

# Textile Architecture



**MEHLER**  
TECHNOLOGIES

# Textile structure



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## Membranes for countless applications

Textile structures, as an integrated component of contemporary architecture, get more and more common world-wide. Improved materials and advanced engineering allow for new and larger challenging constructions. Architects and planners now have the possibility to realise their visions and their demand on perfection in function and appearance.



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Mehler Technologies follows this demand! Practically proven membranes, with application-specific surface finishes, coupled with ongoing research and product optimisation, support architects and planners in the realisation of their ideas.

The product range **VALMEX® structure** has especially been developed for textile architecture. It stands for most diverse applications:

- Open, enclosed, convertible, and attached covers
- Tensioned membrane, frame supported, and air supported structures

To support architects and engineers to generate 3D models of tensile structures, a new software has been developed. **Mehler TensileDraw** is an AutoCAD and RHINO fully compatible and integrated plug-in software package.

**Mehler TensileDraw** is a useful help in 3D model design: it can simulate well balanced force stress distribution on the membrane surface without complicating file exportation and related compatibly problems.

The application can calculate the form of complex geometry fabric structures thanks to the generation of a warp and weft beam mesh reproducing orthotropic behaviour of fabric material.



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Mehler Technologies' membranes for textile structure are used all around the world:

- 1 China
- 2 United Kingdom
- 3 Brazil
- 4 China
- 5 China
- 6 Australia
- 7 Australia
- 8 Poland
- 9 Romania
- 10 Germany



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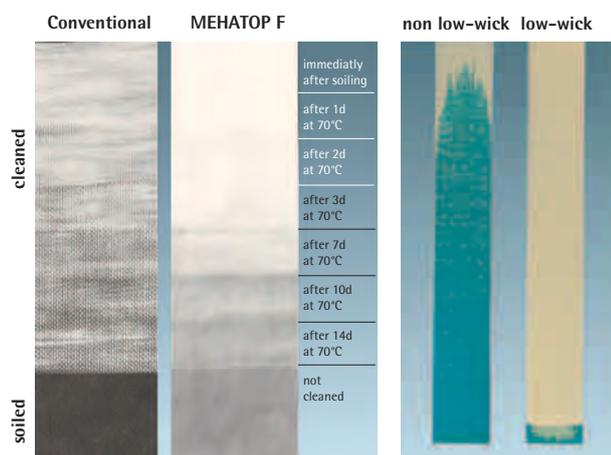
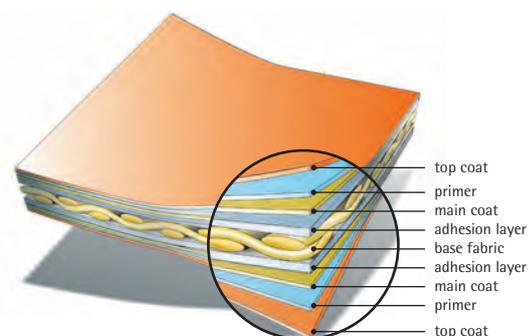
# Ideas come true



## Fabrics to create future

**VALMEX® MEHATOP F** is a multi-layer composite material with special densely woven low-wick yarns in the base fabric. Several coatings (adhesion, main coat, primer) give necessary tightness and flexibility. The surface lacquering, that includes PVDF lacquer (MEHATOP F) developed by Mehler Technologies, finishes the material with a double top coat that has a protective and refining effect. That is why **VALMEX® MEHATOP F** membranes maintain their unique appearance long term, and under extreme climatic conditions. Apart from the application diversity, the material characteristics are particularly convincing:

- Very water and dirt repellent, thus a low level of surface pollution
- Good surface barriers as sealants against plasticiser migration
- Improved cleaning behaviour
- Reduced invasion of fungus and micro-organisms into the membrane
- Good weldability
- High temperature resistance
- Good long-term appearance



Highest quality standards assure applications in many different ways:

- 1 China
- 2 Iran
- 3 Great Britain
- 4 South Africa
- 5 Italy
- 6 Korea
- 7 Germany



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# Creating events



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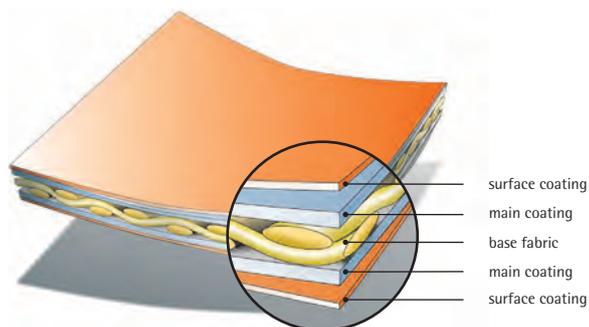


## From shelter to architecture

The tent belongs to the oldest housings that mankind has created. As it can be build up and dismantled quickly, the tent stands for mobility, immediate utilisation and independence from time. Events, presentations, leisure time applications or simply roofing and shelter turn tents into an essential part of culture and lifestyle.

With **VALMEX® tent**, Mehler Texnologies has created an application-specific product range opening up all construction, size and application possibilities to planners, architects and manufacturers.

As in **VALMEX® structure**, the base fabric in **VALMEX® tent** does also consist of low-wick yarns. The special surface with PVDF or acrylic lacquering provides for high water and UV resistance and protects against infestation by fungus and micro-organisms. High tear resistance and a relatively low weight favour the quick build up and dismantlement, particularly in marquees.



Suitable material for each application:

- 1 MEHATOP F
- 2 VALMEX® FR 650-2
- 3 Bright atmosphere by translucency of fabric
- 4 VALMEX® FR duo opak
- 5 POLYMAR® Poly opak
- 6 Pagoda tent
- 7 City scape
- 8 Pole tent
- 9 Free span

The diverse applications of **VALMEX® tent** are primarily based on the excellent material characteristics:

- Flame retardant
- Fungicide treatment
- High tensile strength and tear resistance
- Good UV resistance
- High water pressure resistance
- Easy to weld
- Easy to clean
- Impressive long-term appearance



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# Light and shadow



## Protecting efficiently from sun

Sun protection, shading and air conditioning are factors for the value maintenance, productivity and life quality that must not be underestimated. Moreover, the economic aspect of energy saving makes sun protection and shading more and more attractive – also in smaller objects. Mehler Technologies has developed several product ranges that are adjusted to these specific applications.

Apart from material qualities of the **VALMEX® structure** products that are e. g. used as car park roofing, the product range **AIRTEX®** offers fabrics covering the whole outside shading area. Examples are awnings, gastronomy umbrellas and sunshades and leisure time applications.

With **FLASHGUARD®**, architects, planners and the sun protection trade do have consistent fabrics at their disposal that are adjusted to the requirements of shading systems and constructions. It can be used for both, shading inside and outside. **FLASHGUARD®** aims at the creation of a natural and comfortable room climate. The fabric has an open structure, outward sight is unlimited and natural illumination is maintained to the largest possible extent. An advantage that will create relaxed work, particularly at computer work places. Many colours allow on the one hand for an individual light and room atmosphere, on the other hand, shading systems can be used in an integrative or accenting way in building design.

With **VALMEX® sol-boutique**, blind fabrics are available that have particularly been developed for decorative and commercial outside shading.



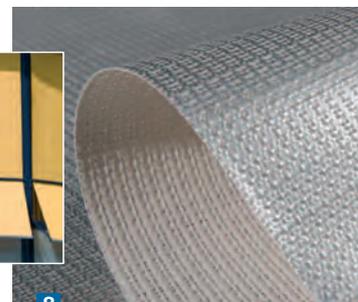
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VALMEX® fabrics have excellent properties for sun protection:

- 1 VALMEX® FR 900
- 2 VALMEX® MEHATOP F
- 3 VALMEX® FR 1400
- 4 VALMEX® FR 700
- 5 VALMEX® FR 1000
- 6 VALMEX® FR 900
- 7 VALMEX® highly translucent
- 8 FLASHGUARD®
- 9 FLASHGUARD®
- 10 VALMEX® silver MESH



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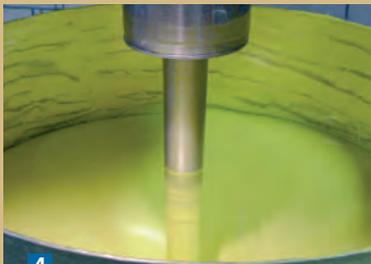


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# Quality at its best



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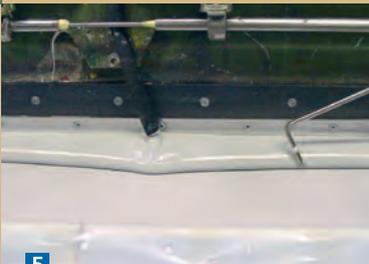
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## German technology for technical textiles

In the market of coated fabrics, Mehler Technologies is one of the leading international companies. More than 50 million square metres of material are manufactured and supplied under the brands **VALMEX®**, **POLYMAR®** and **AIRTEX®**.

Clients are companies in the manufacturing, fabrication and converting industry.

The technology for the fully developed technical textiles comes from 60 years of experience in development and production. Continuo-

ous ongoing research and development further enhances existing composite materials, and opens up new ranges of application. To ensure the consistent high quality of products means to continually keep up to date with the latest state-of-the-art technology. The responsible way in which the company deals with energy and resources, its use of environmentally sustainable materials and its activities related to the recycling of coated textiles have been bundled by Mehler Technologies under one all embracing label.

Mehler Technologies manufactures its technical textiles at two sites in Germany and one site in the Czech Republic. Clients in more than 80 countries are supplied by sales companies in Italy, France, Great Britain, Poland, Latvia, Romania, Turkey, Middle East, Far East and the United States as well as sales agents in other European countries, Asia, Australia, Africa and South America.

Manufacturing of coated fabrics is committed to highest quality standards:

- 1 Precision coater
- 2 Warp beam
- 3 Weaving loom (high speed)
- 4 Blend the compound
- 5 Spread the coating
- 6 Que for top lacquering
- 7 Coating up to 5 m width
- 8 Assured quality
- 9 Biaxial strenght test
- 10 Tensile strength test
- 11 Seam strength test
- 12 Tear strength test
- 13 UV resistance test



**MEHLER**  
*eco-care*



**vinyl** plus

Due to its commitment to environmental responsibility and sustainability Mehler Technologies is participating in external recycling systems and in the 'voluntary commitment of the PVC industry' VinylPlus.

# Mehler Texnologies - around the world

## Manufacturing and sales



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