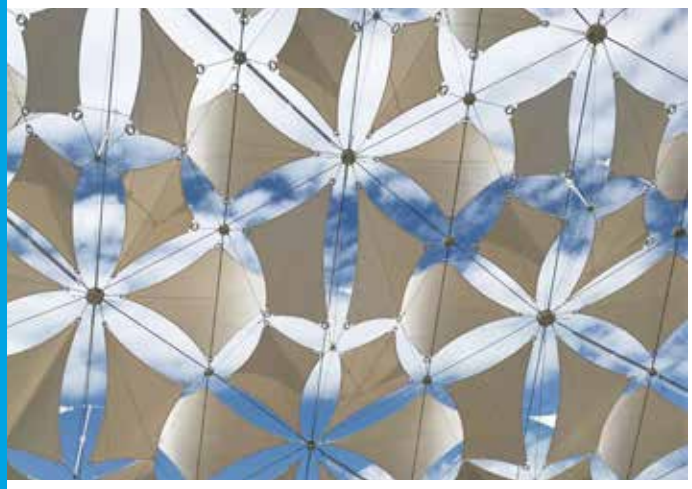
Architectural Membranes

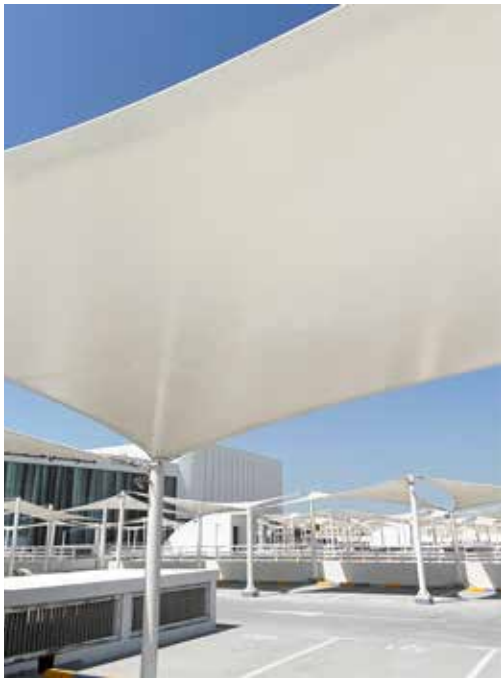


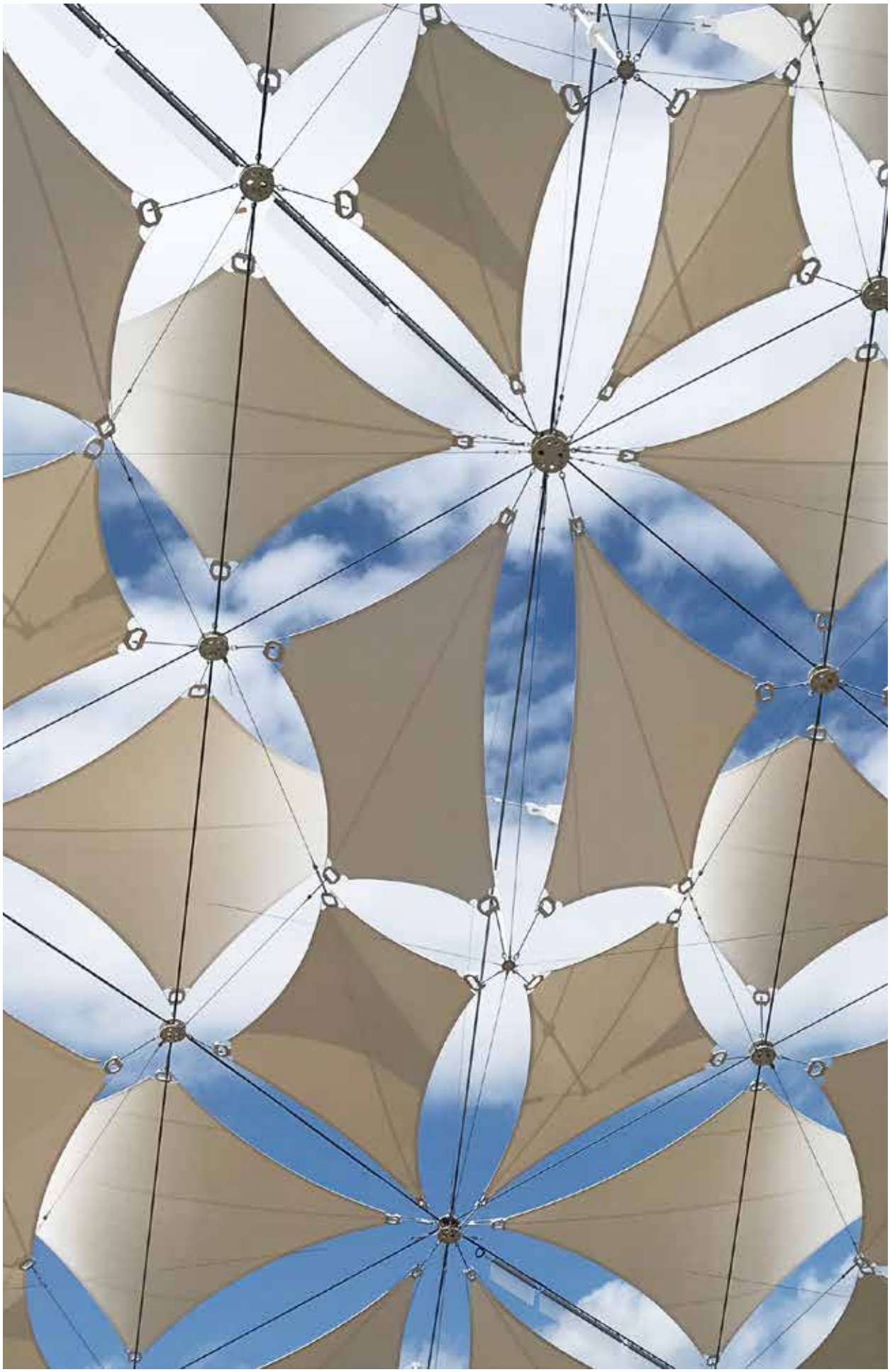












Architectural membranes

Dear reader,

With over 110 years of textile traditions, we serve companies that have the ambition to shape the future and we contribute to the challenges of our fast evolving world.

At Sioen, we commit to achieve a reliable and satisfactory solution.

As technical textile experts, we focus on applications and materials that only few know to deal with: textile membranes.

The constant development of state-of-the-art projects is the fruit of our exceptional experience combined with a great technical know-how. Textile architecture opens up unimagined possibilities allowing to create building sculptures, organic shapes, light roofs or draw attention to spectacular facades with advanced properties in an economical, environmentally friendly and sustainable way.

Products

Fluo²max	9
Fluomax	13
Easyfluo	19
Facade	23
Fluoscrim	27
Keders	30

Sioen is member of

LSAA TensiNet IMS e.V.

In the spotlight

New Sioen Tensile Architecture website

*We have recently updated the Sioen Tensile Architecture website. A range of new features have been added. We now have a **fabric selector**, a possibility to **register your warranty** and Expertise, Use and Vision sections.*

By using our fabric selector, you can find the perfect fabric for your project in just a few clicks. Feel free to use our filters on range, tensile strength, weight, properties, surface treatment and solar transmission. Those filters will narrow your search. Contact our team for more information and advice.

The new section Expertise includes more information on production, vertical integration, technicity, warranty and colours. Use, on the other hand, elaborates on themes such as less waste, sustainability, end-of-life, cleaning and maintenance.

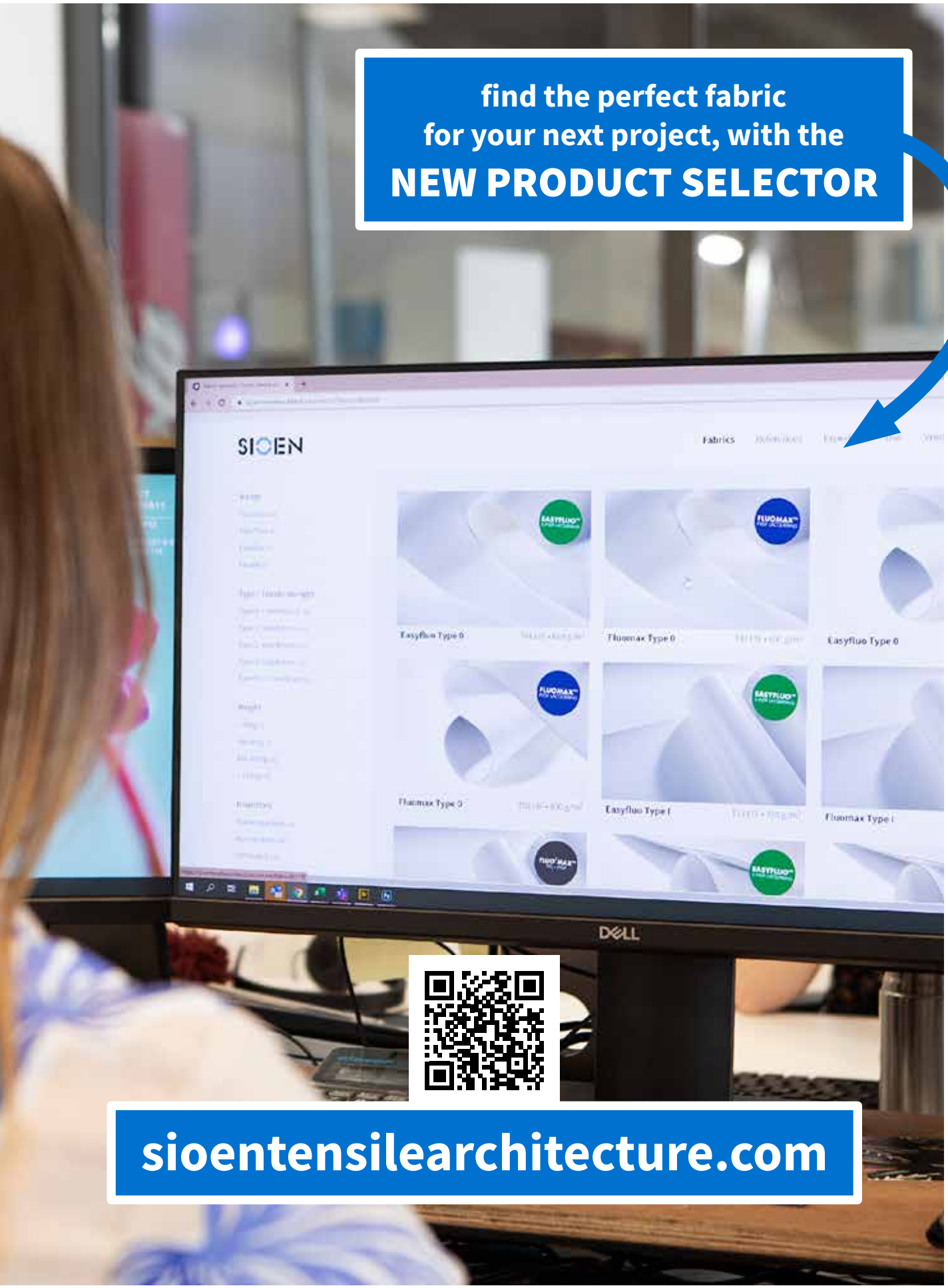
New CSR website

The Sioen Group has its own dedicated Corporate Social Responsibility website where you can find all actions Sioen is involved in.

Our approach is based on the UN's 17 Sustainable Development Goals, the 5 P's (People, Prosperity, Planet, Peace, Partnerships) and the Sioen focal points (Energy, Waste, Sustainable products, Credentials and HR). Our certificates, memberships and awards prove our engagement towards CSR.

You can use our filters to search through our long list of actions.




find the perfect fabric
for your next project, with the
NEW PRODUCT SELECTOR
SIOEN
Fabrics
DELL
sioentensilearchitecture.com

Quick selection guide for TA

Architectural membranes

	Range	Definition	Tensile strength	Fibres
page 9	**Fluo²max**	Highest durability membrane	Type 1 to Type 5	High quality High tenacity polyester
page 13	**Fluomax**	Performance membrane	Type 0 to Type 5	High quality High tenacity polyester
page 19	**Easyfluo**	Cost efficient membrane	Type 0 to Type 2	High quality High tenacity polyester
page 23	**Façade**	Facade mesh	Type 2	High quality High tenacity polyester
page 27	**Fluoscrim**	Highly translucent membrane	Type 2	Glass fibre mesh

Opaque options



Our fluo2max, Fluomax and Easyfluo ranges also include opaque fabrics (0% light transmission).
For an overview of Fluomax opaque quality properties, please have a look at pages 16-17.

	Treatments				
	Low wick	*Flame Retardancy*	*Antibacterial*	**Top coating**	**Warranty**
	Yes	Yes	Yes	Front: TiO_2 + PVDF Back: PVDF	Up to 20 years
	Yes	Yes	Yes	Front: PVDF Back: PVDF	Up to 15 years
	Yes	Yes	Yes	Front: PVDF Back: Acrylic	Up to 10 years
	No	Yes	Yes	Both side In deep lacquering: Mat / Glossy / Print	Up to 12 years
	Yes	Yes	Yes	Translucent fluoropolymer HF weldable	Up to 15 years


ADRIATIC
BANCA dell'ADRIATICO
Arena

Fluo²max

FLUO² MAX™
TiO_2 + PVDF

The Fluo²Max membranes are more than just the improved Fluomax membranes. Fluo²Max is the next-generation high durability range that offers the best performance possible. The range is perfect for regions with high UV radiation levels, thanks to its TiO_2 prime coat barrier. On top of that, the Fluo²Max membrane range is lacquered with our PVDF topcoat on both sides, just like our FluoMax. The Fluo²Max' 20 year warranty proves its high durability.

9 layered membrane

Surface treatment (front)
PVDF direct weldable

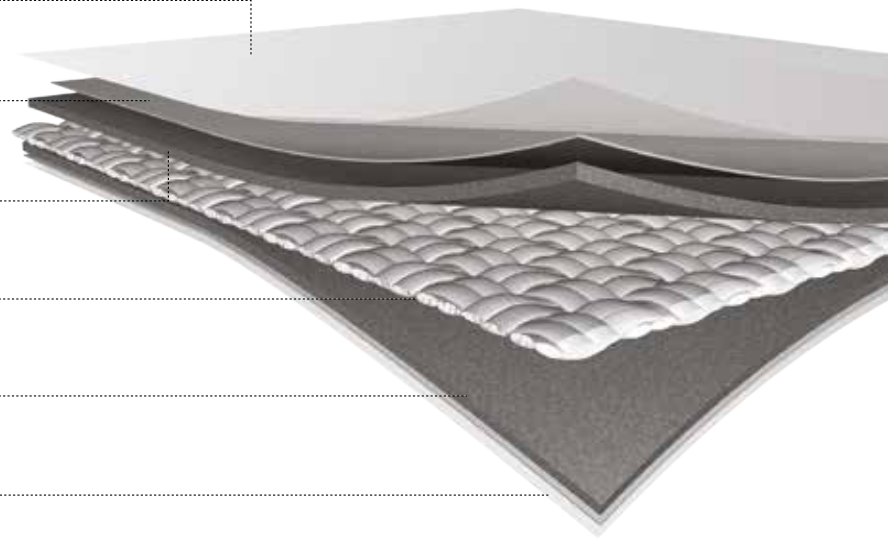
Primer
TiO_2

Base coating
Architectural PVC coating (2 layers)

Fabric
High tenacity PES low wick treated

Base coating
Architectural PVC coating (2 layers)

Surface treatment (back)
PVDF direct weldable (2 layers)



Overview Fluo²Max™ qualities

Directly weldable PVC coated polyester fabric with TiO_2 and PVDF lacquering for enhanced lifetime durability.

		Type 1	Type 2	Type 2	Type 3
		T1117T	T2117T	T2118T	T3117T
Basic properties					
Total weight - g/m²		725	900	1050	1150
Thickness		0,60 mm	0,75 mm	0,9 mm	1 mm
Standard width (1)		300 cm	300 cm	300 cm	300 cm
Technical specifications					
Breaking strength (Warp/Weft) - N/5cm		3000/3000	4300/4200	4300/4200	6000/5500
Tear strength (Warp/Weft) - N		300/300	600/500	600/500	900/800
Adhesion - N/5cm		100	120	120	120
Temperature resistance		-30/+70°C	-30/+70°C	-30/+70°C	-30/+70°C
Flex cracking (100.000x)		no cracks	no cracks	no cracks	no cracks
Microbial resistance		degree 0	degree 0	degree 0	degree 0
Fire resistance	*EU Fire test*	B-s2 d0	B-s2,d0	B-s2 d0	B-s2 d0
	French Fire test	M2	M2	M2	M2
	German Fire test	B1	B1	B1	B1
	British Fire test	Pass	Pass	Pass	Pass
	Marshall Fire test	Pass	Pass	Pass	Pass
	Australian Fire test	Tested	Tested	-	-
	Russian technical standard	Pass	Pass	Pass	Pass
	American Fire test	Pass	Pass	Pass	Pass
Solar values	*Solar Transmission (Ts)*	8,5 %	7,4%	5,6%	4,8%
	Visible light transmission (Tv)	7,2%	6,3%	4,7%	4,2%
	Reflection (Rs)	81%	81%	83%	83%
	UV transmission (Tuv)	0%	0%	0%	0%
	Solar reflection (SRI)	102	103	105	106
	Solar Factor (G value)	12%	11%	9%	7%
	U value (Vertical Airflow)	5,6	5,5	5,5	5,5
	U value (Horizontal Airflow)	4,7	4,6	4,6	4,6

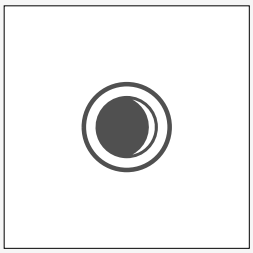
Type 4	Type 5	
T4117T	T5117T	
1350	1600	*DIN EN ISO 2286/2*
1,15 mm	1,39 mm	*DIN 5084*
250 cm	250 cm	
8000/7000	10000/9000	*DIN 1421*
1200/1200	2000/2000	*DIN 53363*
120	150	*ISO 2411*
-30/+70°C	-30/+70°C	*DIN EN 1876/2*
no cracks	no cracks	*DIN 53359A*
degree 0	degree 0	*EN ISO 846-A*
C-s2 d0	C-s3 d0	*EN 13501*
-	-	*NF P 92 507*
B1	-	*DIN 4102*
Pass	Pass	*BS 7837*
Pass	Pass	*California T19*
-	-	*AS 1530.2*
Pass	Pass	*GOST*
Pass	Pass	*NFPA 701*
4,5%	-	*DIN EN 410*
4%	-	*DIN EN 410*
83%	-	*DIN EN 410*
0%	0%	*DIN EN 410*
106	-	*ASTM E 1980*
8%	-	*DIN EN 13363/1*
5,5	5,5	*DIN EN ISO 6946*
4,6	4,6	*DIN EN ISO 6946*

Colours

Other widths on request.



9922 - White



Opaque on demand

Standard rolls: 3m wide 100 lm
Jumbo rolls: on request

Key features



Low wick



Flame retardant



Antibacterial



Best in class
UV resistance



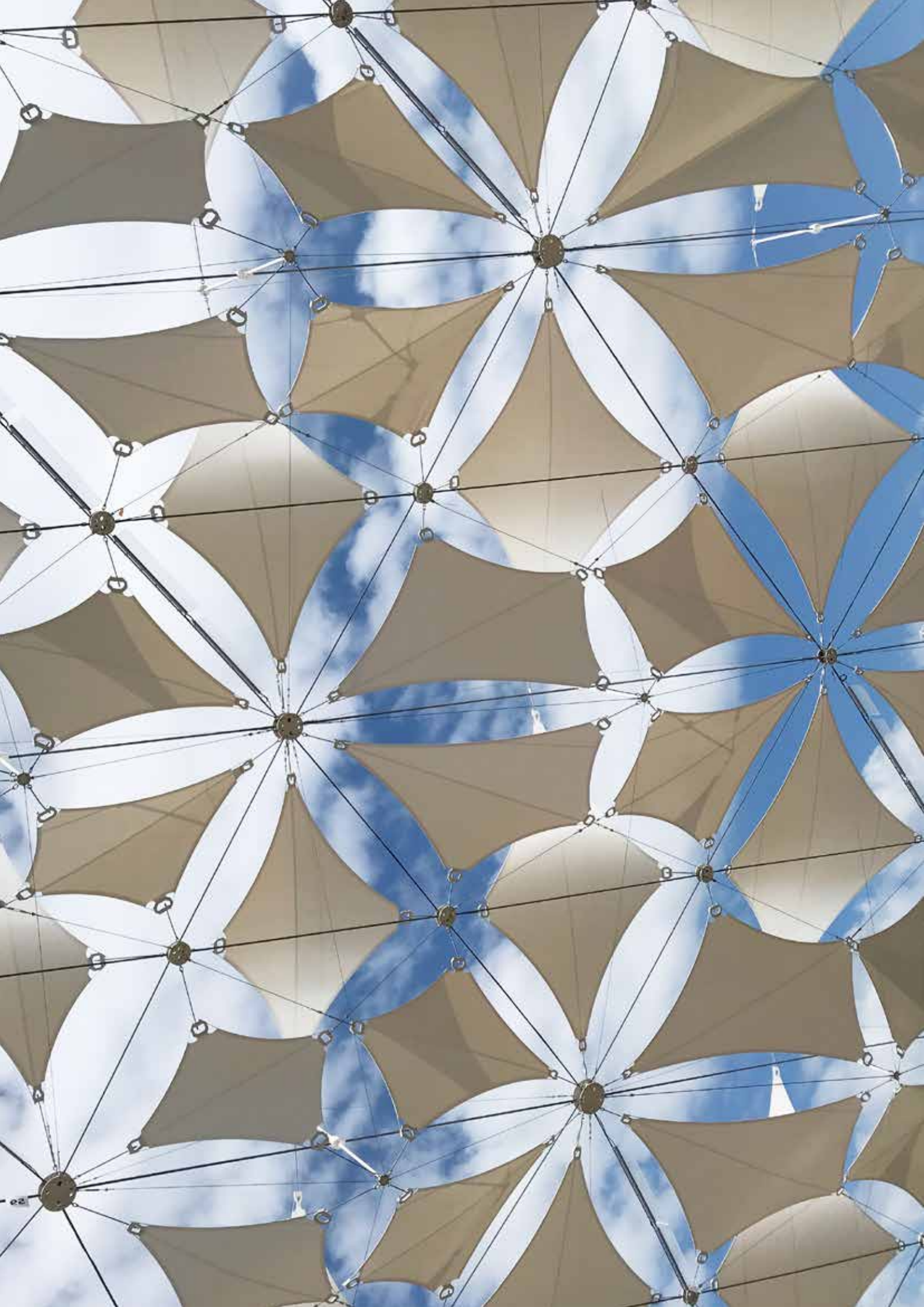
Direct HF
weldable

Lacquering

Top:
TiO_2-PVDF

Bottom:
PVDF

20
years warranty



Fluomax

FLUOMAX™
PVDF LACQUERING

Our FluoMax is the standard membrane range in textile architecture. It offers long-lasting performances and is thus the exquisite choice for permanent projects. Its superb PVDF topcoat provides excellent dirt resistance and durable easy cleaning properties. We offer a 15 year warranty thanks to this range's excellent lifetime durability.

9 layered membrane

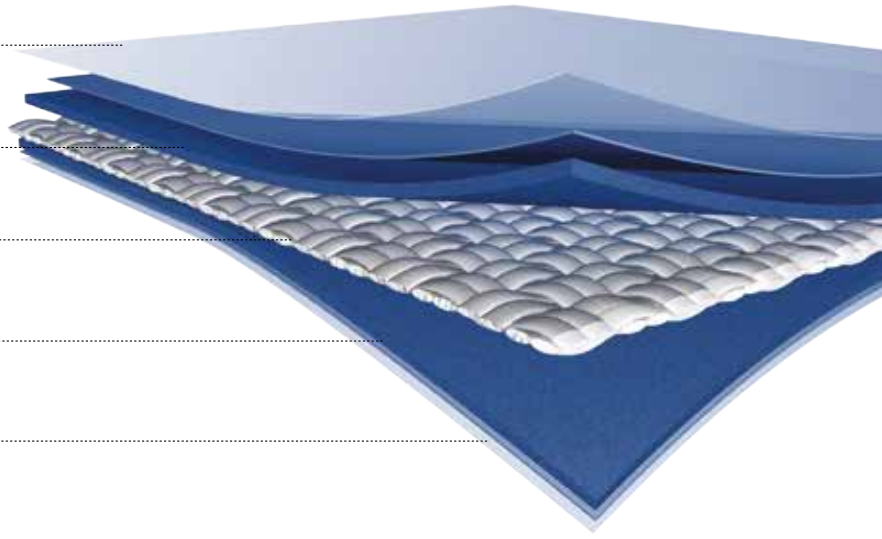
Surface treatment (front)
PVDF direct weldable (2 layers)

Base coating
Architectural PVC coating (2 layers)

Fabric
High tenacity PES low wick treated

Base coating
Architectural PVC coating (2 layers)

Surface treatment (back)
PVDF direct weldable (2 layers)



Overview Fluomax qualities

Directly weldable PVC coated polyester fabric with both side PVDF lacquering.

		Type 0	Type 1	Type 2	Type 2
		T0117F	T1117F	T2117F	T2118F
Basic properties					
Total weight - g/m²		650	725	900	1050
Thickness		0,55 mm	0,60 mm	0,75 mm	0,90 mm
Standard width (1)		300 cm	300 cm	300 cm	300 cm
Technical specifications					
Breaking strength (Warp/Weft) - N/5cm		2900/2700	3000/3000	4300/4200	4300/4200
Tear strength (Warp/Weft) - N		300/300	300/300	600/500	600/500
Adhesion - N/5cm		100	100	120	120
Temperature resistance		-30/+70°C	-30/+70°C	-30/+70°C	-30/+70°C
Flex cracking (100.000x)		no cracks	no cracks	no cracks	no cracks
Microbial resistance		degree 0	degree 0	degree 0	degree 0
Fire resistance	*EU Fire test*	B-s2 d0	B-s2 d0	B-s2 d0	B-s2 d0
	French Fire test	M2	M2	M2	M2
	German Fire test	B1	B1	B1	B1
	British Fire test	Pass	Pass	Pass	Pass
	Marshall Fire test	Pass	Pass	Pass	Pass
	Australian Fire test	Tested	Tested	Tested	-
	Russian technical standard	Pass	Pass	Pass	Pass
	American Fire test	Pass	Pass	Pass	Pass
Solar values	*Solar Transmission (Ts)*	11%	10%	8,6%	6%
	Visible light transmission (Tv)	10%	9%	7,4%	6%
	Reflection (Rs)	78%	79%	82%	82%
	UV transmission (Tuv)	0%	0%	0%	0%
	Solar reflection (SRI)	97	98	101	102
	Solar Factor (G value)	13%	12%	10%	10%
	U-Value (Vertical airflow)	5,6 W/(m².K)	5,6 W/(m².K)	5,5 W/(m².K)	5,5 W/(m².K)
	U-Value (Horizontal airflow)	4,7 W/(m².K)	4,7 W/(m².K)	4,6 W/(m².K)	4,6 W/(m².K)

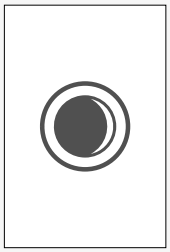
Type 3	Type 4	Type 5	
T3117F	T4117F	T5117F	
1150	1350	1600	*DIN EN ISO 2286/2*
1,00 mm	1,15 mm	1,39 mm	*DIN 5084*
300 cm	250 cm	250 cm	
6000/5500	8000/7000	10000/9000	*DIN 1421*
900/800	1200/1200	2000/2000	*DIN 53363*
120	120	150	*ISO 2411*
-30/+70°C	-30/+70°C	-30/+70°C	*DIN EN 1876/2*
no cracks	no cracks	no cracks	*DIN 53359A*
degree 0	degree 0	degree 0	*EN ISO 846-A*
B-s2 d0	C-s2 d0	C-s3 d0	*EN 13501*
M2	-	-	*NF P 92 507*
B1	B1	-	*DIN 4102*
Pass	Pass	Pass	*BS 7837*
Pass	Pass	Pass	*California T19*
-	-	-	*AS 1530.2*
Pass	Pass	Pass	*GOST*
Pass	Pass	Pass	*NFPA 701*
6,2%	5,4%	4%	*DIN EN 410*
5,6%	4,9%	1%	*DIN EN 410*
82%	82%	83%	*DIN EN 410*
0%	0%	0%	*DIN EN 410*
103	104	102	*ASTM E 1980*
8%	7%	-	*DIN EN 13363/1*
5,5 W/(m².K)	5,5 W/(m².K)	-	*DIN EN ISO 6946*
4,6 W/(m².K)	4,6 W/(m².K)	-	*DIN EN ISO 6946*

Colours

Other colours and width on request,
for colour range see table pages 32-33.







9909 - White

Opaque see page 16

Standard rolls: 3m wide 100 lm
Jumbo rolls: on request

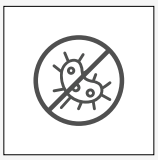
Key features



Low wick



Flame retardant



Antibacterial



Best in class
UV resistance



Direct HF
weldable

Lacquering

Top:
PVDF

Bottom:
PVDF

15
years warranty

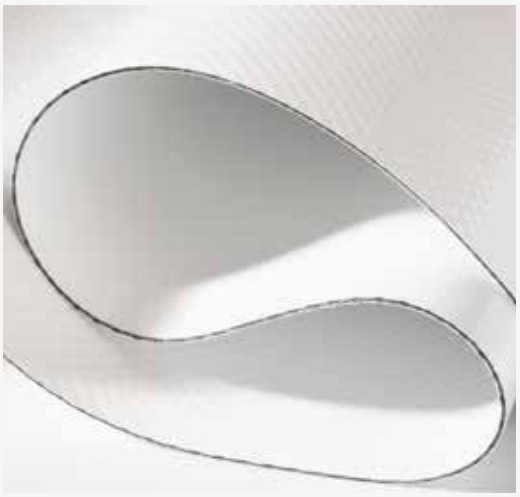
Overview Fluomax Opaque qualities

Directly weldable PVC coated polyester fabric with both side PVDF lacquering with 0% light transmission.



		Type 0	Type 1	Type 2
		T0119F	T1119F	T2119F
Basic properties				
Total weight - g/m²		800	850	1050
Thickness		0,67 mm	0,72 mm	0,90 mm
Standard width (1)		300 cm	300 cm	300 cm
Technical specifications				
Breaking strength (Warp/Weft) - N/5cm		2900/2700	3000/3000	4300/4200
Tear strength (Warp/Weft) - N		300/300	300/300	600/500
Adhesion - N/5cm		100	100	120
Temperature resistance		-30/+70°C	-30/+70°C	-30/+70°C
Flex cracking (100.000x)		no cracks	no cracks	no cracks
Microbial resistance		degree 0	degree 0	degree 0
Fire resistance	*EU Fire test*	B-s1 d0	-	-
	French Fire test	M2	M2	M2
	German Fire test	-	B1	B1
	British Fire test	Pass	Pass	Pass
	Marshall Fire test	Pass	Pass	Pass
	Australian Fire test	-	-	-
	Russian technical standard	Pass	Pass	Pass
	American Fire test	Pass	Pass	Pass
Solar values	*Solar Transmission (Ts)*	0%	0%	0%
	Visible light transmission (Tv)	0%	0%	0%
	Reflection (Rs)	77%	77%	77%
	UV transmission (Tuv)	0%	0%	0%
	Solar reflection (SRI)	92	92	92
	Solar Factor (G value)	-	-	-
	U-Value (Vertical airflow)	-	-	-
	U-Value (Horizontal airflow)	-	-	-

Type 3	Type 4	
T3119F	T4119F	
1300	1600	*DIN EN ISO 2286/2*
1,10 mm	1,40 mm	*DIN 5084*
250 cm	250 cm	
6000/5500	8000/7000	*DIN 1421*
900/800	1200/1200	*DIN 53363*
120	120	*ISO 2411*
-30/+70°C	-30/+70°C	*DIN EN 1876/2*
no cracks	no cracks	*DIN 53359A*
degree 0	degree 0	*EN ISO 846-A*
-	-	*EN 13501*
M2	-	*NF P 92 507*
-	-	*DIN 4102*
Pass	Pass	*BS 7837*
Pass	-	*California T19*
-	-	*AS 1530.2*
Pass	Pass	*GOST*
Pass	Pass	*NFPA 701*
0%	0%	*DIN EN 410*
0%	0%	*DIN EN 410*
-	-	*DIN EN 410*
0%	-	*DIN EN 410*
-	-	*ASTM E 1980*
-	-	*DIN EN 13363/1*
5,5 W/(m².K)	5,5 W/(m².K)	*DIN EN ISO 6946*
4,6 W/(m².K)	4,6 W/(m².K)	*DIN EN ISO 6946*



Key features

Low wick

Flame retardant

Antibacterial

Best in class UV resistance

Direct HF weldable

Opaque

Lacquering

Top: **PVDF**

Bottom: **PVDF**

15 **years warranty**



Easyfluo

EASYFLUO™
PVDF LACQUERING

The Easyfluo is a membrane range with long-lasting aesthetics, offering a good performance. The membranes are easy-to-handle, lightweight and translucent. Its quality and budget price ensure an optimal price/ performance ratio. The Easyfluo range is subject to a 10-year warranty.

9 layered membrane

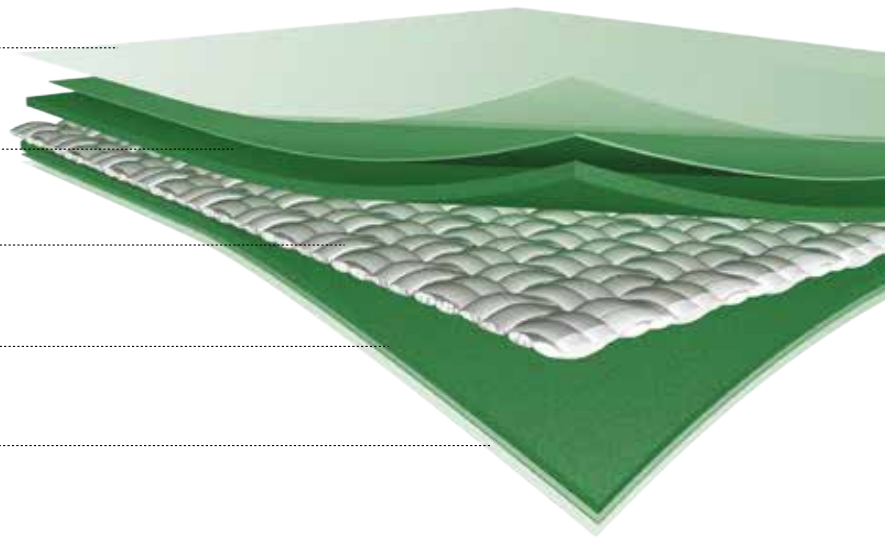
Surface treatment (front)
PVDF direct weldable (2 layers)

Base coating
Architectural PVC coating (2 layers)

Fabric
High tenacity PES low wick treated

Base coating
Architectural PVC coating (2 layers)

Surface treatment (back)
Acrylic direct weldable (2 layers)



Overview Easyfluo qualities

Directly weldable PVC coated polyester fabric with E-PVDF lacquering.

		Type 0	Type 1
		T0117E	T1117E
Basic properties			
Total weight - g/m²		650	725
Thickness		0,55 mm	0,60 mm
Standard width (1)		300 cm	300 cm
Technical specifications			
Breaking strength (Warp/Weft) - N/5cm		2900/2700	3000/3000
Tear strength (Warp/Weft) - N		300/300	300/300
Adhesion - N/5cm		100	100
Temperature resistance		-30/+70°C	-30/+70°C
Flex cracking (100.000x)		no cracks	no cracks
Microbial resistance		degree 0	degree 0
Fire resistance	*EU Fire test*	B-s2 d0	B-s2 d0
	French Fire test	M2	M2
	German Fire test	B1	B1
	British Fire test	-	Pass
	Marshall Fire test	-	Pass
	Australian Fire test	Tested	Tested
	Russian technical standard	-	Pass
	American Fire test	-	Pass
Solar values	*Solar Transmission (Ts)*	11%	10%
	Visible light transmission (Tv)	-	9%
	Reflection (Rs)	78%	79%
	UV transmission (Tuv)	0%	0%
	Solar reflection (SRI)	97	98
	Solar Factor (G value)	13%	12%
	U-Value (Vertical airflow)	5,6 W (m².K)	5,6 W (m².K)
	U-Value (Horizontal airflow)	5,6 W (m².K)	4,7 W (m².K)

Type 2	Type 2	
T2117E	T2118E	
900	1050	*DIN EN ISO 2286/2*
0,75 mm	0,90 mm	*DIN 5084*
300 cm	300 cm	
4300/4200	4300/4200	*DIN 1421*
600/500	600/500	*DIN 53363*
120	120	*ISO 2411*
-30/+70°C	-30/+70°C	*DIN EN 1876/2*
no cracks	no cracks	*DIN 53359A*
degree 0	degree 0	*EN ISO 846-A*
B-s2 d0	B-s2 d0	*EN 13501*
M2	M2	*NF P 92 507*
B1	B1	*DIN 4102*
Pass	Pass	*BS 7837*
Pass	Pass	*California T19*
Tested	-	*AS 1530.2*
Pass	Pass	*GOST*
Pass	Pass	*NFPA 701*
8,6%	6%	*DIN EN 410*
7,4%	6%	*DIN EN 410*
81%	82%	*DIN EN 410*
0%	0%	*DIN EN 410*
101	101	*ASTM E 1980*
10%	10%	*DIN EN 13363/1*
5,5 W (m^2.K)	5,5 W (m^2.K)	*DIN EN ISO 6946*
4,6 W (m^2.K)	4,6 W (m^2.K)	*DIN EN ISO 6946*

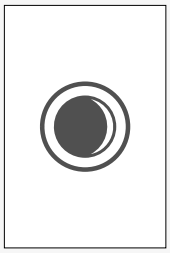
Colours

Other colours and width on request,
for colour range see table pages 32-33.



9909 - White





Opaque on demand

Standard rolls: 3m wide 100 lm
Jumbo rolls: on request

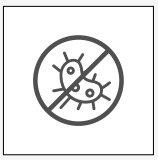
Key features



Low wick



Flame retardant



Antibacterial



Best in class
UV resistance



Direct HF
weldable

Lacquering

Top:
E-PVDF

Bottom:
Acrylic

10
years warranty


fifty ONE

Facade mesh

FACADE
ELEMENTS

Our facade range has a very strong tensile strength and can be used for building aesthetics, weather protection, direct sunlight screening, visual screening and even publicity. The range is available in three types of in-deep architectural PVC coating: printable, mat and glossy. Its low footprint impact makes it the perfect solution for durably retrofitting your building. The facade mesh range comes with 12 years of warranty.

Coating
InDeep Architectural PVC coating

Top coating (3 options):

1. Printable
2. Mat
3. Glossy

In-Deep



Fabric
High tenacity PES yarns

Overview Façade quality

Directly weldable PVC coated polyester mesh .

FACADE ELEMENTS

Type 2

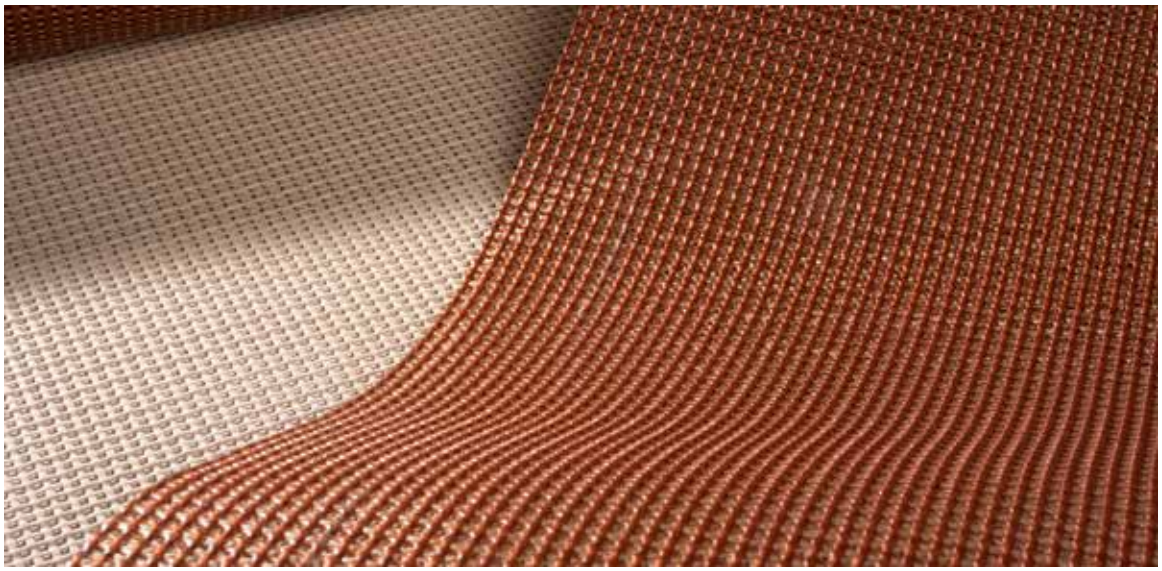
W090721LV

Basic properties

Total weight - g/m²	700	*DIN ISO 2286/2 1998*
Thickness	1,20 mm	*DIN 5084*
Openess factor	22%	*NBN EN 14500*
Composition	Polyester 1670 dtex - Architectural PVC - in-deep surface treatment	
Roll width	300 cm	
Roll length	50 lm	

Technical specifications

Tensile strength (Warp / Weft)	*N/5cm*	5000 / 4000	*EN ISO 1421/1 1998*
Adhesion	*N/5cm*	120	*ISO 2411 2000*
Tear strength (Warp / Weft)	*N/5cm*	1400 / 1100	*DIN 53363*
Temperature resistance		-30/+70°C	*DIN EN 1876/2*
Fire resistance	*German fire test*	B1	*DIN 4102*
	British fire test	PASS	*BS 7837*
	American fire test	PASS	*NFPA 701*
		PASS	*California T19*
Reaction to fire	*Euroclass*	B-s3 d0	*EN 13501-1 + A1 2009*



Printable lacquer

Our in deep lacquering process provides limitless creative design solutions for facade cladding. This lacquer is highly suited for printing with any design, colour or pattern to unrivalled quality, producing stunning real images and match any colour system. Any colour on your request.



applied in a way that the protective substrate is well embedded all-around the mesh. Perfect embedment of the material.

Coating process

In alternative to not proper knife-coating systems, Sioen advanced and unique production process for meshes consists in dip-coating the open mesh fabric immediately after being constructed directly on the weaving loop. This unique on-line technique grants a very homogeneous deeper distribution of the coating mass around the polyester yarns, implementing hugely the penetration of the protective layers so that the materials are able to perform constantly over their service life.

Colours

Other colours and width on request,
for colour range see table pages 32-33.

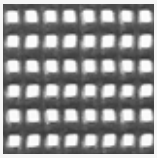


0011 - *White*



1815 - *Sandstone*

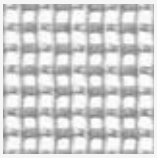
7002 - *Grey*



7185 - *Anthracite*



7509 - *Silver*



7517 - *Aluminium*



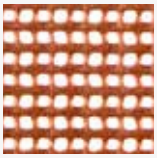
7515 - *Dark Silver*



7999 - *Black*



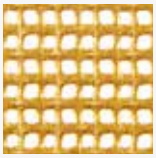
1587 - *Champagne*



3592 - *Copper*



8500 - *Bronze*



1588 - *Gold*

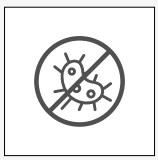
Key features



Printable



Flame retardant



Antibacterial



Excellent UV resistance

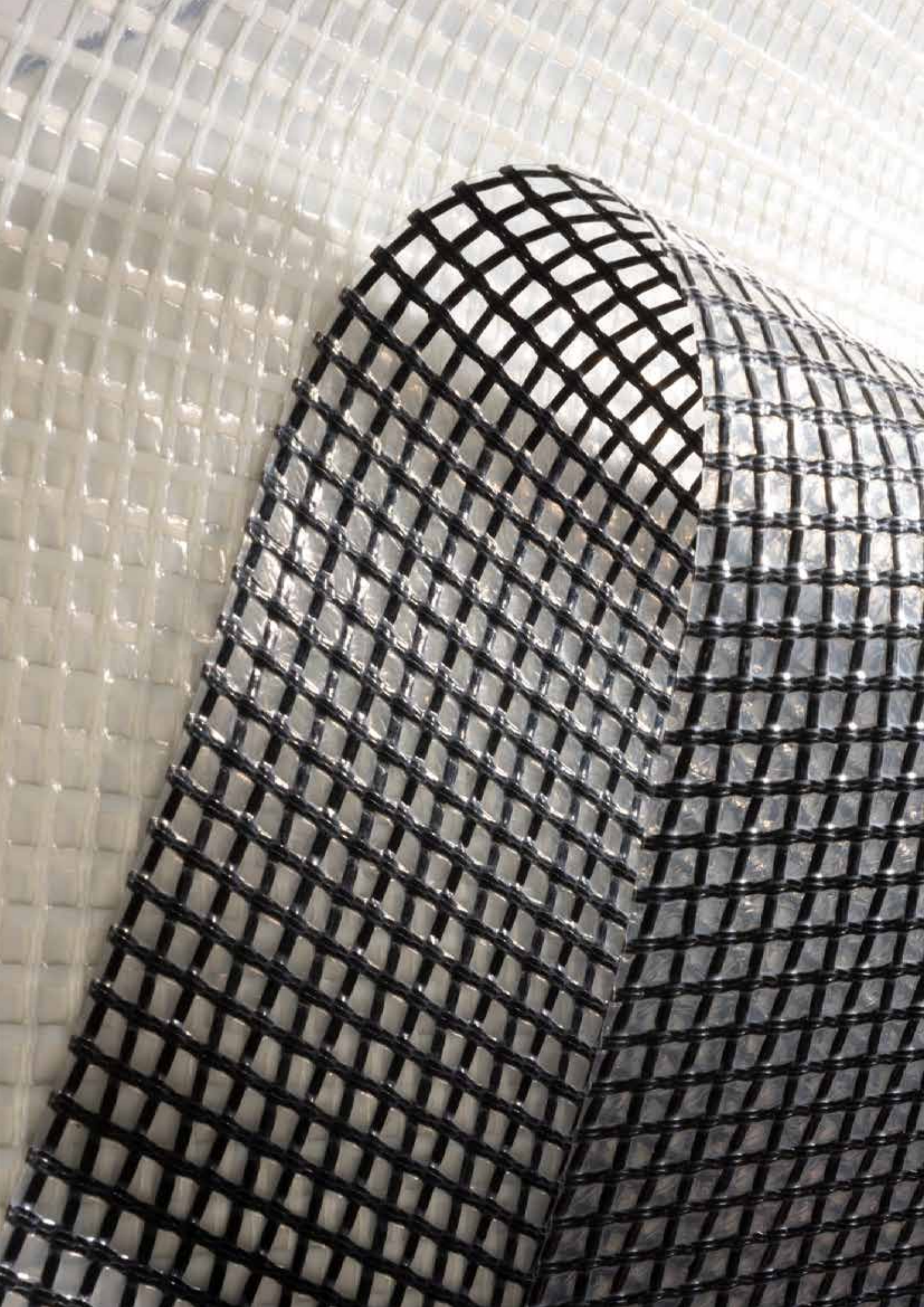


In-deep coating technology



Direct HF weldable

12
years warranty



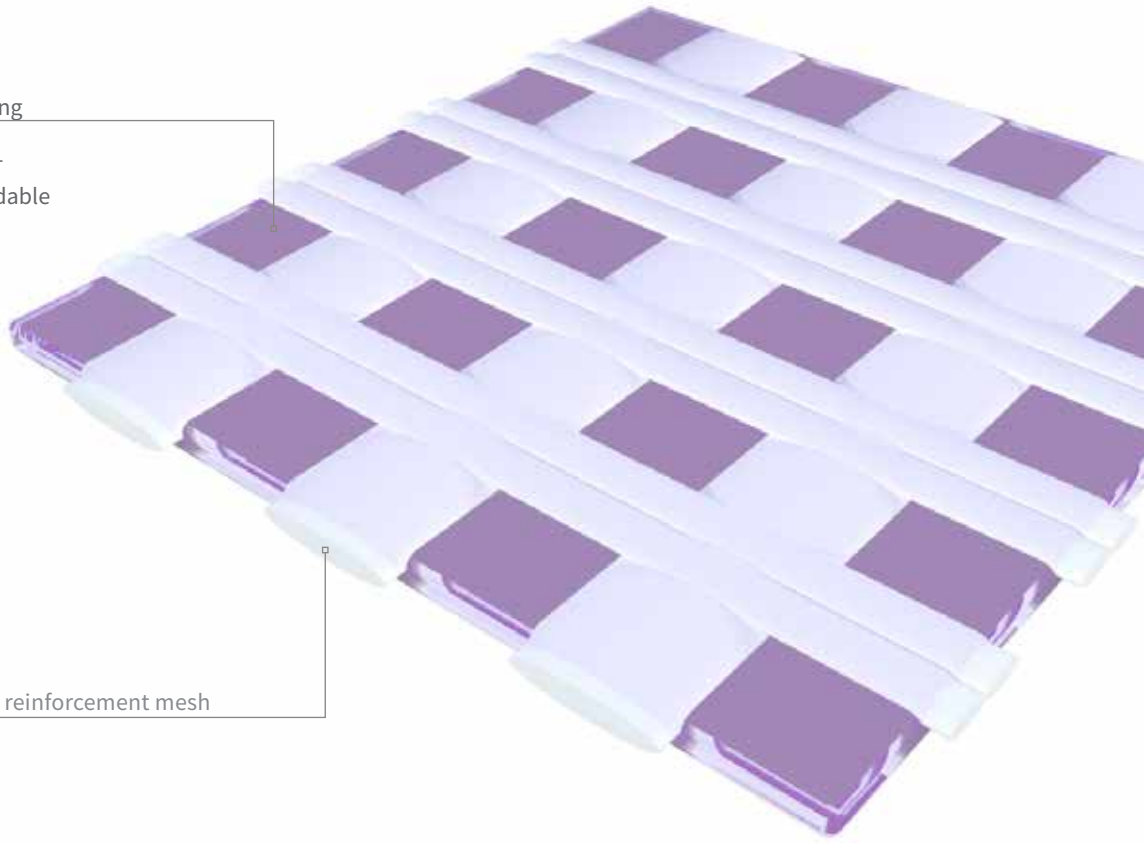
Fluoscrim

FLUOSCRIM
HIGHLY TRANSLUCENT

The Sioen Fluoscrim is a highly translucent composite membrane range for permanent tensile architecture applications. The range has a fluorocarbon coating instead of a PVC cristal coating, keeping lasting clarity even after years of usage. The Fluoscrim membranes excel in dimensional stability, solar and easy-to-weld performances.
The membranes maximise the natural light ambiance and can be used for advanced climate control. We offer a 15 year warranty for our Fluoscrim range.

Coating
Fluorocarbon Coating

Highly translucent +
high frequency weldable



Fabric
Low wick glass fibre reinforcement mesh

Overview Fluoscrim quality

Highly translucent composite membrane for permanent tensile architecture applications.

FLUOSCRIM
HIGHLY TRANSLUCENT

Type 2

T2198

Basic properties

Total weight - g/m²	850	*DIN EN ISO 2286/2*
Thickness	1 mm	*DIN 5084*
Openess factor	52%	*DIN 5036*
Standard width (1)	160 cm	

Technical specifications

Breaking strength (Warp/Weft)	*N/5cm*	4500/4500	*DIN 53363 2003*
Tear strength (Warp/Weft)	*N*	800/800	*DIN 53363 2003*
Adhesion	*N/5cm*	200	
Temperature resistance		-30/+70 °C	
Wicking		Low wick	
Fire resistance			
	French Fire test	M2	*NF P 92 507*
Solar values			
	Transmission (Ts)	50%	*DIN EN 410*
	Reflection (Rs)	40%	*DIN EN 410*
	UV transmission (Tuv)	38%	*DIN EN 410*

Easy to weld / Quality seams

- Direct HF weldable with standard equipment.
- Reliable, robust and easy welding.
- Low wick glass fibres.

Long lifetime

- 100% fluoropolymer coating resistant to outdoor UV radiations.
- Life expectancy > 25 years.

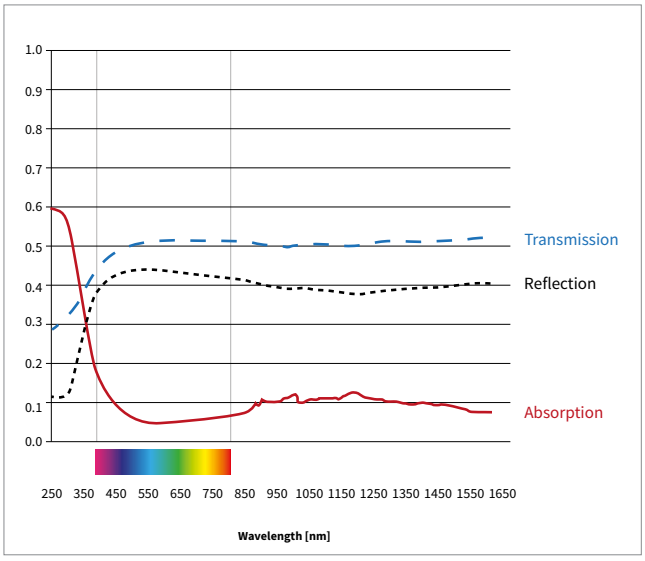
Premium look and performance

- Achieve big span (type 2) with highly translucent material.
- Maximize natural light ambiance.
- Penetration of photosynthetically active radiation for plant growth.
- Optimized Near and mid- infrared radiations reflection for enhanced climate control.
- 100% fluoropolymer coating.
- PVC free material.

<u>Graph 1:</u> Optical properties of Fluoscrim T2199 membrane.

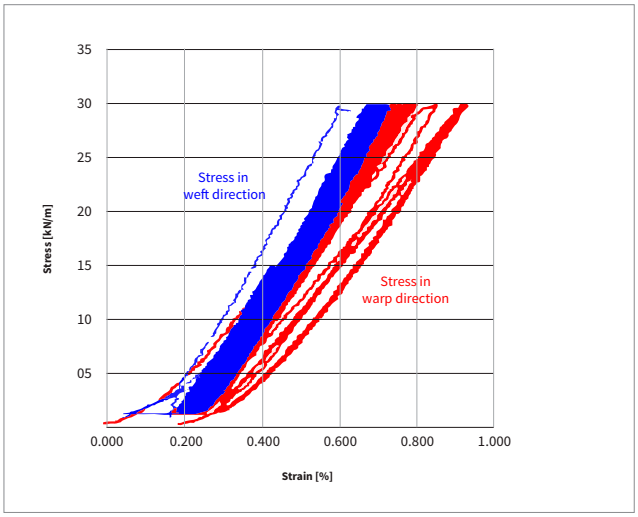
Fluoscrim membrane has superb visible light transmission (T_V = 50%) while engineered to reflect near and mid infrared radiations (R_{NIR}= 40%) to ensure optimal climate control applications.

UV-A transmission (T_{uv}= 38%) combined with UV-B blocking is ideal for plant growth applications.



Graph 2: Biaxial test result Stress= f (Strain) under Young's modulus biaxial test protocol.

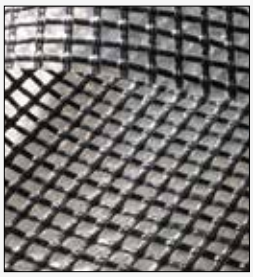
- Excellent overlap in warp and weft directions.
- Very limited material elongation under stress.
- Excellent dimensional stability.



Colours

Other colours on request.





High translucency

Standard rolls: 150cm 50lm
**Specialty product, on demand*

Key features



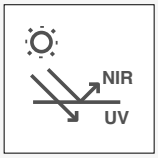
Low wick



Flame retardant



PVC free

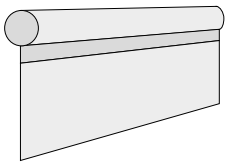


50% translucency

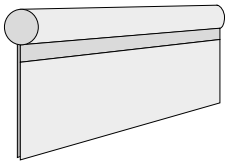
15
years warranty

Keders

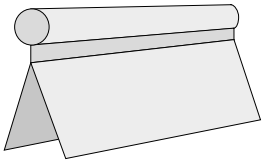
Keders are an optional connection between our membranes and the supporting structure. As market leader, Coatex offers a wide range of standard and customised keders, using different welding techniques to obtain a strong and lasting keder. Single or double flag, diameter in function of your profile, translucent or opaque,… we can customise the keder that perfectly suits your needs.



Simple



Double closed



Double open

Contact Coatex
for custom design:

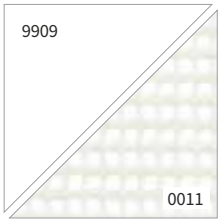
Industriezone Sappenleen
Sappenleenstraat 3-4
B-8970 Poperinge - Belgium
coatex@sioen.com



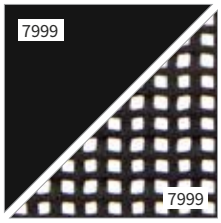
Available Colour Range

Colours and contextures presented here are given as indicative colours. Please check samples for physical correspondence.

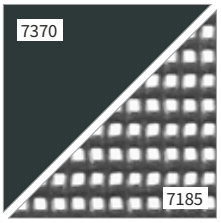
White



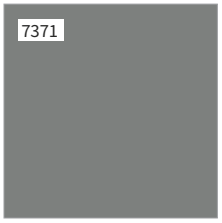
Black



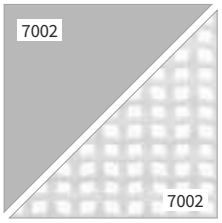
Anthracite



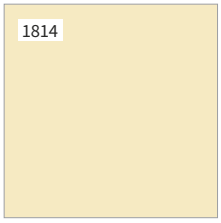
Shadow



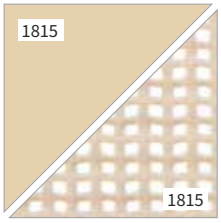
Grey



Cream



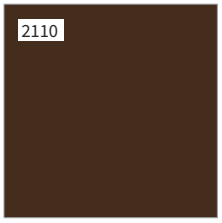
Sandstone



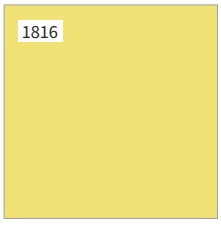
Peanut



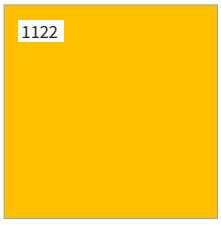
Wallnut



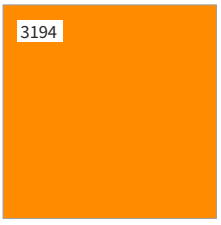
Lemon



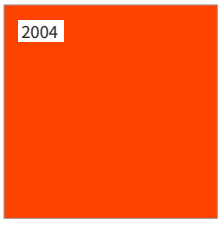
Sunflower



Orange



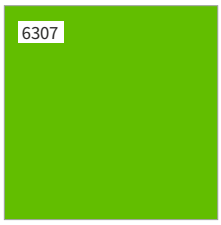
Pumpkin



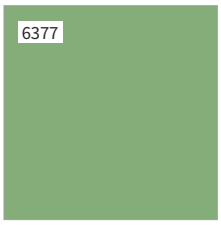
Chili



Lime



Moss



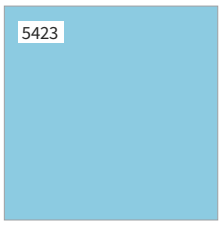
Forest



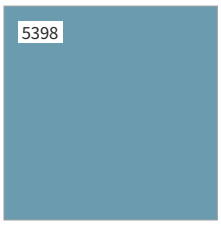
Fern



Sky



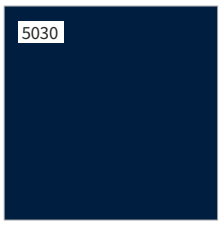
Olympic



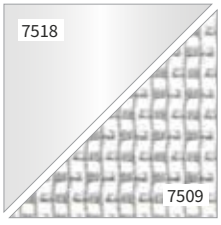
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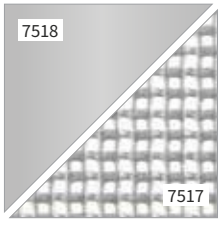
Space



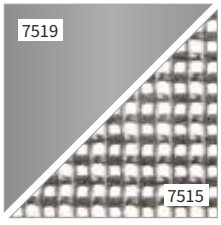
Silver



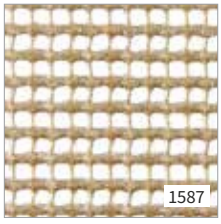
Aluminium



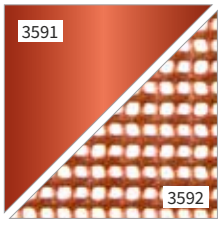
Dark Silver



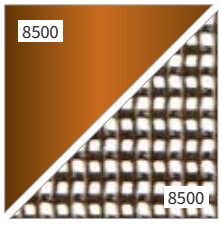
Champagne



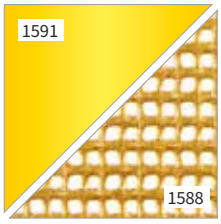
Copper



Bronze



Gold



Flexout

The Flexout membrane range is perfect for your event structures. The PVC and PU coated fabrics are suited for stretch tents. The fabrics' stretch properties make it easy to create enjoyable and creative shapes that perfectly suit your event's atmosphere.


Stretch


Flame retardant


Water repellent



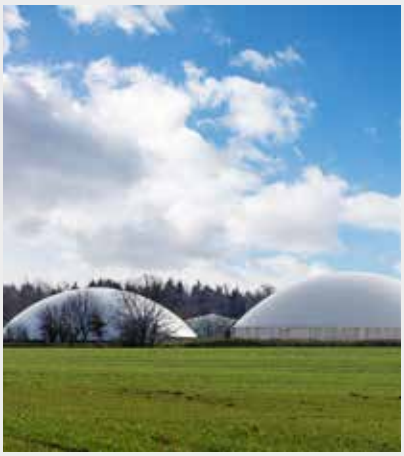
UV resistant



Pergola

Our Pergola range by Sioen Technical Textiles includes weather-resistant, low-maintenance and long-lasting fabrics. All of our pergola fabrics are 100% blockout, flame retardant and have a high UV resistance.





Biogas

Discover our range for Biogas installations. Our state-of-the-art production process, low gas permeability and compliance to the most stringent applications and regulations. Our extensive portfolio of high quality coated technical textiles is successfully used all around the globe in anaerobic digestion reactors.
We have membrane solutions for a broad range of feedstocks such as sewage sludge, manure, municipal biodegradable waste, acid or alkaline waste as well as industrial wastes such as slaughter waste, soy bean scrap, palm oil waste , etc.



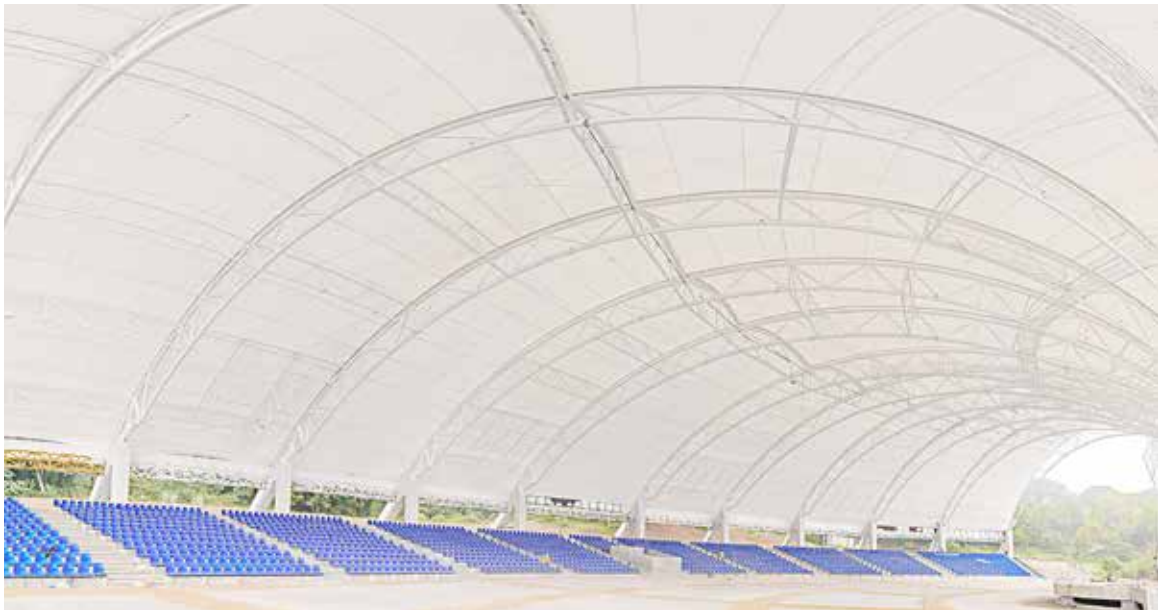
Tents

The Sioen Technical Textiles Tents range contains flame-retardant coated technical textiles for temporary tents and structures. Colours are often of major importance when designing tents. Our range is therefore also available in bicolour, striped and printable options. Our standard range contains stocked items in many colours and weights.





References















Check our references
sio.to/et12g














fifty ONE







Check our references
sio.to/et12g


















POLI
GENIUS









Check our references
sio.to/et12g









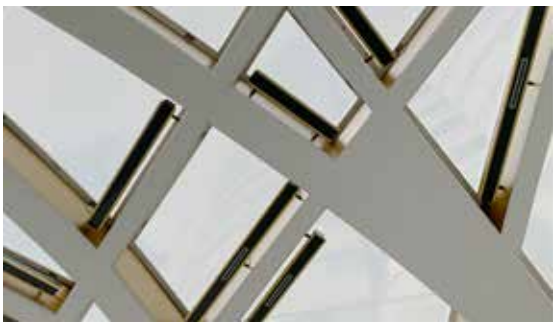














Check our references
sio.to/et12g

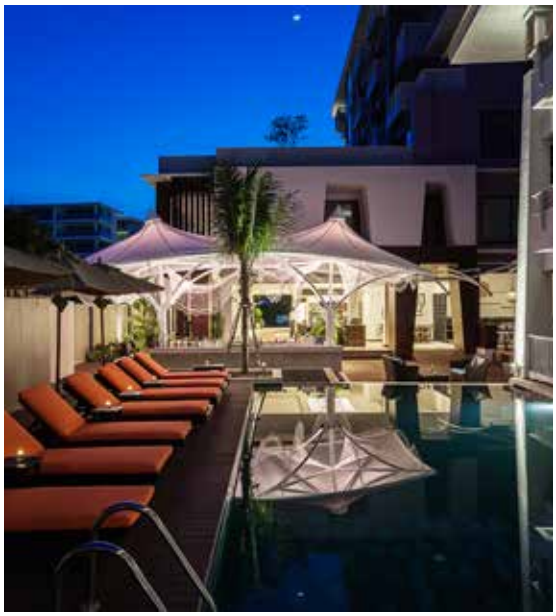


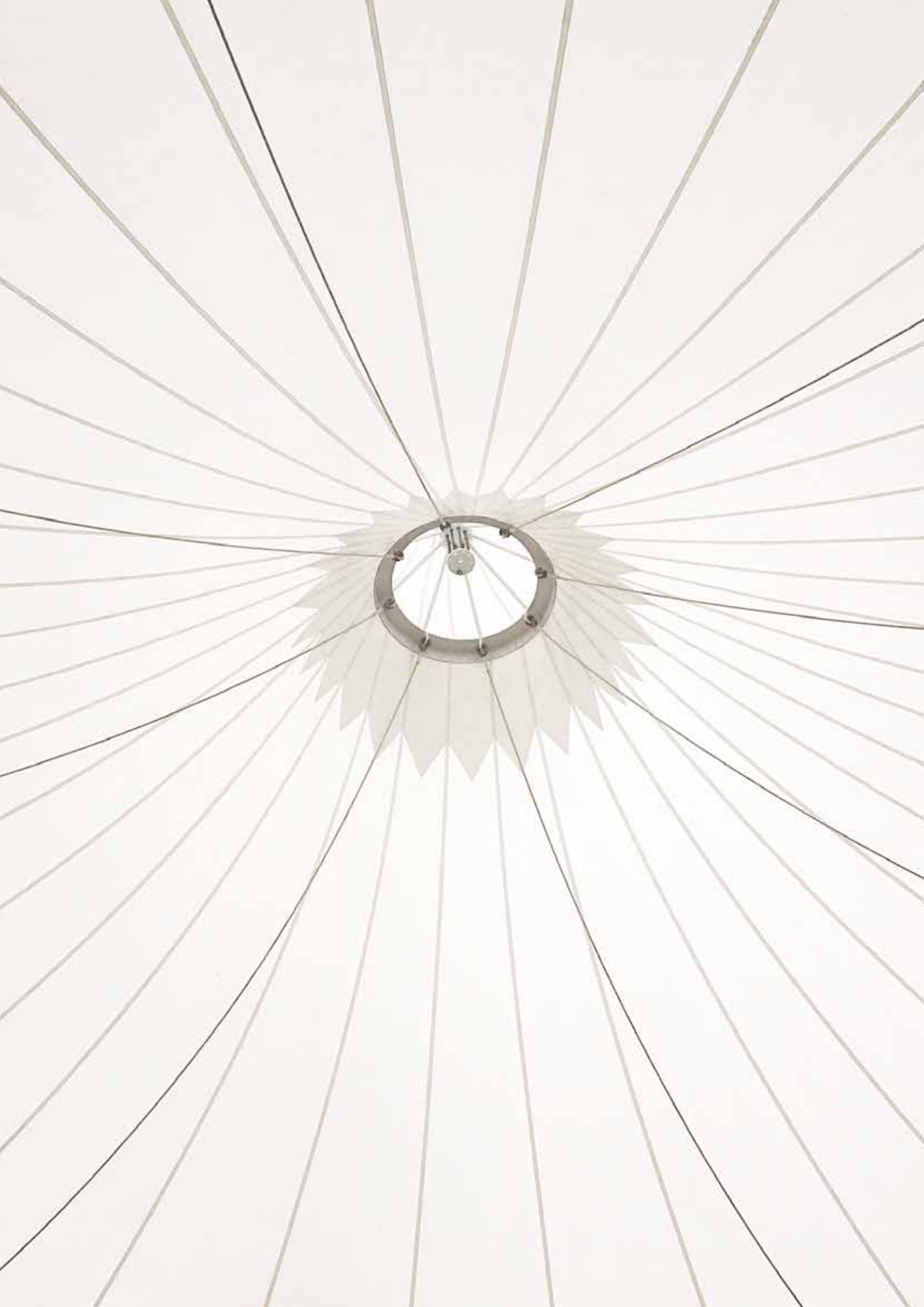












Textile buildings

From an engineering point of view, textile membranes are thin fabric structures with a consistent thickness, which by virtue of their surface shape and inherent deflection behavior, are able to support the imposed loads requested by Building Codes. To create textile structures, the membranes are modestly pre-tensioned to enhance the building's skin stiffness.







© 2016 - Pesaro

Refined structures for new landscapes

Textile membranes are a feast for designers. With different heights and irregular inclinations, textile membranes are the perfect tools to turn a fabric into new landscapes. A constant quest and challenge to create widespan enclosures of great spatial interest and variety with only minimalistic structural support!

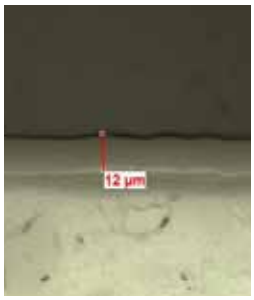
Overall textile buildings combine creativity and aesthetics with frugal use of materials, short construction periods, long life span and limited budget.

These state-of-the-art technologies and innovative textile materials push the boundaries of emerging projects by the full replacement of conventional building materials or by intelligent combinations.

Sioen is set on technicity

Our fabrics and membranes for tensile architecture have excellent specs and withstand exposure to numerous severe conditions that could permanently damage the fabric. Sioen membranes show outstanding performance and technicity thanks to the dedicated engineering.

New proprietary PVDF topcoats



© 2016 - Cross section top coat

Our top coats provide good cleanability, good processing and they are an efficient barrier for plasticizer migration and weather impact. They are a balanced compromise between optimised weldability, excellent weathering resistance and long lasting aesthetics, among others.

This innovative generation of patented top coats was created by our 200-headed R&D department in cooperation with the Sioen Chemicals Division.

All our architectural membranes are directly weldable without preparation, which guarantees perfect seams. In addition, our low wick treatment contributes to maintain robust seams throughout the structure's life time.

Thanks to our unique PVDF lacquer, our membranes have excellent dirt resistance and durable easy cleaning properties. Our Fluomax and Fluo^{2}max membranes are even lacquered on both sides.

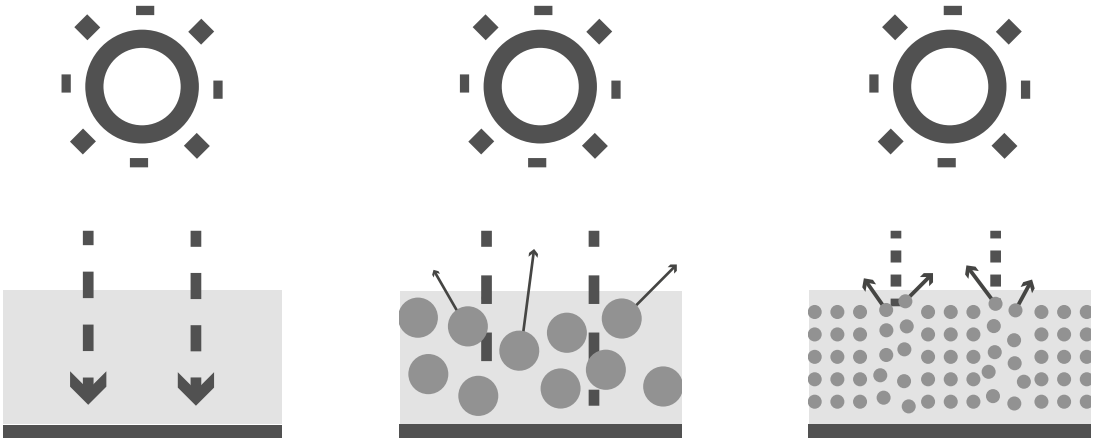
New TiO2 prime coat barrier

Thanks to the new TiO_2 prime coat barrier, our Fluo2max membrane achieves outstanding UV resistance in permanent structures.

TiO_2 has been known as an excellent UV barrier for decades. Even if it is used in an extremely thin layer, it already offers a very efficient UV protection. That is why it is also used as a sun blocker in cosmetics.

The combination of the TiO_2 technology and the Fluomax PVDF top coat results in a highly innovative coating that blocks all UV radiation. Therefore, the membrane lasts very long and we can offer you a 20 year warranty.

FLUO^{2}MAX™
TiO_2 + PVDF



Topcoat Basecoat

Chemical UV Filter

No particles

- UV protection limited by absorption of UV rays by “filter molecules”.

Topcoat Basecoat

Standard TiO_2 technology

Coarse particles

- UV protection due to absorption, reflection and scattering.

Not very effective, as a proportion of UV rays can pass through the topcoat without hitting a particle.

Topcoat Basecoat

Sioen TiO_2 technology

Nanoparticles

- UV protection due predominantly to absorption of UV rays by TiO_2 nanoparticles.
- Highly efficient UV reflection and scattering

Architectural membranes properties

During its lifetime a textile architecture fabric can possibly be exposed to numerous, severe and sometimes unexpected weather conditions which could permanently damage the fabric.



Low wick

Thanks to our membranes' low wick properties, the mechanical and aesthetical properties are preserved. Wicking is the migration of water between the filaments of the fabric. It occurs when the woven base fabric is directly exposed to extreme humidity and it can result in fungal and bacterial growth.

The phenomenon initially results in an aesthetical appearance that looks poorly, as yellowish, brown lines and stains appear all over the base fabric and at the seams. In very bad cases, the physical performance of the fabric decreases and might lead to structure failure.

Fortunately, Sioen membranes undergo our in-house low wick anticapillary treatment, which prevents wicking. The treatment successfully avoids all water, dirt and fungus absorption inside the fabric and ensures long lasting aesthetics, minimal discoloration and uniform translucency.



Flame retardancy

All building materials should comply to the local and international safety regulations. One of the most important properties is the ability of the membrane to avoid fire initiation and propagation over the building structure.

All tensile architecture fabrics are produced using high quality flame retardant additives in order to achieve appropriate flame retardant performances recommended by the building industry. Our materials meet the required specifications, as they are self-extinguishing, they have low flame propagation and have no flaming droplets.

The ability of a fabric to burn or ignite, causing fire or combustion, is quantified in fire standards. Internationally, there is a variety of test protocols to evaluate the flammability of a textile material. All Sioen membranes comply with the following fire standards:

- DIN 4102
- EN 13501-1
- NF P92-507
- BS 7837
- The California Code of Regulations

Temperature range

Our Sioen membranes are sold and used in structures all over the world. That also means that they are used in many different climates and temperatures.

Luckily, our architectural membranes have a temperature resistance ranging from -30°C to +70°C. The material remains flexible, even at a low temperature. That way, they can be handled and installed easily.







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Light and translucency

Light is of major importance in life. In architectural constructions, the duality of light and darkness is a challenge for each and every construction engineer and architect. We help you find the right balance.

Our Sioen membranes offer you the exceptional advantage of combining structural design with an abundant presence of natural light. Thanks to the membrane's very high translucency, a natural feeling can be created.

The membranes can be used for visual effects with, for example, communicational or architectural designs on it, thanks to its uniform translucency. It is guaranteed through a consistent measurement of the batch to batch colour translucency deviation. The interior/ exterior luminosity can transform the structure into a signage structure or a nocturnal reference point.

Thermal performances

We offer a solution for every need. By using tensile membranes for your building structures, you can improve the thermal performances and the energy balance.

Thanks to combining different fabrics, the energy management can be monitored and controlled. To insulate the structure double membranes are used. The insulation profits from the combination of incident radiation and the insulating air gap between the two membranes.

Our opaque membranes also offer designers the ability to reduce the high radiation flux. In addition, Sioen also offers low emissivity membranes with the lowest emissivity on the market (e = 0.22). The use of Low E membranes in textile architecture ensures optimal thermal comfort for the final customer.



Part of Sioen

Sioen Tensile Architecture is part of the Sioen group, a textile solutions provider with over 110 years of experience. Our company slogan "Protection through innovation" reflects our focus on innovative and qualitative products.



"Sioen Industries is a diversified group with an extensive portfolio of products and activities"













The Sioen Group's activities include spinning, weaving, and coating of technical textiles. We also manufacture professional protective clothing and we produce fine chemicals. Thanks to having a large R&D team and in-house laboratories, we can find customised solutions to all your textile needs.

"Our 360° view on all aspects of textiles is a major advantage for all our customers."

Vertical integration

“Sioen offers unrivalled quality through vertical integration”

We are vertically integrated, which means that we produce all elements of a tensile architecture membrane in-house ourselves. This offers you a major advantage as it implies a quality and delivery reassurance. In addition, we can co-create customised colours, fabrics and even entire complexes with and for our customers. Our flexibility is unrivalled .





Yarns

On our state-of-the-art Sioen extrusion lines we produce 18.000 tons of high tenacity polyester yarns. With our yarns, we serve many applications and markets. We specialise in very technical bespoke yarns, tailored to the requirements of our customers.



Woven fabrics

More than 500 weaving looms operating 24/7 to make your fabric for tensile architecture applications.



Pigment pastes and varnishes

We are producing chemical additives used in the processing of pigment pastes and varnishes ourselves at our specialised chemicals plant. Those colouring solutions are engineered for tensile architecture, taking all the special requirements of that market into consideration. The pigments and varnishes are used in our various coating plants and, depending on the coating technology, poured onto the fabric, transferred through a paper or dipped in a coating bath. .

ISO 9001 certified

Quality management principles, continual improvements, strong customer focus and daily involvement of our top management are engraved in Sioen's DNA. For now more than 20 years Sioen coating is ISO 9001 certified to ensure the delivery of reliable products to demanding customers applications.

Using ISO 9001:2015 helps ensure that customers get consistent, good quality products and services, which in turn brings many business benefits.





Sustainability and CSR

At Sioen, Corporate Social responsibility is of major importance to us. Our approach to CSR is based on the UN's 17 Sustainable Development Goals, the 5 P's (People, Prosperity, Planet, Peace, Partnerships) and the Sioen focal points (Energy, Waste, Sustainable products, Credentials and HR). Our certificates, memberships and awards prove our engagement towards CSR.

Obviously, we cannot discuss all our CSR initiatives in detail here, but the following topics offer you an interesting preview.





Recycling our solvent and PVC waste

At our Ardooie and Saint-Frères Direct coating sites, we apply a PVC coating to our technical textiles. To reduce our waste, we recycle the PVC waste and the solvent we use to clean the tubs. Thanks to this adaptation, we produce more sustainably. We manage to use less raw materials and to produce less waste.

Successful energy plan Mouscron plants

The energy improvement plan of the Sioen site in Mouscron (Belgium) resulted in a CO_2 reduction of approximately 1900 tonnes/year and an energy reduction of 5600 mWh/year. An impressive result that required an investment of about one million Euros.

Energy recuperation

In all of our coating plants, the air above the machines is extracted and purified. The energy that is released is used to preheat the furnaces. The optimisation of this process is one of the reasons why our gas consumption has decreased so much.

Residual PVC reduction project

At our Sioen Direct Coating production sites, we coat technical textiles. We used to have 50-100 tonnes of residual PVC a year, which is a huge amount. We managed to reduce this amount of residual PVC to a bare minimum, thanks to increasing awareness, data analysis and visualisation. This achievement is a team victory. Additionally, the little residual PVC we have, is recycled and used as raw material in other production processes.

To find out more about the many actions Sioen is involved in, please have a look at our csr.sioen.com website.

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