance

NEW TECHNOLOGY

The newly installed coating machine provides better overall tension of the textile architecture membranes. We coat back and front side in one run, immediately followed by a special lacquering treatment.

NEW TECHNOLOGY

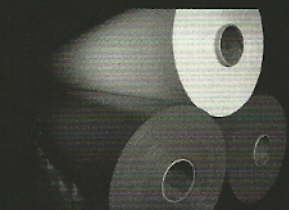
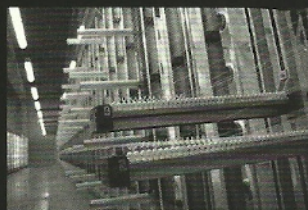
EXTRA UV & THERMAL STABILITY



To guarantee a maximum life span of the PVC coated fabric, Sioen managed to optimize the overall composition in such a way that it shows excellent UV, thermal and biochemical resistance.

The PVC and the pigments in Sioen's T-qualities are selected for their highly stable nature on their own. In order to achieve the highest possible ageing resistance, our labs have managed to increase considerably the life span of the coating even further by incorporating the best UV-, bacterial and thermal stabilisers. In this way, the risk of undesired effects like discoloration is reduced to an absolute minimum. Excellent stability is not a challenge, but a standard.

SIOEN SPECS: HIGH TEARING RESISTANCE AND TENSILE STRENGTH



- The specs of all of our textile architecture products reply to the most stringent demands, amongst others, of the textile architecture world.
- Our products provide amongst others a high tearing resistance and tensile strength in both weft and warp of the membrane. This is the result of careful production of yarn, fabric, paste and varnish.
- We use an ultra strong PES high tenacity yarn that is produced on special extruders in our spinning mill. This implies that the membrane can resist the exposure to all weather elements (sun, wind, rain, snow...).

- Our new looms are dedicated solely to the production of base fabric for textile architecture purposes. The fabric is treated on separate machines and becomes more stable, flatter and extra solid.
- At the Sioen chemicals plants we produce pastes and varnishes. For all textile architecture applications, we have created a clear white pigment and a unique dirt repellent varnish.
- The newly installed coating machine provides better overall tension of the textile architecture membrane. we coat both sides simultaneously, immediately followed by a special lacquering system.

LOW WICK

All of Sioen's T-qualities are produced with fabrics containing ultra low-wicking high tenacity polyester yarns. In a normal polyester yarn, water (containing dirt and fungus) can be taken up by capillary action. When this phenomenon occurs, it will lead to dark marks over

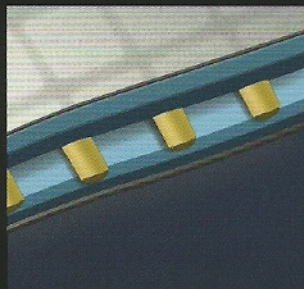
the tent structure, which cannot be removed. Sioen's low-wicking yarns have a special treatment that reduces staining to practically zero. Evidently, this treatment highly extends the life span of the structure and favors the aesthetic aspect of it.



LOW WICK



WICK



SELF CLEANING

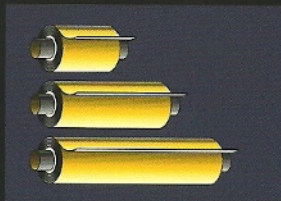


The chemical composition of the topcoat enables good dirt rejection, giving the structure excellent cleaning and even self-cleaning properties (dirt repellence).

In order to provide you easy processing of the fabric, the topcoats are giving you perfect and fluent weldability and are ensuring you a reliable weld, meeting the most stringent demands. All these features are realised by the unique chemical composition of the topcoat.

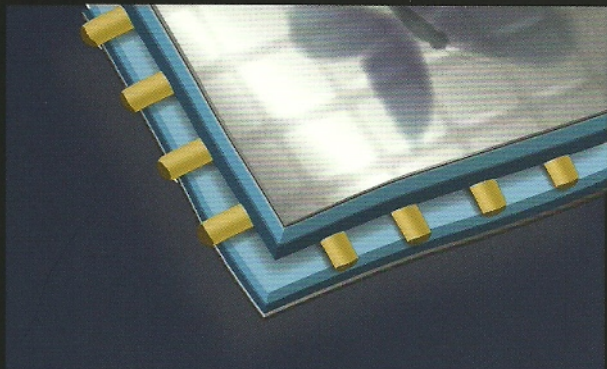
SIOEN WIDTHS AND COLOURS

Sioen offers the largest choice of widths on the market. Some of our products are standard in many colours: available on stock. Any special colour can be requested.

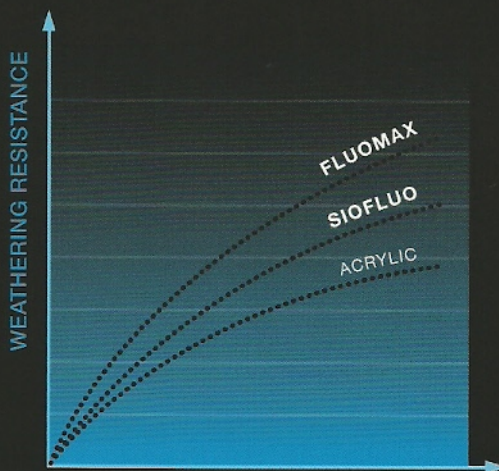


LACQUERING

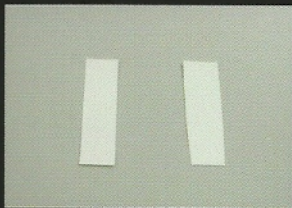
Lacquer treatment is of key significance in textile architecture. The type, quality and amount of numerous lacquer components have been elaborately investigated in our R&D labs. Sioen offers two types of double lacquer treatment. Each of these lacquers have been optimally formulated with top class ingredients that give important features like extra UV, chemical and weather resistance, dirt repellence, smoothness and a brilliant finish.



- a) **Siofluo**: The standard double acrylic/PVDF lacquering, with excellent dirt repellence and improved chemical and radiation protection.
- b) **Fluomax**: A double fluorinated PVDF lacquering, which gives the highest possible ageing resistance.



LIGHT FASTNESS

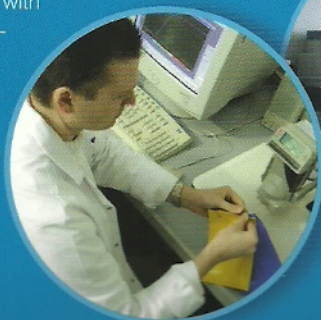


Light fastness of a colour is its (degree of) resistance against (fading due to) light exposure. The mix of additives developed by our R&D centre prevents the colours from fading over the years. Sioen Chemicals division

has many years of experience in testing and recommending light-fast and weather resistant systems for in- and outdoor use. The mixture varies according to polymer, stabilization package and performance expectations. Our specialists always find the best solution.

DEDICATED R&D, CUSTOMIZED DEVELOPMENT

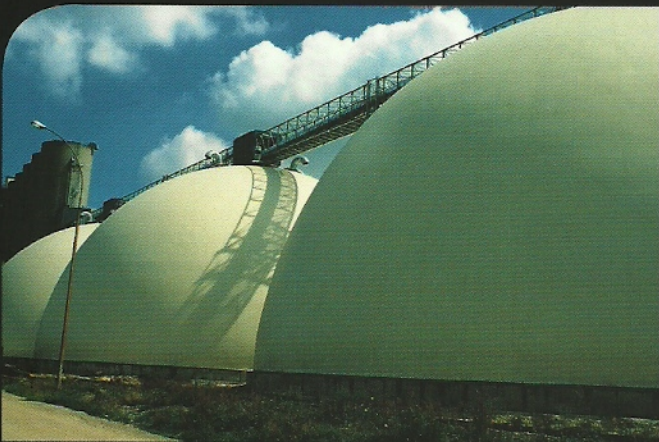
At our central research and development centre, our dedicated team of professionals makes textile architecture their daily business. This new range, with new and exclusive yarn-formulations-techniques-lacquering-, is the result of intensified collaboration between our researchers, external specialists, universities and some of our major clients.



REFERENCES



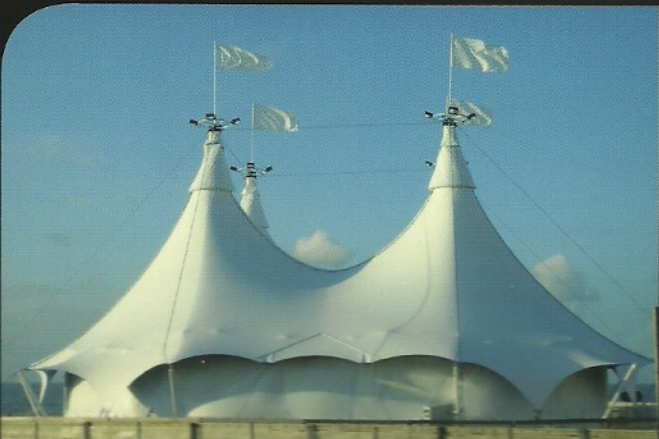
With our new production technology and balanced chemical compositions, we produce all types of textile architecture membranes. Type 0 - 1 - 2 - 3 and 4.



Through extensive R&D efforts we managed to optimize the overall composition of the membrane.



Our lacquers assure optimal UV, chemical and weather resistance, dirt repellence, smoothness and a brilliant finish.



Weldability is a key feature of our membrane.