

*Progetto di ricerca di interesse nazionale 2005, Cofinanziato dal MIUR*

*Titolo generale della ricerca:*



**PERCORSI E GESTIONE DELLE INFORMAZIONI TECNICHE PER LA PROMOZIONE E IL CONTROLLO DELL'INNOVAZIONE NEI MATERIALI E NEL PROGETTO DI ARCHITETTURA**

*Responsabile nazionale* Attilio Nesi, Università degli Studi di Reggio Calabria



*Titolo della ricerca dell'unità di ricerca del Politecnico di Milano, Dipartimento BEST*

**MEMBRANE E SCOCHE PER L'ARCHITETTURA DIFFUSA**

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## Prodotto finito

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### SELEZIONE DI SCHEDE TECNICHE DAI PRINCIPALI PRODUTTORI

I dati pubblicati nelle schede sono stati forniti dalle aziende e sono indicativi. Per una corretta e più aggiornata informazione si consiglia il contatto diretto con i loro uffici commerciali.

### Base fabric

<b>Yarn</b>	Glass fibre filament	100%
<b>Thread count</b>	Warp 16.8 per cm	DIN EN 1049
	Weft 12.0 per cm	
<b>Weight</b>	196 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Plain	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp 2500 N / 5cm min	DIN 12654
	Weft 1750 N / 5cm min	
<b>Trapezoidal tear</b>	Warp 350 N	DIN 53356
	Weft 400 N	
<b>Weight</b>	370 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	0.22 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	42.0%	43.4%	DIN EN 410
<b>Reflection</b>	52.0%	54.0%	DIN EN 410
<b>Absorption</b>	6.0%	2.6%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
5 cm x 0.75 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 2000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C		
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925	
	Weather-proof	Hydrophobic	UV light resistant
	No toxic emissions	No residual odours	Easily cleaned
	Lifespan 25+ years	Dimensionally stable	

### Applications

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interplas may change these specifications from time to time subject to a programme of continuous improvement.)

### P-D INTERGLAS TECHNOLOGIES Ltd

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Beccles Church by AURA

# 2000TRL

silicone coated glass fibre fabric  
 lightweight membrane for internal use Type 0

P-D Interglas ATEX 2000 TRL is a high strength, yet lightweight glass fibre fabric impregnated and coated with specially formulated translucent silicones for use as textile membranes, curtains, canopies and awnings. Silicone coated fabrics are very flexible over a temperature range of -50° C to +200° C and block out short wave UV-B and UV-C light, harmful to humans, animals and plants, but transmit UV-A light, essential for plant growth.

There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture. This combination of advanced technical qualities and its visual appeal makes ATEX 2000 TRL a unique and unrivalled product for structural membrane solutions now, and for the future.

Although ATEX 2000 TRL is currently being tested for long term outdoor use, it is only recommended for interior applications. ATEX 2000 grade is also available in a wide range of colours on request (subject to terms and minimum quantities).

# 2000TRL

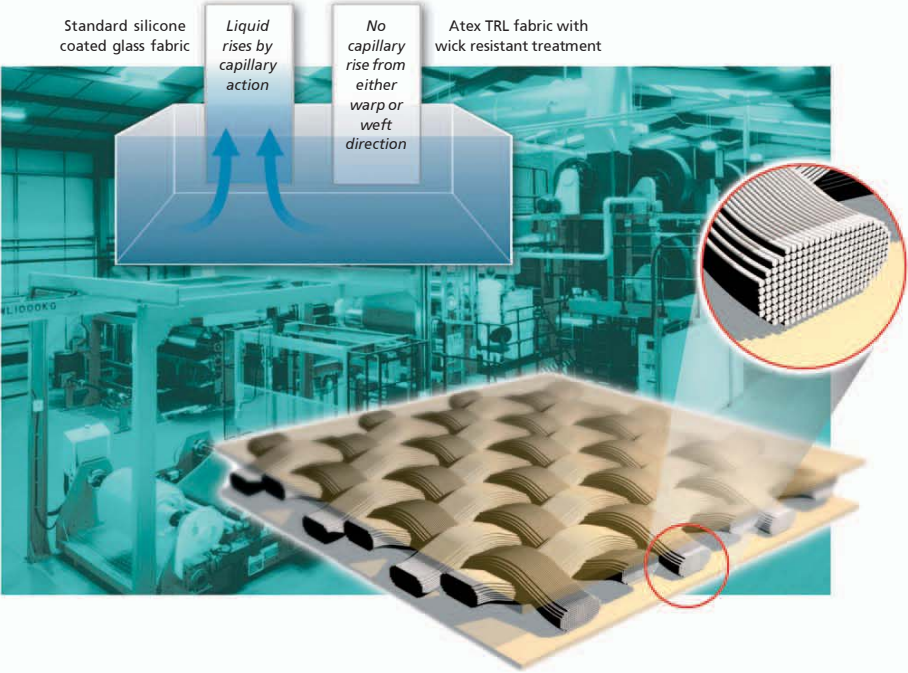
For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency



Alexandra Palace by AURA



Sony Centre by Downer International



### Base fabric

<b>Yarn</b>	Glass fibre filament	100%
<b>Thread count</b>	Warp 12.6 per cm	DIN EN 1049
	Weft 11.5 per cm	
<b>Weight</b>	340 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Plain	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp 3500 N / 5cm min	DIN 12654
	Weft 3000 N / 5cm min	
<b>Trapezoidal tear</b>	Warp 350 N	DIN 53356
	Weft 300 N	
<b>Weight</b>	595 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	0.45 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	38.4%	41.1%	DIN EN 410
<b>Reflection</b>	43.9%	40.5%	DIN EN 410
<b>Absorption</b>	17.7%	18.4%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
5 cm x 0.75 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 2000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C	
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925
	Weather-proof	Hydrophobic
	UV light resistant	
	No toxic emissions	No residual odours
	Easily cleaned	
	Lifespan 25+ years	Dimensionally stable

### Applications

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interglas may change these specifications from time to time subject to a programme of continuous improvement.)

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JFS school, Kenton by Fabric Architecture

# 3000TRL

silicone coated glass fibre fabric  
 medium weight membrane Type I

P-D Interglas ATEX 3000 TRL is a high strength, medium weight glass fibre fabric impregnated and coated with specially formulated, translucent silicones for the use as internal textile membranes, curtains, canopies and awnings. Silicone coated fabrics are very flexible over a temperature range of -50° C to +200° C and block out short wave UV-B and UV-C light, harmful to humans, animals and plants, but transmit UV-A light, essential for plant growth.

There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture. This combination of advanced technical qualities and its visual appeal makes ATEX 3000 TRL a unique and unrivalled product for structural membrane solutions now, and for the future.

ATEX 3000 grade is also available in a wide range of colours on request (subject to terms and minimum quantities).

# 3000TRL

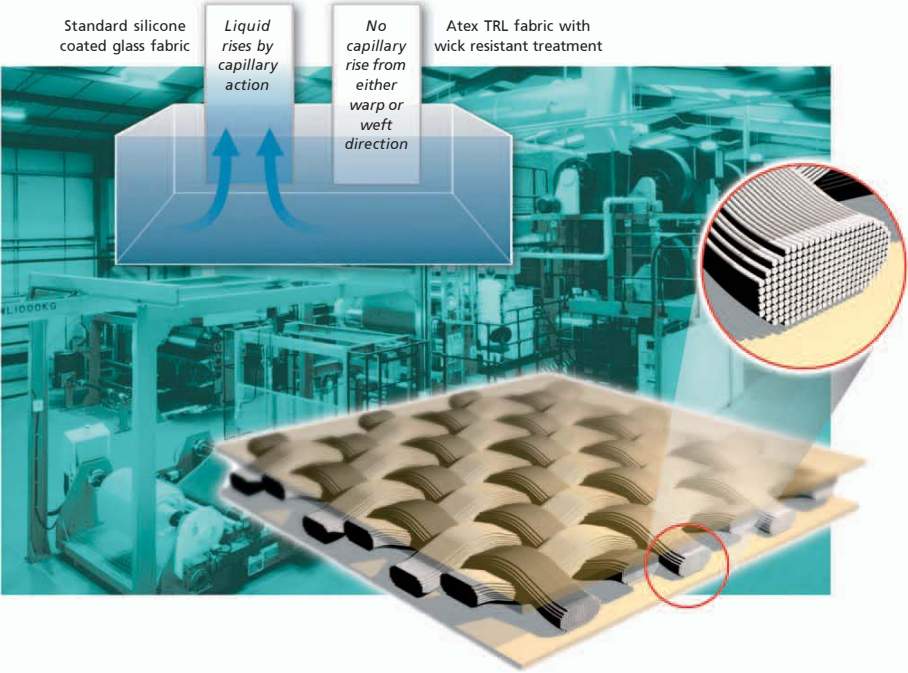
For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency



Pagoda, Notley by Fabric Architecture



Bandstand, Blackburn by Fabric Architecture



### Base fabric

<b>Yarn</b>	Glass fibre filament	100%
<b>Thread count</b>	Warp 12.6 per cm	DIN EN 1049
	Weft 11.5 per cm	
<b>Weight</b>	340 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Plain	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp 3500 N / 5cm min	DIN 12654
	Weft 3000 N / 5cm min	
<b>Trapezoidal tear</b>	Warp 350 N	DIN 53356
	Weft 300 N	
<b>Weight</b>	595 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	0.45 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	38.4%	41.1%	DIN EN 410
<b>Reflection</b>	43.9%	40.5%	DIN EN 410
<b>Absorption</b>	17.7%	18.4%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
5 cm x 0.75 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 2000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C	
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925
	Weather-proof	Hydrophobic
		UV light resistant
	No toxic emissions	No residual odours
		Easily cleaned
	Lifespan 25+ years	Dimensionally stable

### Applications

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high reflectivity and maximum shade

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interplas may change these specifications from time to time subject to a programme of continuous improvement.)

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# 3000 SilverAero

silicone coated glass fibre fabric  
 medium weight membrane Type I

P-D Interglas ATEX 3000 Silver Aero is a high strength, medium-weight glass fibre fabric impregnated and coated with specially formulated silicones, incorporated highly reflective pigments, for use as textile membranes, stage covers, curtains, canopies and awnings. These silicone coated fabrics are very flexible over a temperature range of -50° C to +200° C and completely block out all harmful UV light, plus XX% of visible light too.

There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture. This combination of advanced technical qualities and its visual appeal makes ATEX 3000 Silver Aero a unique and unrivalled product for structural membrane solutions now, and for the future.

ATEX 3000 grade is also available in translucent or a wide range of colours on request (subject to terms and minimum quantities).

# 3000 Silver Aero

For membrane structures, stage covers ceiling constructions, weather-proof awnings and facade covers with high reflectivity and maximum shade

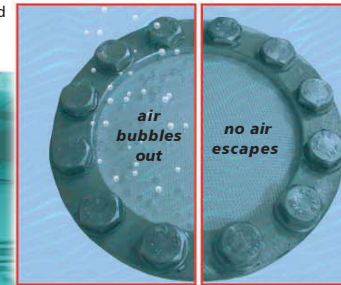


XX% light and heat are reflected by ATEX 3000 Silver Aero

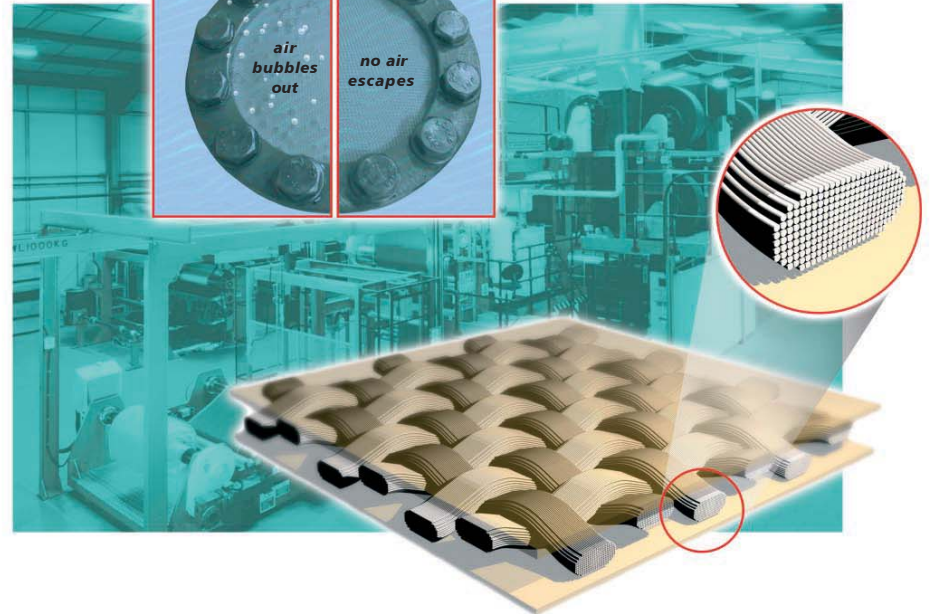


Fuel cell building, Festo-Rohrbach

Standard silicone coated glass fabric pressurised under water



Atex 3000 SilverAero fabric with airtight construction



### Base fabric

<b>Yarn</b>	Glass fibre filament	100%
<b>Thread count</b>	Warp 8.4 per cm	DIN EN 1049
	Weft 7.3 per cm	
<b>Weight</b>	685 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Plain	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp 5000 N /5cm min	DIN 12654
	Weft 5000 N /5cm min	
<b>Trapezoidal tear</b>	Warp 400 N	DIN 53356
	Weft 400 N	
<b>Weight</b>	1365 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	0.90 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	18.4%	21.1%	DIN EN 410
<b>Reflection</b>	68.4%	74.7%	DIN EN 410
<b>Absorption</b>	13.2%	4.2%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
5 cm x 0.75 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 4000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C	
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925
	Weather-proof	Hydrophobic
	No toxic emission	No residual odours
	Easily cleaned	
	Lifespan 25+ years	Dimensionally stable

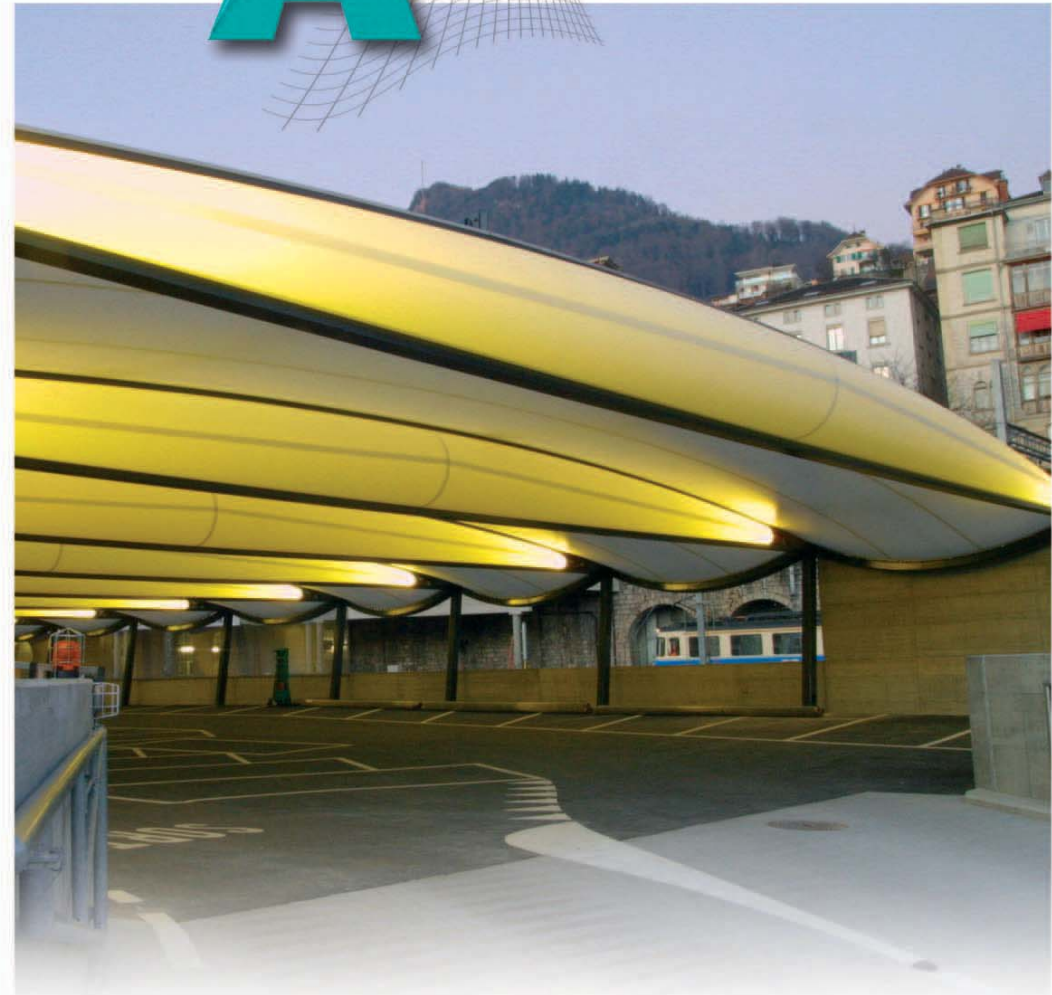
### Applications

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interglas may change these specifications from time to time subject to a programme of continuous improvement.)

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GMPG Montreux – Airlight Ltd / Canobbio

# 5000Aero

membrane for inflatable structures  
 heavyweight membrane Type III



P-D Interglas ATEX 5000 Aero is a high performance glass fibre fabric impregnated and coated with specially formulated translucent silicones for use as textile membranes, curtains, canopies and awnings. Silicone coated fabrics are very flexible over a temperature range of -50°C to +200°C and block out short wave UV-B and UV-C light, harmful to humans, animals and plants, but transmit UV-A light, essential for plant growth.

There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture.

This combination of advanced technical qualities and its visual appeal makes ATEX 5000 Aero a unique and unrivalled product for structural membrane solutions now, and for the future.

ATEX 5000 grade is also available in a wide range of colours on request (subject to terms and minimum quantities).

# 5000Aero

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency

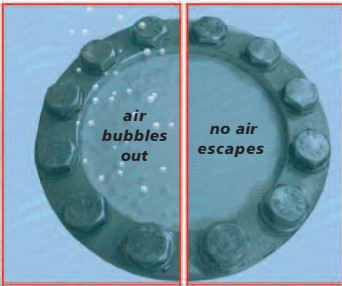


GMPG Montreux – Airlight Ltd / Canobbio

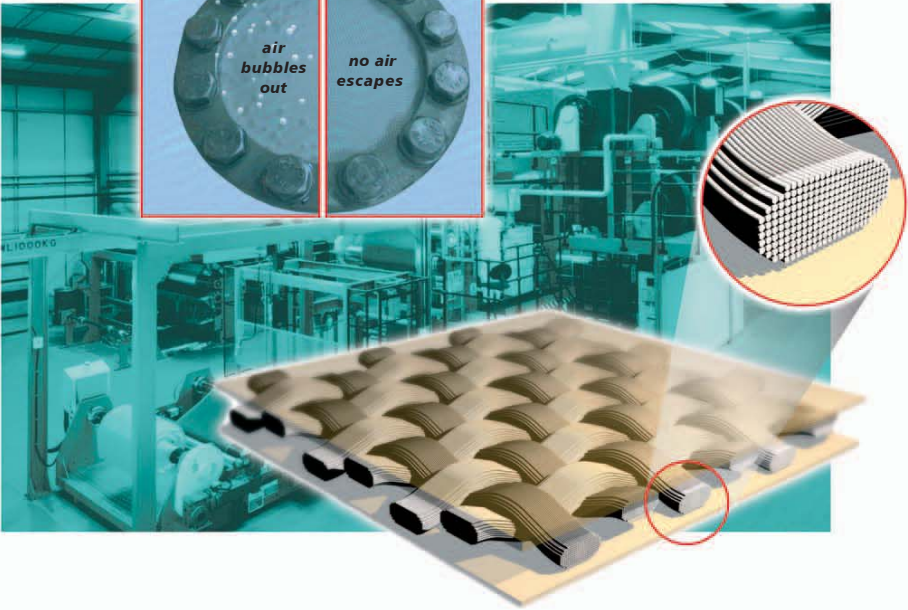


Exhibition Breitling – Airlight Ltd / Canobbio

Standard silicone coated glass fabric pressurised under water



Atex 5000 Aero fabric with airtight construction



### Base fabric

<b>Yarn</b>	Glass fibre filament 100%	
<b>Thread count</b>	Warp	8.4 per cm
	Weft	7.3 per cm
<b>Weight</b>	685 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Plain	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp	5000 N /5cm min
	Weft	5000 N /5cm min
<b>Trapezoidal tear</b>	Warp	400 N
	Weft	400 N
<b>Weight</b>	1165 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	0.80 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	18.4%	21.1%	DIN EN 410
<b>Reflection</b>	68.4%	74.7%	DIN EN 410
<b>Absorption</b>	13.2%	4.2%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
5 cm × 0.75 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 4000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C	
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925
	Weather-proof	Hydrophobic
		UV light resistant
	No toxic emission	No residual odours
		Easily cleaned
	Lifespan 25+ years	Dimensionally stable

### Applications

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interplas may change these specifications from time to time subject to a programme of continuous improvement.)

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Fort Glasgow – Fabric Architecture

# 5000TRL

silicone coated glass fibre fabric  
 heavyweight membrane Type III

P-D INTERGLAS ATEX 5000 TRL is a high performance glass fibre fabric impregnated and coated with specially formulated translucent silicones for use as textile membranes, curtains, canopies and awnings. Silicone coated fabrics are very flexible over a temperature range of -50° C to +200° C and block out short wave UV-B and UV-C light, harmful to humans, animals and plants, but transmit UV-A light, essential for plant growth.

There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture.

This combination of advanced technical qualities and its visual appeal makes ATEX 5000 TRL a unique and unrivalled product for structural membrane solutions now, and for the future.

ATEX 5000 grade is also available in a wide range of colours on request (subject to terms and minimum quantities).

# 5000TRL

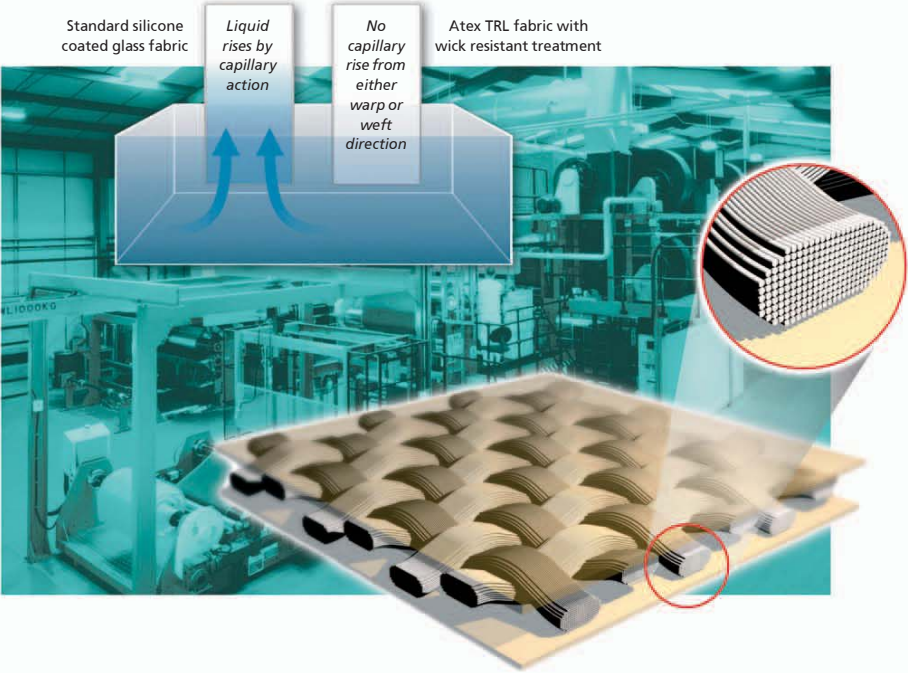
For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency



GMPG Montreux – Airlight Ltd / Canobbio



Exhibition Breitling – Airlight Ltd / Canobbio





### Base fabric

<b>Yarn</b>	Glass fibre filament 100%	
<b>Thread count</b>	Warp 13.5 per cm	DIN EN 1049
	Weft 11.7 per cm	
<b>Weight</b>	1100 g/m <sup>2</sup>	DIN EN 12127
<b>Weave style</b>	Panama	DIN ISO 9354

### Coated fabric

<b>Coating</b>	Silicone	
<b>Tensile strength</b>	Warp 8000 N / 5cm min	DIN 12654
	Weft 8000 N / 5cm min	
<b>Trapezoidal tear</b>	Warp 500 N	DIN 53356
	Weft 500 N	
<b>Weight</b>	1520 g/m <sup>2</sup>	DIN EN 12127
<b>Thickness</b>	1.25 mm	DIN ISO 4603 / E
<b>Width</b>	2.00 m	

### Optical values

	Solar	Standard D65	
<b>Transmission</b>	12.6%	14.8%	DIN EN 410
<b>Reflection</b>	69.8%	77.5%	DIN EN 410
<b>Absorption</b>	17.6%	7.7%	DIN EN 410

### Fire Rating

Class 0	BS 476: Part 6: 1989, Part 7: 1997
B1	DIN 4102

### Fabricating

Sewing with PTFE thread	
Silicone adhesive tapes	
8 cm × 1.00 mm	Peel 180° > 150 N / 5 cm*
	Tensile > 6000 N / 5 cm*

### Characteristics

<b>Temperature Range</b>	-50° C to +200° C	
<b>Capillary rise</b>	< 5 mm / 24 h	DIN 53 925
	Weather-proof	Hydrophobic UV light resistant
	No toxic emission	No residual odours Easily cleaned
	Lifespan 25+ years	Dimensionally stable

### Applications

For large span membrane structures, ceiling constructions and weather-proof awnings with high translucency

\*depending on equipment, must be in accordance with specified adhesive tape grade and coordinated parameters.  
(P-D Interglas may change these specifications from time to time subject to a programme of continuous improvement.)

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 www.atex-membranes.com



# 8000TRL

silicone coated glass fibre fabric  
 heavyweight membrane Type IV

P-D INTERGLAS ATEX 8000 TRL is a high performance heavyweight glass fibre fabric impregnated and coated with specially formulated translucent silicones for use as textile membranes, curtains, canopies and awnings. Silicone coated fabrics are very flexible over a temperature range of -50° C to +200° C and block out short wave UV-B and UV-C light, harmful to humans, animals and plants, but transmit UV-A light, essential for plant growth.

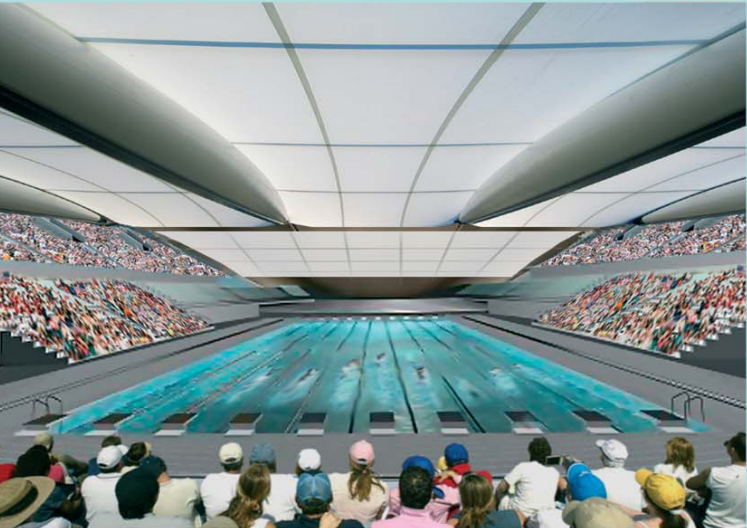
There are no emissions of toxic fumes or molten drips at high temperatures. The material is treated to resist wicking along the fibres for prolonged outdoor use and has a surface which improves soil resistance and handling during manufacture.

This combination of advanced technical qualities and its visual appeal makes ATEX 8000 TRL a unique and unrivalled product for structural membrane solutions now, and for the future.

ATEX 8000 grade is also available in a wide range of colours on request (subject to terms and minimum quantities).

# 8000TRL

For membrane structures, ceiling constructions, weather-proof awnings and facade covers with high translucency



Sports facility – Airlight Ltd



30m temporary bridge – Airlight Ltd

