www.helioscreen.com

helioscreen

The Collection Book

Solar shading
Signage
Tensile structures

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Introduction

A window covering system is not only aesthetic, it can also be used to optimize the total energy performance of a building. To help you make the right choice of fabric, Helioscreen has developed this fully detailed "Helioscreen Collection Book".

It contains a comprehensive and detailed overview of all technical properties of the Helioscreen fabrics. All fabrics have been tested according to the latest European Standards by renowned laboratories.

The Quality Chain

Helioscreen has a clear mission: to make and supply high-quality products that improve quality of life and work. We accomplish this through ongoing research and product development, always bearing in mind that the service we give to the customer is of the utmost importance.

But the quality of the weaving process for Screen fabric is only one link in the Quality Chain: later on, the fabric will have to be cut to size, welded, finished and assembled into a roller blind and put onto a window. The quality of the end-product - the installed blind - will be judged by the end-user only, and every link in the manufacturing and assembly chain will have to be perfectly controlled to make sure that the quality in one stage of the manufacturing process does not get lost somewhere else.

The weaving of glass yarns remains a complex and difficult task, but with the help of the latest developments in the beaming and weaving processes it has been perfected. The customer should be aware, however, of a few areas that deserve attention:

- **Colour variations**
  Compared to the sample card, from one batch of yarn to another, minor and carefully controlled colour variations may occur.

- **Storage of the rolls**
  Store the rolls in such a way that no excessive weight rests on the fabric. While the fabric is sturdy and strong, glass does not like to be compressed and the fabric may be deformed if it is put under continuous local high pressure. Never store the rolls vertically. Put them by preference in separate cardboard tubes.

- **Cover manufacturing**
  Always make sure the covers are cut at perfectly right angles. Use razor sharp blades or crush-cut knives in order to avoid splitting the glass core.
  Stitching is not recommended, it is better to weld the fabric, either with a high-frequency or a thermal welding machine, especially designed for this job.

- **Maximum dimensions**
  There are certain limits to the size of a single sunblind, depending upon the diameter and material of the roller tube, the type of mechanism and the size of the headbox. These are limits beyond which the blind will simply not perform properly and the screen cover will not behave as it should. Helioscreen offers free information on the use of its fabrics and the maximum dimensions of single blinds.

Call or e-mail us if you have any questions or if you are in doubt.
Thank you for choosing Helioscreen.

Helioscreen: We're keen on green

The threat of rapid climate change has focused the world's attention on the need to make our way of living more sustainable than it is today. Sustainable economic development can be defined as one that "meets the needs of the present without compromising the ability of future generations to meet their own needs".

Our climate is already changing. But - instead of reducing the rate - mankind is still pumping more carbon dioxide into the earth's atmosphere. In fact, humans are in a way cannibalizing the planets resources, and we are doing it even more rapidly.

Throughout its history and for more than 40 years, Helioscreen urged consumers, architects and building developers to create "Green Buildings" that save energy by better managing natural resources such as sunlight and heat. While doing this, Helioscreen never compromised people's desire for building aesthetics and/or comfort in any way.

Helioscreen fabrics used as a mobile (internal or external) shading device contribute to sustainable buildings by effectively managing natural daylight, enhancing interior comfort, increasing occupant productivity and reducing energy consumption.

For a sustainable environment

Committed to the future, Helioscreen constantly improves materials, production and company processes to save energy, reduce waste and spare resources.

You might ask yourself whether this is possible using PVC (Polyvinyl Chloride). Well it is! Being the subject of criticism for decades, PVC is one of the most tested and advanced materials ever. Products made of PVC can be manufactured and processed in an environmentally compatible way. They are long lasting, spare resources and save energy and costs.

Creativity is a key factor in Helioscreen's strategy to prevent waste, and find new ways of recycling. For instance, fabric production waste from weaving and thermofixation is used to make design "screenbags", (paper baskets in screen) in different sizes and colours, useful pencil bags and some other surprising office supplies.

As you can see, Helioscreen is definitely keen on green.

Legend

Ts	Solar transmittance %
Rs	Solar reflectance of the side of the glass or fabric facing the sun %
Rs'	Solar reflectance of the side of the glass or fabric opposite from the sun %
As	Solar absorptance %
OF	Openness coefficient % Relative area of the openings in the fabric. For identical fabrics that differ only by the colour, the OF is considered as independent of the colour. The value of the OF should be measured for the darkest colour.
g	Solar factor The total solar energy transmittance whereas g is considered as the solar factor for the glazing only and g_{tot} the solar factor for the combination of glazing and solar protection device.
Tv = $T_{v,n-h}$	Light transmittance % Total transmitted light flow
Tv_{diff} = $T_{v,n-diff}$	Diffused part of the light transmittance %
Tv_{dir} = $T_{v,n-n}$	Direct part of the light transmittance %
Tuv	UV transmittance %
Glazing A	Clear single glazing
Glazing B	Clear double glazing
Glazing C	Double glazing with low emissivity coating and space filled with argon
Glazing D	Reflective double glazing with a low emissivity soft coating and space filled with argon
U	Thermal transmittance of the glazing in W/m^2K
Fc or z	Shading factor Ratio of the solar factor of the combined glazing and solar protection device (g_{tot}) to that of the glazing alone (g). Fc = g_{tot} / g

Symbol overview

Our symbol	European standard EN 14501
Ts	$T_{e,n-h}$
Rs	$\rho_{e,n-h}$
Rs'	$\rho'_{e,n-h}$
As	α_e
OF	OF
g	g

Our symbol	European standard EN 14501
Tv	$T_{v,n-h}$
Tv_{diff}	$T_{v,n-diff}$
Tv_{dir}	$T_{v,n-n}$
Tuv	T_{uv}
U	U

How to read the data

All figures provided by Helioscreen are measured and calculated by accredited laboratories according to the latest European standards:

Solar and luminous characteristics

EN 410 (1998): Defines how to make spectral measurements on fabrics and how to calculate the solar transmittance (Ts) and solar reflectance (Rs) values. The solar transmittance and reflectance values are required for the calculation of the solar factor "g".

g-value calculation

EN 13363-1+A1 (2007): This standard specifies the simplified method for the calculation of the solar factor "g".The solar factor or g-value is the total solar energy transmittance whereas "g_{tot}" is the solar factor of the combination of glazing and solar protection device.

Visual and thermal comfort

EN 14501 (2005): Performance characteristics and classification of a solar protection device or roller shutter with regard to visual and thermal comfort. The standard defines the technical characteristics of 4 typical glazings (A,B,C,D) for the calculation of the "g_{tot}" value and classifies the thermal and visual comfort.

Glazing	U (W/m²K)	g	Ts	Rs	Rs'
A	5.8	0.85	0.83	0.08	0.08
B	2.9	0.76	0.69	0.14	0.14
C	1.2	0.59	0.49	0.29	0.27
D	1.1	0.32	0.27	0.29	0.38

Influence on thermal and visual comfort

Class	0	1	2	3	4
	Very little effect	Little effect	Moderate effect	Good effect	Very good effect

Total solar energy transmittance g_{tot} - Classification

Class	0	1	2	3	4
g_{tot}	$g_{tot} \geq 0.50$	$0.35 \leq g_{tot} < 0.50$	$0.15 \leq g_{tot} < 0.35$	$0.10 \leq g_{tot} < 0.15$	$g_{tot} < 0.1$

Glare control - Classification

Tv_{dir}	Tv_{diff}			
	$Tv_{diff} < 2$	$2 \leq Tv_{diff} < 4$	$4 \leq Tv_{diff} < 8$	$Tv_{diff} \geq 8$
$Tv_{dir} > 10$	0	0	0	0
$5 < Tv_{dir} \leq 10$	1	1	0	0
$Tv_{dir} \leq 5$	3	2	1	1
$Tv_{dir} = 0$	4	3	2	2

Visual contact with the outside - Classification

T_{vdir}	T_{vdiff}		
	$0 < T_{vdiff} \leq 4$	$4 < T_{vdiff} \leq 15$	$T_{vdiff} > 15$
$T_{vdir} > 10$	4	3	2
$5 < T_{vdir} \leq 10$	3	2	1
$T_{vdir} \leq 5$	2	1	0
$T_{vdir} = 0$	0	0	0

Night privacy - Classification

T_{vdir}	T_{vdiff}		
	$0 < T_{vdiff} \leq 4$	$4 < T_{vdiff} \leq 15$	$T_{vdiff} > 15$
$T_{vdir} > 10$	0	0	0
$5 < T_{vdir} \leq 10$	1	1	1
$T_{vdir} \leq 5$	2	2	2
$T_{vdir} = 0$	4	3	2

Enduris™ Glass Core

Enduris™ Glass Core plays a key role in the design of high-performance, sustainable blinds.

Fabrics with Enduris™ Glass Core offer great look, sharp transparency to outward visibility and ensure outstanding strength and durability for large outdoor and indoor shade applications. Designed and tested for the highest levels of performance, with a wide range of attractive designs, fabrics made with Enduris yarns have been installed in offices and executive suites, educational and health-care facilities, public spaces, hotels, restaurants and residential areas.

Solar shading fabrics made with Enduris™ yarns contribute to sustainable buildings by effectively managing solar heat protection, diffusing incoming natural light, enhancing interior comfort and increasing occupant productivity. The proven outstanding strength and quality of fabrics with Enduris Glass Core make them a leading option for architects and designers.

All shades made with these yarns offer excellent aesthetics, the highest strength and durability to maintain those looks, and performance characteristics that contribute to a healthier, more sustainable indoor environment.

Enduris™
GLASS CORE

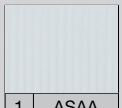
Performance in **choice**

The following diagrams will guide you to the ideal combination of colour and type of fabric in a few easy steps:

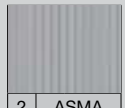
1. Choose your colour from one of the groups:
   a) White, b) Grey/beige, c) Dark, d) Colour

2. On the left page of each colour group you will find the different classes describing the performance of the colour and fabric chosen (see also p.6 and p.7 on How to read the data). The diagram on the right will give you an idea of the combined performance of colour and fabric for light transmittance and thermal comfort (the gtot values are for glazing C). White squares are used for internal applications, black ones for external applications.

White

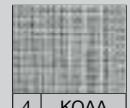


1	ASAA
2s	000204
-	1	1
0	2
91	

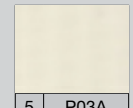


2	ASMA
F	000204
-	1	1
1	2
97	

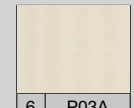
3	KLAA
2s	173173
2	1	0
2	1
53	



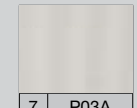
4	KQAA
2s	173177
2	1	0
2	1
49	



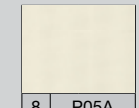
5	P03A
2s	101101
-	1	1
0	2
69	



6	P03A
2s	101116
-	1	1
1	2
69	



7	P03A
2s	101117
-	1	1
1	2
69	



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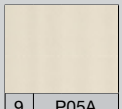
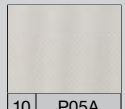
2s	101101
-	1	0
1	1
75	



9	P05A
2s	101116
-	1	0
1	1
75	



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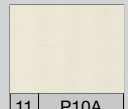
2s	101117
-	1	0
2	1
75	



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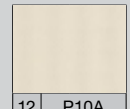
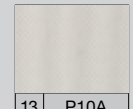
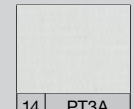
2s	101101
-	1	0
2	0
81	



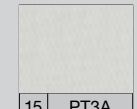
12	P10A
2s	101116
-	1	0
1	1
81	



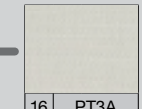
13	P10A
2s	101117
-	1	0
3	0
81	



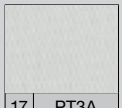
14	PT3A
2s	101101
-	1	1
0	2
87	



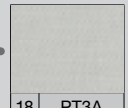
15	PT3A
F	101116
-	1	1
0	2
87	



16	PT3A
B	101116
-	1	1
0	2
87	

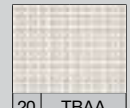


17	PT3A
F	101117
-	1	1
1	2
87	

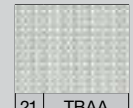


18	PT3A
B	101117
-	1	1
1	2
87	

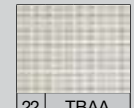
19	TBAA
2s	108150
3	1	2
2	2
33	



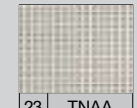
20	TBAA
2s	150116
3	1	1
1	2
34	



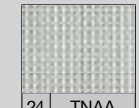
21	TBAA
2s	150117
3	1	1
1	2
34	



22	TBAA
2s	150150
3	1	1
0	2
35	

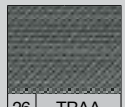


23	TNAA
2s	150116
-	1	0
3	0
65	



24	TNAA
2s	150117
-	1	0
3	0
65	

25	TNAA
2s	150150
-	1	0
2	0
65	

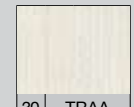


26	TRAA
B	118150
-	1	3
2	2
57	

27	TRAA
F	150108
-	1	1
1	2
58	

28	TRAA
B	150108
-	1	1
1	2
58	

29	TRAA
F	150114
-	1	1
1	2
58	



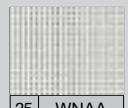
30	TRAA
F	150116
-	1	0
1	1
58	

31	TRAA
F	150117
-	1	1
1	2
58	

32	TRAA
F	150118
-	1	1
1	2
58	

33	TRAA
F	150126
-	1	1
1	2
59	

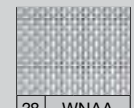
34	TRAA
2s	150150
-	1	1
0	2
59	



35	WNAA
2s	101101
2	1	0
2	1
39	

36	WNAA
2s	101112
2	1	0
3	0
39	

37	WNAA
2s	101116
3	1	0
3	0
39	



38	WNAA
2s	101117
3	1	0
2	1
39	

39	WNAA
2s	108101
3	1	1
3	1
39	

40	WSAA
2s	101101
3	1	1
0	2
23	

41	WSAA
F	108101
4	1	3
2	2
23	

42	WSAA
B	108101
4	1	3
2	2
23	

43	WSAA
F	112101
3	1	1
1	2
24	

44	WSAA
B	112101
3	1	1
1	2
24	

45	WSAA
F	116101
3	1	1
1	2
26	

46	WSAA
B	116101
3	1	1
1	2
26	

47	WSAA
F	117101
4	1	2
2	2
27	

48	WSAA
B	117101
4	1	2
2	2
27	

a	b
c	d
e	f	g
h	i
j	

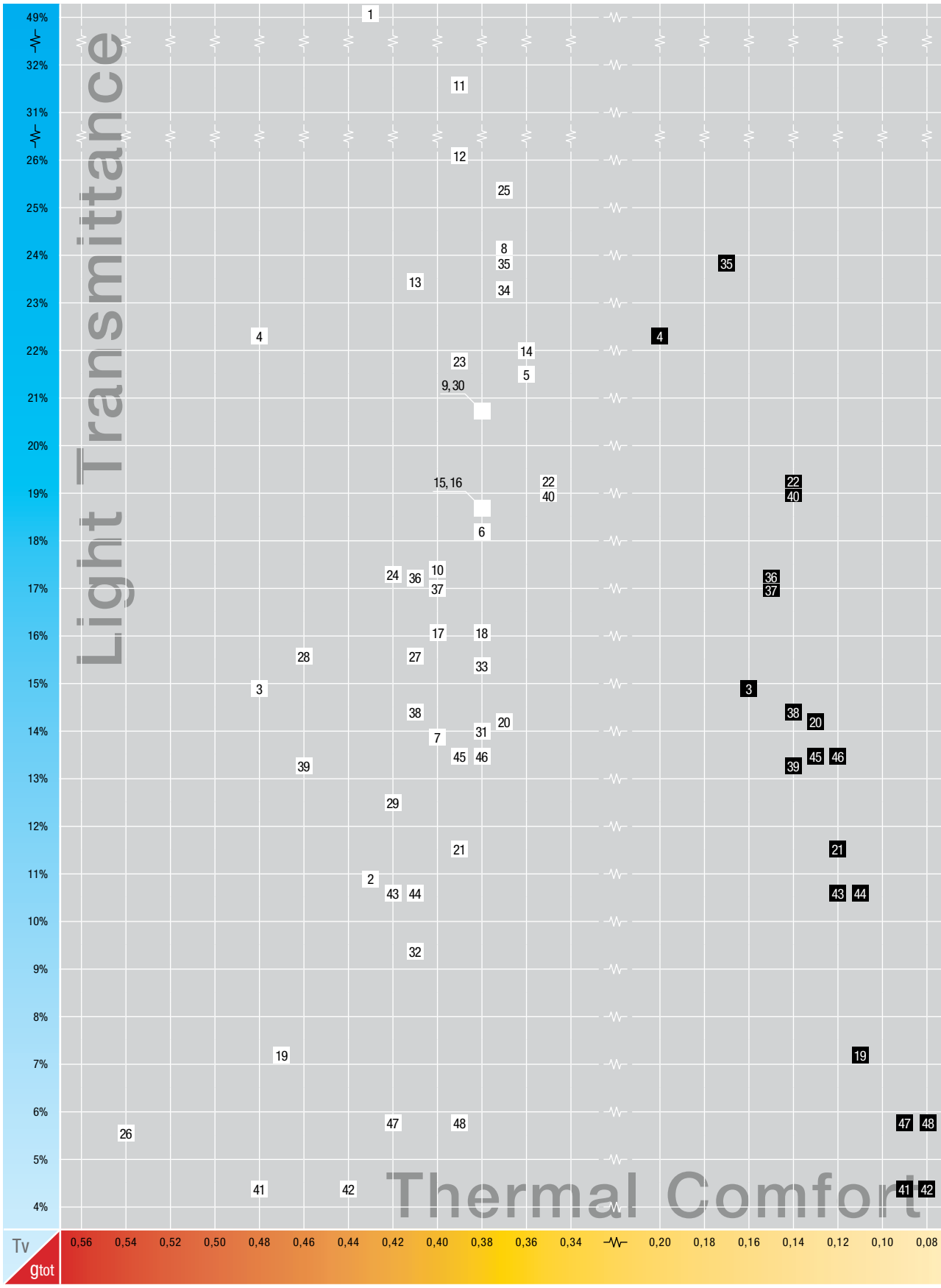
a: number in diagram
b: fabric code

c: F=front, B=back, 2s=2-sided
d: colour code
e: gtot external
f: gtot internal
g: glare control
h: contact outside
i: night privacy
j: page in catalogue

Class	
0	very little effect
1	little effect
2	moderate effect
3	good effect
4	very good effect

• gtot values are for glazing C

White


Light Transmittance
Thermal Comfort
49%
32%
31%
26%
25%
24%
23%
22%
21%
20%
19%
18%
17%
16%
15%
14%
13%
12%
11%
10%
9%
8%
7%
6%
5%
4%
1
11
12
25
8
35
13
34
4
4
14
23
5
9, 30
15, 16
22
40
22
40
6
24
36
10
37
36
37
17
18
28
27
33
3
3
38
20
38
7
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2
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41
42
Tv
gtot
0,56
0,54
0,52
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0,42
0,40
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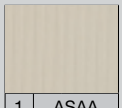
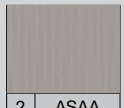
0,18
0,16
0,14
0,12
0,10
0,08

Grey/beige



1	ASAA
2s	000750
-	1	1
0	2
91	



2	ASAA
2s	001500
-	1	1
0	2
91	

3	ASAA
2s	004748
-	1	1
0	2
91	

4	ASMA
F	001500
-	1	1
1	2
97	

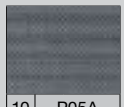
5	KLAA
2s	173178
2	1	0
2	1
53	

6	KMAA
B	183185
3	0	0
2	1
45	

7	KMAA
B	183186
2	1	0
2	1
45	

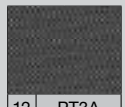
8	KQAA
2s	173178
2	1	0
3	0
49	

9	P03A
2s	118117
-	0	3
2	2
70	



10	P05A
2s	118117
-	0	1
3	1
76	

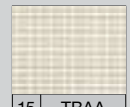
11	P10A
2s	118117
-	0	1
3	1
82	



12	PT3A
F	118117
-	0	3
2	2
87	

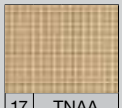
13	PT3A
B	118117
-	1	3
2	2
87	

14	TBAA
2s	118117
3	0	3
2	2
33	



15	TBAA
2s	127127
3	1	1
1	2
34	

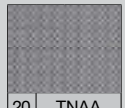
16	TBAA
2s	127139
3	1	1
1	2
34	



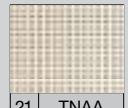
17	TNAA
2s	126126
-	1	0
3	0
64	

18	TNAA
2s	126127
-	1	0
3	0
64	

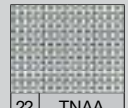
19	TNAA
2s	126133
-	1	1
3	1
64	



20	TNAA
2s	127108
-	1	0
3	0
65	



21	TNAA
2s	127127
-	1	0
3	0
65	

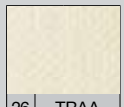


22	TNAA
2s	127133
-	1	0
3	0
65	

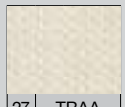
23	TRAA
F	118117
-	0	3
2	1
57	

24	TRAA
B	118117
-	0	3
2	1
57	

25	TRAA
B	118126
-	0	3
2	2
57	



26	TRAA
2s	127127
-	1	1
0	2
58	



27	TRAA
B	150116
-	1	0
1	1
58	

28	TRAA
B	150117
-	1	1
1	2
58	

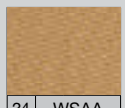
29	TRAA
B	150126
-	1	1
1	2
59	

30	WSAA
B	108112
4	1	3
2	2
23	

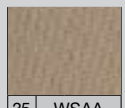
31	WSAA
B	108126
4	1	3
2	2
24	

32	WSAA
F	112103
3	1	0
2	1
24	

33	WSAA
B	112103
3	1	0
2	1
24	



34	WSAA
F	112109
3	1	0
2	1
24	



35	WSAA
2s	112112
3	1	2
2	2
24	

36	WSAA
F	112113
4	1	3
2	2
25	

37	WSAA
F	112156
3	1	2
2	2
25	

38	WSAA
B	113117
3	0	3
2	2
25	

39	WSAA
F	112157
3	1	1
1	2
27	

40	WSAA
B	112157
3	1	1
1	2
27	

41	WSAA
F	116111
3	1	2
2	2
27	

42	WSAA
2s	116116
3	1	1
1	2
27	

43	WSAA
F	116119
3	1	1
2	2
27	

44	WSAA
F	116122
3	1	2
2	2
27	

45	WSAA
F	117116
4	1	2
2	2
28	

46	WSAA
B	117116
4	1	2
2	2
28	

47	WSAA
2s	117117
4	1	2
2	2
28	

a	b
c	d
e	f	g
h	i
j	

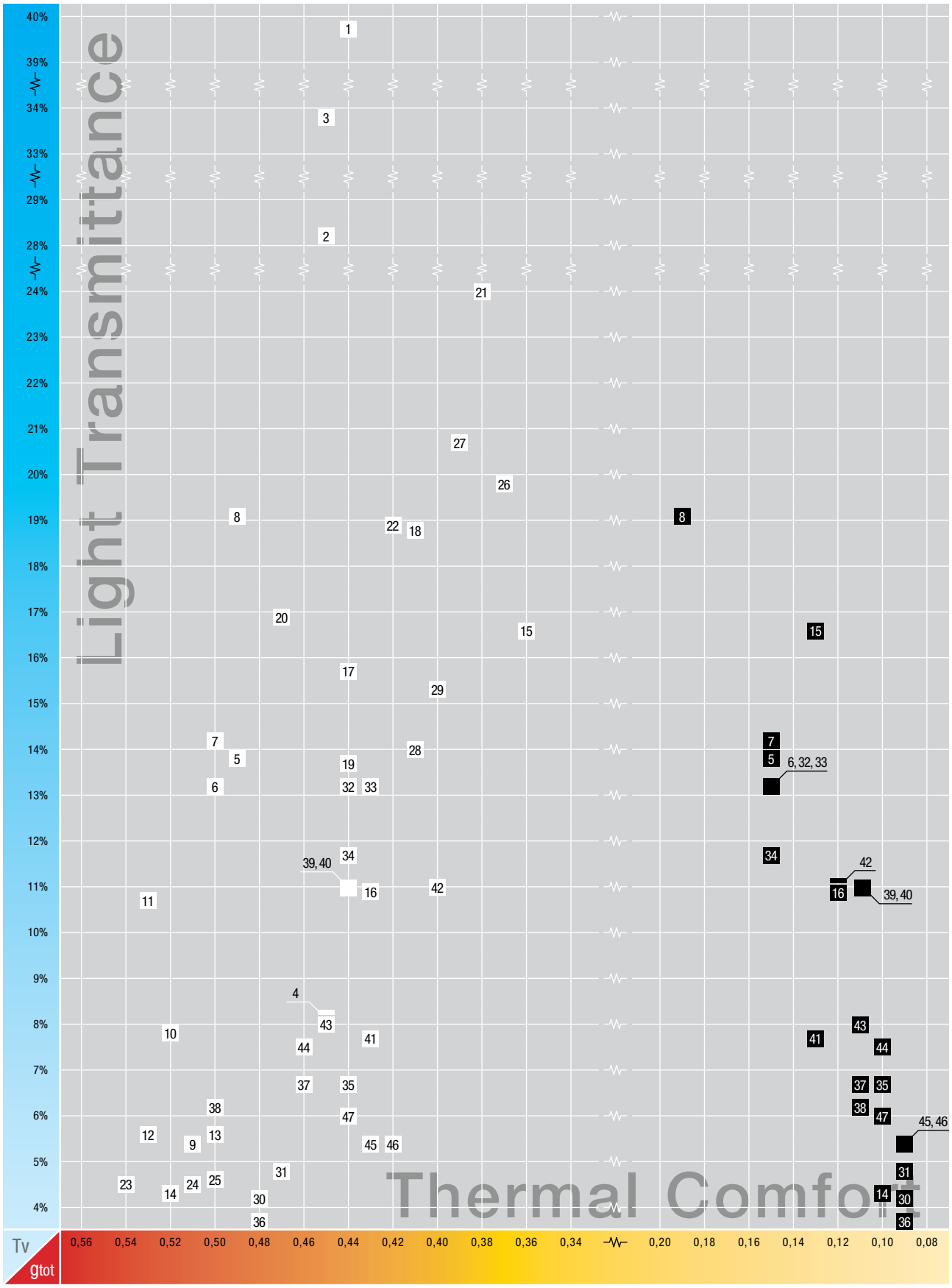
a: number in diagram
b: fabric code

c: F=front, B=back, 2s=2-sided
d: colour code
e: gtot external
f: gtot internal
g: glare control
h: contact outside
i: night privacy
j: page in catalogue

Class	
0	very little effect
1	little effect
2	moderate effect
3	good effect
4	very good effect

• gtot values are for glazing C

Grey/beige


Light Transmittance
Thermal Comfort
Tv
gtot
40%
39%
34%
33%
29%
28%
24%
23%
22%
21%
20%
19%
18%
17%
16%
15%
14%
13%
12%
11%
10%
9%
8%
7%
6%
5%
4%
0,56 0,54 0,52 0,50 0,48 0,46 0,44 0,42 0,40 0,38 0,36 0,34 0,20 0,18 0,16 0,14 0,12 0,10 0,08
1
3
2
21
27
26
8
22
18
20
15
17
29
7
5
6
19
32
33
28
39, 40
34
16
42
11
4
43
10
44
41
37
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38
47
12
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13
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46
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36
8
15
7
5
6, 32, 33
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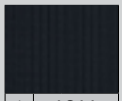
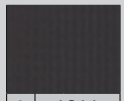
38
47
45, 46
31
14
30
36

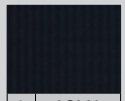
Dark



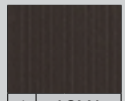
1	ASAA
2s	001887
-	1	2
2	2
91	



2	ASAA
2s	004999
-	1	1
1	2
92	



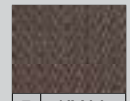
3	ASMA
F	001887
-	1	3
2	2
97	



4	ASMA
F	004999
-	1	2
2	2
97	

5	KLAA
2s	173172
3	1	0
2	1
53	

6	KLAA
2s	173175
3	0	0
2	1
53	



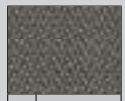
7	KMAA
F	183182
2	0	1
3	1
45	

8	KMAA
2s	183183
3	0	1
3	1
45	

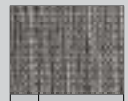
9	KMAA
F	183184
2	0	1
3	1
45	

10	KMAA
F	183187
2	0	0
2	1
45	

11	KMAA
F	183185
2	0	0
2	1
45	



12	KMAA
F	183186
2	0	0
2	1
45	

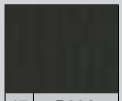


13	KQAA
2s	173175
2	0	0
3	0
49	

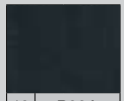
14	KQAA
2s	173179
2	1	0
2	1
49	

15	P03A
2s	113108
-	0	3
2	2
69	

16	P03A
2s	113113
-	0	3
2	2
69	

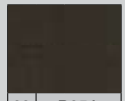


17	P03A
2s	113118
-	0	3
2	2
69	

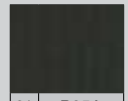


18	P03A
2s	118118
-	0	3
2	2
70	

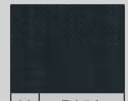
19	P05A
2s	113108
-	0	1
3	1
75	



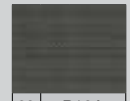
20	P05A
2s	113113
-	0	1
3	1
75	



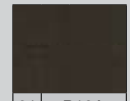
21	P05A
2s	113118
-	0	1
3	1
75	



22	P05A
2s	118118
-	0	1
3	1
76	



23	P10A
2s	113108
-	0	1
3	1
81	



24	P10A
2s	113113
-	0	1
3	1
81	

25	P10A
2s	113118
-	0	1
3	1
81	

26	P10A
2s	118118
-	0	1
3	1
81	

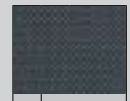
27	PT3A
2s	118118
-	0	3
2	2
87	

28	TBAA
2s	108108
3	0	3
2	2
33	

29	TBAA
2s	118108
3	0	3
2	2
33	

30	TBAA
2s	118118
3	0	3
2	2
34	

31	TBAA
2s	118126
3	0	3
2	2
34	



32	TNAA
2s	118108
-	0	0
4	0
63	

33	TNAA
2s	118118
-	0	1
3	1
63	

34	TNAA
2s	118120
-	0	0
4	0
64	

35	TNAA
2s	118126
-	0	0
4	0
64	

36	TRAA
2s	108108
-	0	3
3	1
57	

37	TRAA
2s	118118
-	0	3
2	2
57	

38	TRAA
F	118126
-	0	3
2	2
57	

39	TRAA
F	118150
-	0	3
2	2
57	

40	TRAA
B	150118
-	1	1
1	2
58	

41	WNAA
2s	108108
3	0	1
3	1
39	

42	WSAA
2s	108108
3	0	3
2	2
23	

43	WSAA
F	108111
4	0	3
2	2
23	

44	WSAA
B	108111
4	0	3
2	2
23	

45	WSAA
B	108118
3	0	3
2	2
23	

46	WSAA
F	113111
3	0	3
2	2
25	

47	WSAA
B	113111
3	0	3
2	2
25	

48	WSAA
2s	113113
3	0	3
2	2
25	

49	WSAA
2s	118118
4	0	3
2	2
28	

50	WSAA
2s	111111
3	1	1
3	1
28	

a	b
c	d
e	f	g
h	i
j	

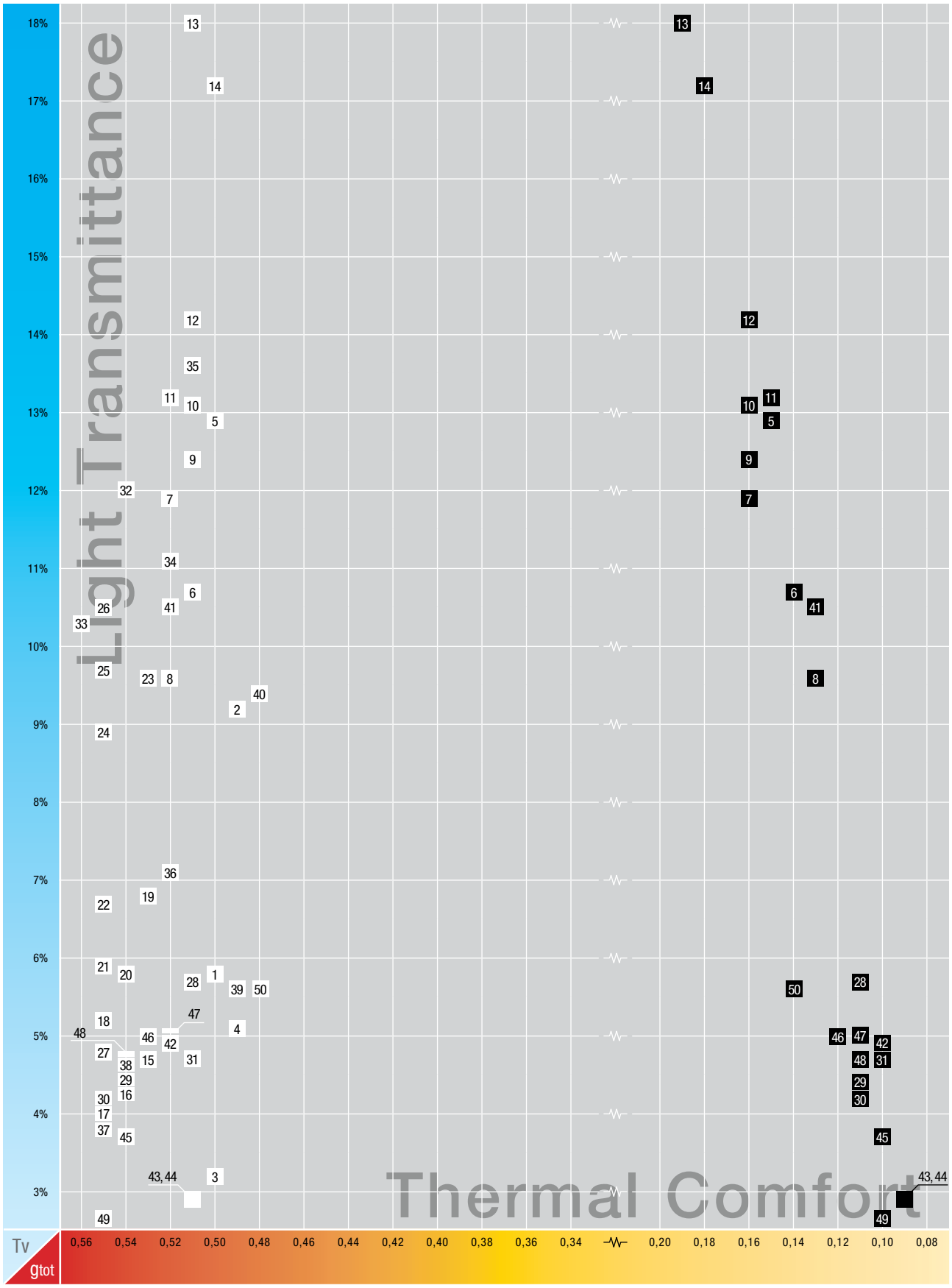
a: number in diagram
b: fabric code

c: F=front, B=back, 2s=2-sided
d: colour code
e: gtot external
f: gtot internal
g: glare control
h: contact outside
i: night privacy
j: page in catalogue

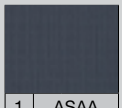
Class	
0	very little effect
1	little effect
2	moderate effect
3	good effect
4	very good effect

• gtot values are for glazing C

Dark


Light Transmittance
Thermal Comfort
18%
17%
16%
15%
14%
13%
12%
11%
10%
9%
8%
7%
6%
5%
4%
3%
Tv
gtot
0,56 0,54 0,52 0,50 0,48 0,46 0,44 0,42 0,40 0,38 0,36 0,34 0,20 0,18 0,16 0,14 0,12 0,10 0,08

Colour



1	ASAA
2s	002780
-	1	1
1	2
91

2	ASMA
B	000204
-	1	1
1	2
97

3	ASMA
B	001500
-	1	1
1	2
97

4	ASMA
B	001887
-	1	3
2	2
97

5	ASMA
B	004999
-	1	2
2	2
97

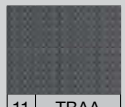
6	KLAA
2s	173174
2	1	0
2	1
53

7	KMAA
B	183182
2	1	1
3	1
45

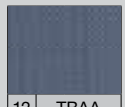
8	KMAA
B	183184
2	1	1
3	1
45

9	KMAA
F	183187
2	1	0
2	1
45

10	KQAA
2s	173176
2	1	0
2	1
49



11	TBAA
2s	108114
3	0	3
2	2
33



12	TBAA
2s	108120
3	0	3
2	2
33

13	TNAA
2s	114114
-	0	0
4	0
63

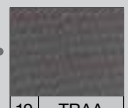
14	TNAA
2s	114116
-	1	0
4	0
63

15	TNAA
2s	114117
-	0	0
4	0
63

16	TNAA
2s	114118
-	0	0
4	0
63

17	TNAA
2s	126108
-	1	0
4	0
64

18	TRAA
F	108114
-	0	3
3	1
57



19	TRAA
B	108114
-	0	3
3	1
58

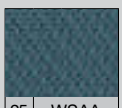
20	TRAA
B	150114
-	1	1
1	2
58

21	WNAA
2s	108118
3	0	1
3	1
40

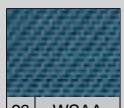
22	WSAA
F	108112
4	1	3
2	2
23

23	WSAA
F	108118
4	0	3
2	2
23

24	WSAA
F	108126
4	1	3
2	2
24



25	WSAA
F	108167
4	0	3
2	2
24



26	WSAA
B	108167
4	1	3
2	2
24

27	WSAA
B	112109
3	1	0
2	1
24

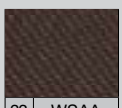
28	WSAA
B	112113
4	0	3
2	2
25

29	WSAA
B	112156
3	1	2
2	2
25

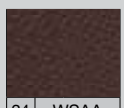
30	WSAA
F	113105
3	0	3
2	2
25

31	WSAA
B	113105
3	0	3
2	2
25

32	WSAA
F	113117
3	0	3
2	2
25



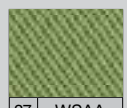
33	WSAA
F	113119
3	0	3
2	2
26



34	WSAA
B	113119
3	0	3
2	2
26

35	WSAA
F	113122
3	0	3
2	2
26

36	WSAA
B	113122
3	0	3
2	2
26



37	WSAA
F	115113
3	1	2
2	2
26

38	WSAA
B	115113
3	0	2
2	2
26

39	WSAA
2s	115115
3	1	1
1	2
26

40	WSAA
F	115181
3	1	0
2	1
26

41	WSAA
B	115181
3	1	0
2	1
26

42	WSAA
B	116111
3	1	2
2	2
27

43	WSAA
B	116119
3	1	1
2	2
27

44	WSAA
B	116122
3	1	2
2	2
27

a	b
c	d
e	f	g
h	i
j

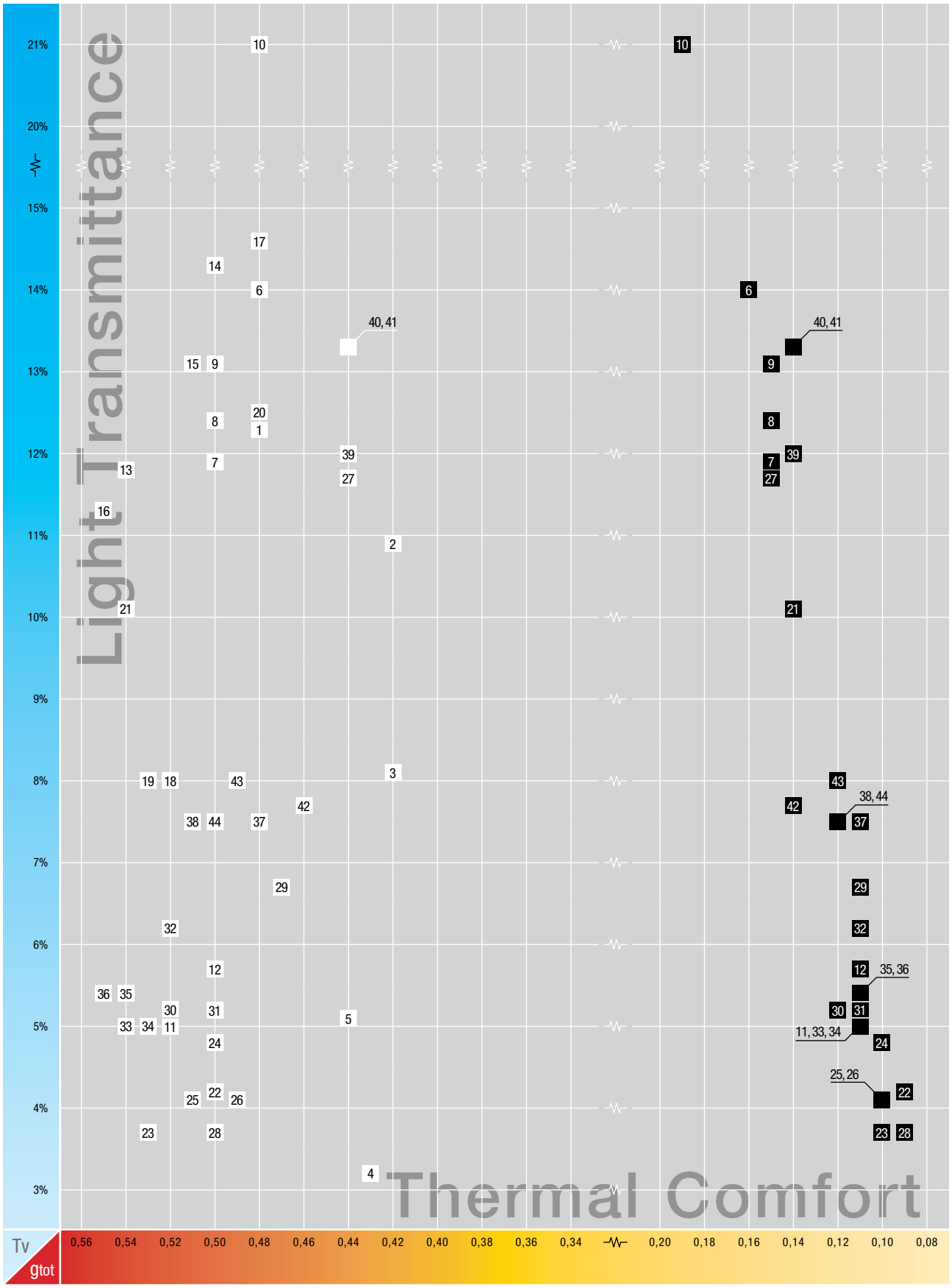
a: number in diagram
b: fabric code

c: F=front, B=back, 2s=2-sided
d: colour code
e: gtot external
f: gtot internal
g: glare control
h: contact outside
i: night privacy
j: page in catalogue

Class	
0	very little effect
1	little effect
2	moderate effect
3	good effect
4	very good effect

• gtot values are for glazing C

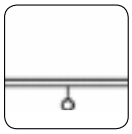
Colour


Light Transmittance
Thermal Comfort
21%
20%
15%
14%
13%
12%
11%
10%
9%
8%
7%
6%
5%
4%
3%
10
17
14
6
40, 41
15
9
20
1
8
39
7
27
13
16
2
21
3
19
18
43
42
38
44
37
29
32
12
36
35
30
31
33
34
11
5
24
25
22
26
23
28
4
40, 41
9
8
39
7
27
6
21
43
38, 44
42
37
29
32
12
35, 36
30
31
11, 33, 34
24
25, 26
22
23
28
Tv
gtot
0,56
0,54
0,52
0,50
0,48
0,46
0,44
0,42
0,40
0,38
0,36
0,34
0,20
0,18
0,16
0,14
0,12
0,10
0,08

Fabrics Overview

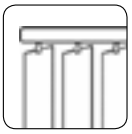
	serge 2165	basket 2120	natte 2165	aurelium	allegro	andante	star 2115	natte 2115	panama	panama twill	green screen eco	green screen platinum	opac 6000	natte 2115 vertical vanes	panama 5 vertical vanes
Fabric code	WSAA	TBAA	WNAA	KMAA	KQAA	KLAA	TRAA	TNAA	P03A P05A P10A	PT3A	ASAA	ASMA	ZZOA	TNAD	P05D
External solar shading	●	●	●	●	●	●									
Internal solar shading	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Black out													●		
Openness Factor	3%	4%	10%	8%	10%	6%	3%	10%	3/5/ 10%	3%	4%	2%	0%	10%	5%
Available widths (in mm, tolerance: -0%, +5%)	1400 1600 1800 2050 2500	1600 2050 2500	2500	2500	2500	2500	1600 2050 2500	2050 2500	2500	2500	2400	2400	1950	89 127	89 127 250
Colours available	34	13	7	6	5	5	14	18	8	5	7	4	4	7	8

Signage



Solar shading

Tensile structures



Vertical vanes

Performance in **fabrics**

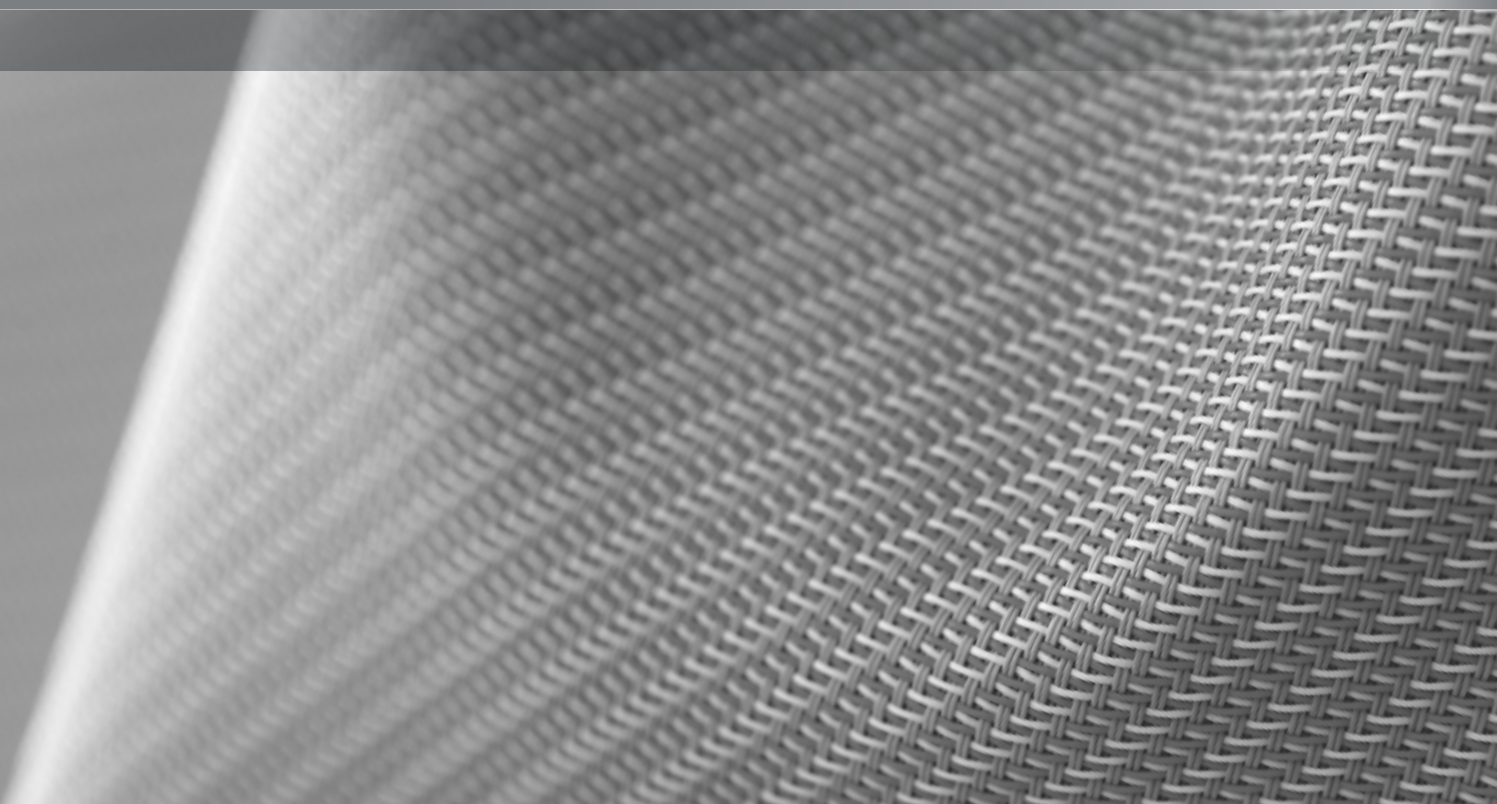
Fabric code WSAA

Sergé 2165

OF 3%

PVC-coated fibreglass fabric
Twill Weave
Fabric code WSAA
OF 3%
Weight 525 g/m^2
External and internal applications

Enduris™
GLASS CORE



Fabric code WSAA

Sergé 2165

OF 3%

Yarn

Technical specifications	Average Values	Standard
Titer	165 tex	ISO 1889
Weighted composition	Glass 41.5%, PVC 58.5%	ISO 3801
Diameter	0.38 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.83 mm	ISO/DIS 5084.2
Mass	525 g/m²	ISO 3801
Yarns in warp/weft/cm	18/14	IS0 7211
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
	B1	DIN 4102
	C-s3, d0	EN 13501-1
Breaking strength	warp 270 daN, weft 240 daN	ISO 13934-1
Elongation at break	warp 5.6%, weft 5%	ISO 13934-1
Tear resistance	warp 17 daN, weft 19 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue white not included	ISO 105 B02
UV-resistance	min. 4 scale of grey (1-5)	ISO 105 B02
Air porosity	960 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Sergé 2165

101101 white

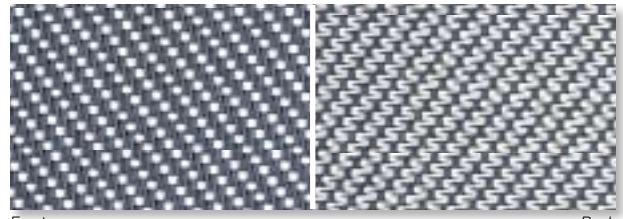
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	18.9	66.9	14.2	19.0	16.1	2.9	3.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.20	0.35	0.18	0.36	0.14	0.35	0.09	0.25
Classes	2	2	2	1	3	1	4	2

108101 grey-white



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.4	27.2	68.4	4.4	1.8	2.6	3.0
Back	4.4	38.9	56.7	4.4	1.8	2.6	3.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.18	0.56	0.14	0.56	0.09	0.48	0.08	0.28
Front Classes	2	0	3	0	4	1	4	2
Back Values	0.16	0.49	0.12	0.50	0.08	0.44	0.07	0.27
Back Classes	2	1	3	1	4	1	4	2

108108 grey

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	5.1	14.2	80.7	4.9	0.5	4.4	4.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.64	0.17	0.62	0.10	0.52	0.09	0.30
Classes	2	0	2	0	3	0	4	2

108111 grey-dark blue

Front *Back*

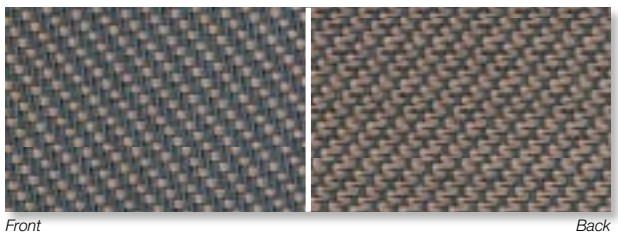
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	3.6	16.8	79.6	2.9	0.4	2.5	2.9
Back	3.6	18.9	77.5	2.9	0.4	2.5	2.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.62	0.15	0.61	0.09	0.51	0.08	0.29
Front Classes	2	0	2	0	4	0	4	2
Back Values	0.20	0.61	0.15	0.60	0.09	0.51	0.08	0.29
Back Classes	2	0	2	0	4	0	4	2

108112 grey-sand



Front *Back*

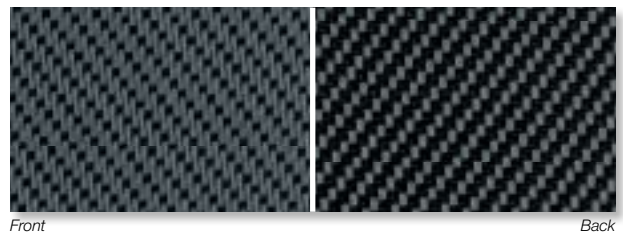
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.4	21.6	74.0	4.2	1.0	3.2	3.6
Back	4.4	27.2	68.4	4.2	1.0	3.2	3.6

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.59	0.15	0.59	0.09	0.50	0.08	0.29
Front Classes	2	0	2	0	4	1	4	2
Back Values	0.18	0.56	0.14	0.56	0.09	0.48	0.08	0.28
Back Classes	2	0	3	0	4	1	4	2

108118 grey-black



Front *Back*

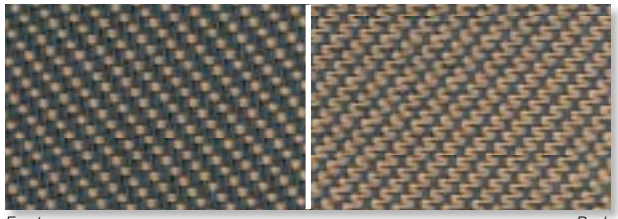
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	3.7	12.7	83.6	3.7	0.4	3.2	3.6
Back	3.7	9.6	86.7	3.7	0.4	3.2	3.6

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.21	0.64	0.16	0.63	0.10	0.53	0.09	0.30
Front Classes	2	0	2	0	4	0	4	2
Back Values	0.22	0.66	0.17	0.65	0.10	0.54	0.09	0.30
Back Classes	2	0	2	0	3	0	4	2

108126 grey-caramel



Front *Back*

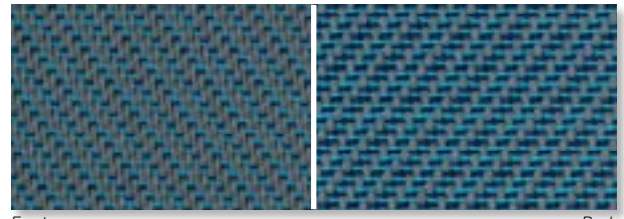
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	5.0	22.2	72.8	4.8	1.1	3.6	4.0
Back	5.0	28.9	66.1	4.8	1.1	3.6	4.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.59	0.15	0.58	0.10	0.50	0.08	0.29
Front Classes	2	0	2	0	4	1	4	2
Back Values	0.19	0.55	0.14	0.55	0.09	0.47	0.08	0.28
Back Classes	2	0	3	0	4	1	4	2

108167 pacific



Front *Back*

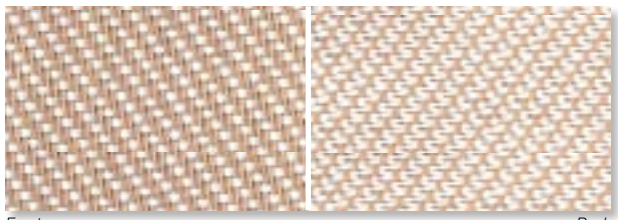
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.8	18.8	76.4	4.1	0.6	3.5	3.9
Back	4.8	22.9	72.3	4.1	0.6	3.5	3.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.21	0.61	0.16	0.60	0.10	0.51	0.08	0.29
Front Classes	2	0	2	0	4	0	4	2
Back Values	0.20	0.58	0.15	0.58	0.10	0.49	0.08	0.29
Back Classes	2	0	2	0	4	1	4	2

112101 sand-white



Front *Back*

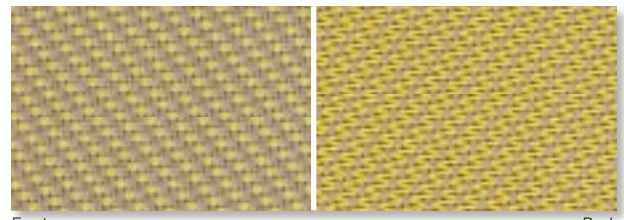
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	12.2	44.8	43.0	10.6	6.0	4.6	5.1
Back	12.2	50.6	37.2	10.6	6.0	4.6	5.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.47	0.17	0.47	0.12	0.42	0.09	0.27
Front Classes	2	1	2	1	3	1	4	2
Back Values	0.19	0.43	0.16	0.44	0.11	0.41	0.08	0,26
Back Classes	2	1	2	1	3	1	4	2

112103 sand-yellow



Front *Back*

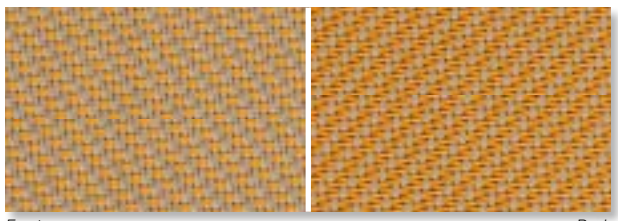
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	16.5	40.8	42.6	13.2	7.5	5.7	6.3
Back	16.5	42.4	41.0	13.2	7.5	5.7	6.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.24	0.50	0.20	0.50	0.15	0.44	0.11	0.27
Front Classes	2	1	2	1	3	1	3	2
Back Values	0.24	0.49	0.20	0.49	0.15	0.43	0.11	0.27
Back Classes	2	1	2	1	3	1	3	2

112109 sand-orange



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	16.7	39.2	44.1	11.7	5.8	5.9	6.5
Back	16.7	39.8	43.5	11.7	5.8	5.9	6.5

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.25	0.51	0.21	0.50	0.15	0.44	0.11	0.27
Front Classes	2	0	2	0	3	1	3	2
Back Values	0.24	0.50	0.21	0.50	0.15	0.44	0.11	0.27
Back Classes	2	0	2	0	3	1	3	2

112112 sand

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	8.2	38.3	53.5	6.7	3.1	3.7	4.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.19	0.50	0.15	0.50	0.10	0.44	0.08	0.27
Classes	2	1	2	0	3	1	4	2

112113 sand-bronze

Front *Back*

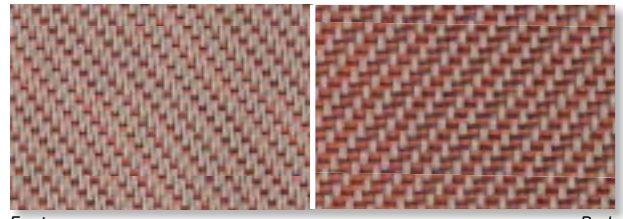
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.2	28.5	67.3	3.7	1.3	2.4	2.7
Back	4.2	20.3	75.5	3.7	1.3	2.4	2.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.18	0.55	0.14	0.55	0.09	0.48	0.07	0.28
Front Classes	2	0	3	0	4	1	4	2
Back Values	0.20	0.60	0.15	0.59	0.09	0.50	0.08	0.29
Back Classes	2	0	2	0	4	0	4	2

112156 fire



Front *Back*

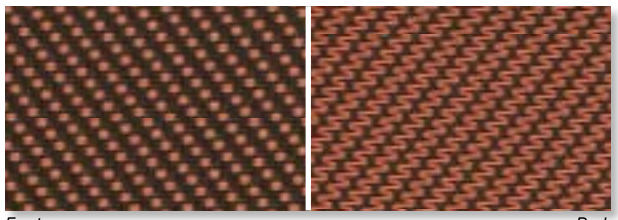
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	9.1	32.4	58.5	6.7	3.1	3.6	4.0
Back	9.1	29.6	61.3	6.7	3.1	3.6	4.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.21	0.54	0.17	0.53	0.11	0.46	0.09	0.28
Front Classes	2	0	2	0	3	1	4	2
Back Values	0.21	0.55	0.17	0.55	0.11	0.47	0.09	0.28
Back Classes	2	0	2	0	3	1	4	2

113105 bronze-tangerine



Front *Back*

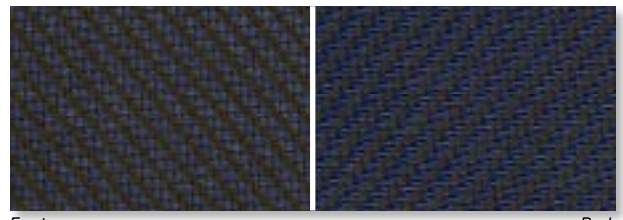
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	7.0	14.4	78.7	5.2	1.2	4.1	4.5
Back	7.0	20.6	72.5	5.2	1.2	4.1	4.5

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.64	0.18	0.62	0.12	0.52	0.10	0.30
Front Classes	2	0	2	0	3	0	4	2
Back Values	0.22	0.60	0.17	0.59	0.11	0.50	0.09	0.29
Back Classes	2	0	2	0	3	0	4	2

113111 bronze-dark blue



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	6.3	10.4	83.3	5.0	0.5	4.5	5.0
Back	6.3	13.7	80.0	5.0	0.5	4.5	5.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.66	0.18	0.64	0.12	0.53	0.10	0.30
Front Classes	2	0	2	0	3	0	4	2
Back Values	0.23	0.64	0.18	0.63	0.11	0.52	0.09	0.30
Back Classes	2	0	2	0	3	0	4	2

113113 bronze

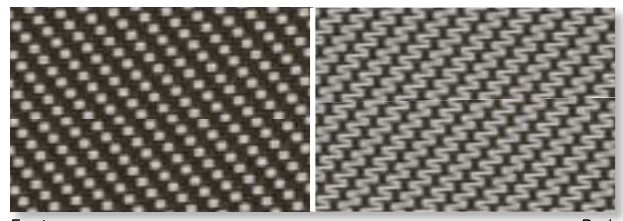
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.8	9.1	86.1	4.7	0.5	4.2	4.6

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.23	0.67	0.17	0.65	0.11	0.54	0.09	0.30
Classes	2	0	2	0	3	0	4	2

113117 bronze-pearl



Front *Back*

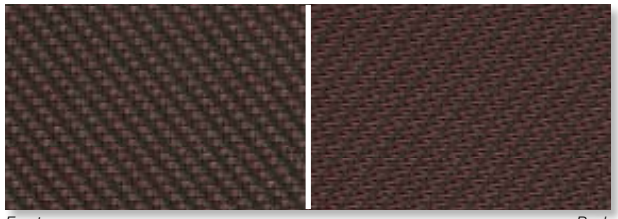
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	6.7	14.7	78.6	6.2	1.9	4.3	4.8
Back	6.7	20.9	72.4	6.2	1.9	4.3	4.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.64	0.18	0.62	0.11	0.52	0.09	0.30
Front Classes	2	0	2	0	3	0	4	2
Back Values	0.21	0.60	0.17	0.59	0.11	0.50	0.09	0.29
Back Classes	2	0	2	0	3	0	4	2

113119 bronze-burgundy



Front *Back*

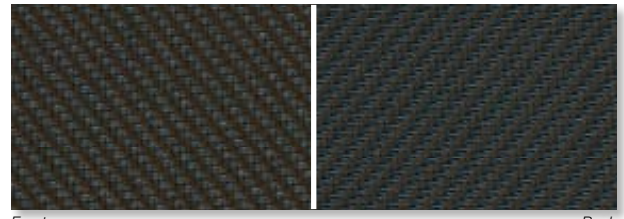
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	5.4	9.7	84.9	5.0	0.6	4.4	4.9
Back	5.4	10.5	84.1	5.0	0.6	4.4	4.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.66	0.18	0.65	0.11	0.54	0.09	0.30
Front Classes	2	0	2	0	3	0	4	2
Back Values	0.23	0.66	0.18	0.64	0.11	0.53	0.09	0.30
Back Classes	2	0	2	0	3	0	4	2

113122 bronze-lichen



Front *Back*

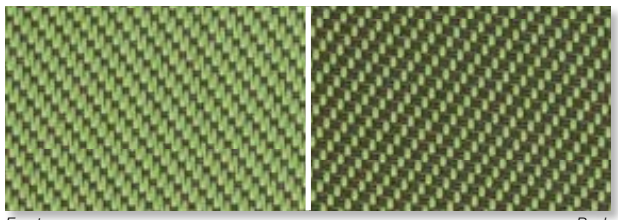
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	5.5	7.5	87.0	5.4	0.5	4.8	5.2
Back	5.5	6.9	87.6	5.4	0.5	4.8	5.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.68	0.18	0.66	0.11	0.54	0.10	0.30
Front Classes	2	0	2	0	3	0	4	2
Back Values	0.24	0.68	0.18	0.66	0.11	0.55	0.10	0.30
Back Classes	2	0	2	0	3	0	4	2

115113 lime-bronze



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	8.2	27.5	64.3	7.5	3.2	4.2	4.7
Back	8.2	19.5	72.3	7.5	3.2	4.2	4.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.21	0.56	0.17	0.56	0.11	0.48	0.09	0.28
Front Classes	2	0	2	0	3	1	4	2
Back Values	0.23	0.61	0.18	0.60	0.12	0.51	0.10	0.29
Back Classes	2	0	2	0	3	0	4	2

115115 lime

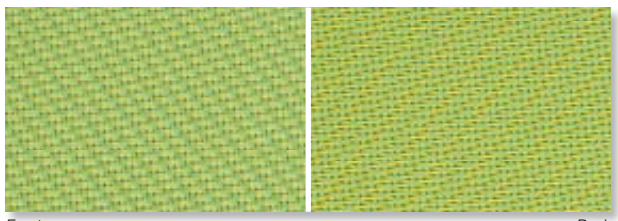
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	14.6	39.4	46.0	12.0	7.6	4.4	4.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.23	0.50	0.19	0.50	0.14	0.44	0.10	0.27
Classes	2	0	2	0	3	1	3	2

115181 kiwano



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	16.1	40.2	43.7	13.3	8.2	5.1	5.7
Back	16.1	40.7	43.2	13.3	8.2	5.1	5.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.24	0.50	0.20	0.50	0.14	0.44	0.11	0.27
Front Classes	2	1	2	1	3	1	3	2
Back Values	0.24	0.50	0.20	0.50	0.14	0.44	0.11	0.27
Back Classes	2	1	2	1	3	1	3	2

116101 linen-white

Front *Back*

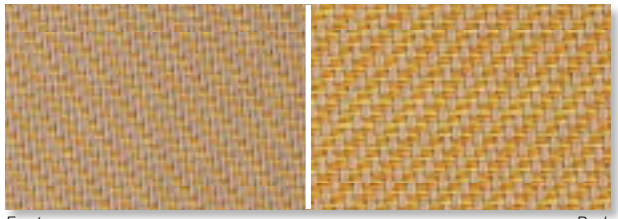
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	15.2	56.8	28.0	13.5	9.8	3.7	4.2
Back	15.2	58.9	25.9	13.5	9.8	3.7	4.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.40	0.17	0.41	0.13	0.39	0.09	0.26
Front Classes	2	1	2	1	3	1	4	2
Back Values	0.19	0.39	0.17	0.40	0.12	0.38	0.09	0.26
Back Classes	2	1	2	1	3	1	4	2

112157 sunset



Front *Back*

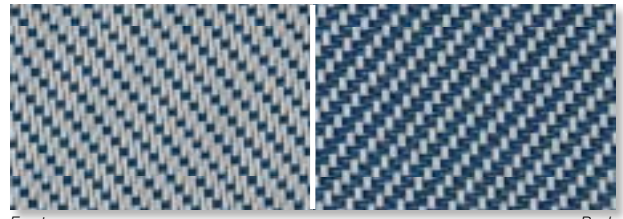
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	13.8	39.4	46.8	11.0	6.7	4.3	4.7
Back	13.8	41.4	44.8	11.0	6.7	4.3	4.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.23	0.50	0.19	0.50	0.13	0.44	0.10	0.27
Front Classes	2	0	2	0	3	1	4	2
Back Values	0.22	0.49	0.18	0.49	0.13	0.44	0.10	0.27
Back Classes	2	1	2	1	3	1	4	2

116111 linen-dark blue



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	13.7	42.0	44.3	7.7	3.8	3.8	4.3
Back	13.7	35.3	51.0	7.7	3.8	3.8	4.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.22	0.49	0.18	0.49	0.13	0.43	0.10	0.27
Front Classes	2	1	2	1	3	1	4	2
Back Values	0.23	0.52	0.19	0.52	0.14	0.46	0.10	0.28
Back Classes	2	0	2	0	3	1	3	2

116116 linen

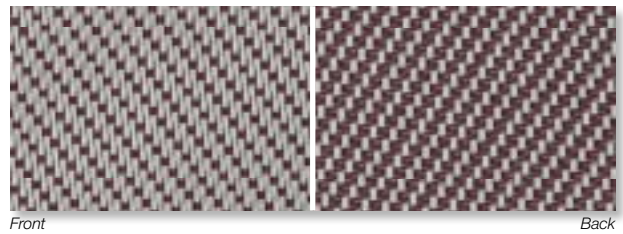
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	13.4	53.2	33.4	11.0	7.2	3.8	4.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.19	0.42	0.16	0.43	0.12	0.40	0.09	0.26
Classes	2	1	2	1	3	1	4	2

116119 linen-burgundy



Front *Back*

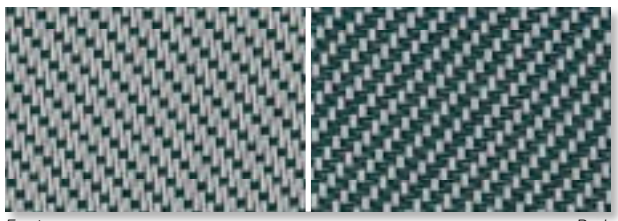
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	9.0	35.4	55.6	8.0	4.0	4.1	4.5
Back	9.0	25.1	65.9	8.0	4.0	4.1	4.5

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.52	0.16	0.52	0.11	0.45	0.08	0.28
Front Classes	2	0	2	0	3	1	4	2
Back Values	0.22	0.58	0.18	0.57	0.12	0.49	0.09	0.29
Back Classes	2	0	2	0	3	1	4	2

116122 linen-lichen



Front *Back*

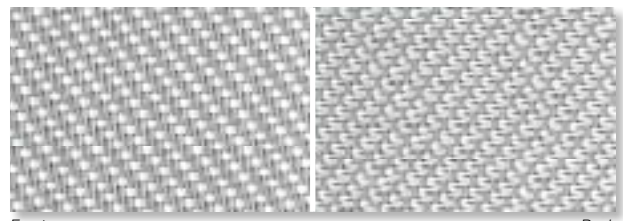
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	8.0	33.5	58.5	7.5	3.8	3.7	4.2
Back	8.0	21.3	70.7	7.5	3.8	3.7	4.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.20	0.53	0.16	0.53	0.10	0.46	0.08	0.28
Front Classes	2	0	2	0	3	1	4	2
Back Values	0.22	0.60	0.18	0.59	0.12	0.50	0.09	0.29
Back Classes	2	0	2	0	3	1	4	2

117101 pearl-white



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	7.2	46.9	45.9	5.8	3.3	2.4	2.8
Back	7.2	53.5	39.3	5.8	3.3	2.4	2.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.16	0.45	0.13	0.46	0.09	0.42	0.07	0.27
Front Classes	2	1	3	1	4	1	4	2
Back Values	0.15	0.41	0.12	0.42	0.08	0.39	0.06	0.26
Back Classes	3	1	3	1	4	1	4	2

117116 pearl-linen

Front *Back*

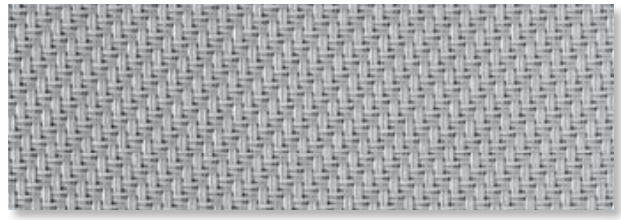
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	7.2	43.0	49.8	5.4	2.6	2.8	3.2
Back	7.2	46.7	46.1	5.4	2.6	2.8	3.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.17	0.47	0.14	0.48	0.09	0.43	0.07	0.27
Front Classes	2	1	3	1	4	1	4	2
Back Values	0.16	0.45	0.13	0.46	0.09	0.42	0.07	0.27
Back Classes	2	1	3	1	4	1	4	2

117117 pearl



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	7.7	39.7	52.6	6.0	2.6	3.4	3.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.18	0.49	0.15	0.50	0.10	0.44	0.08	0.27
Classes	2	1	3	1	4	1	4	2

118118 black

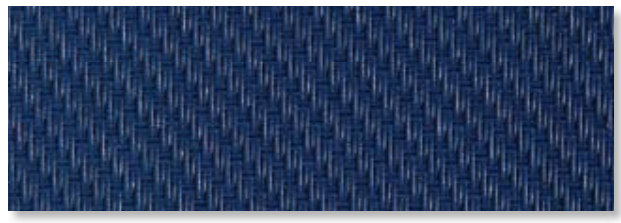
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	2.6	5.2	92.2	2.6	0.3	2.3	2.6

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.69	0.16	0.67	0.10	0.55	0.09	0.30
Classes	2	0	2	0	4	0	4	2

111111 dark-blue



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.8	26.6	60.6	5.6	0.5	5.1	5.6

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.25	0.57	0.20	0.57	0.14	0.48	0.11	0.29
Classes	2	0	2	0	3	1	3	2


© Nike Bourgeois

Fabric code TBAA

Basket 2120

OF 4%

PVC-coated fibreglass fabric
Basket Weave
Fabric code TBAA
OF 4%
Weight 490 g/m^2
External and internal applications

Enduris™ GLASS CORE

Fabric code TBAA

Basket 2120

OF 4%

Yarn

Technical specifications	Average Values	Standard
Titer	120 tex	ISO 1889
Weighted composition	Glass 34%, PVC 66%	ISO 3801
Diameter	0.29 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.62 mm	ISO/DIS 5084.2
Mass	490 g/m²	ISO 3801
Yarns in warp/weft/cm	24/17.5	IS0 7211
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
	B1	DIN 4102
	C-s3, d0	EN 13501-1
Volatile organic compounds (VOC)	complies	DIBt (June 2004)
	complies	AgBB (March 2008)
	complies	AFSSET (2006)
	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 190 daN, weft 140 daN	ISO 13934-1
Elongation at break	warp 4.8%, weft 4.4%	ISO 13934-1
Tear resistance	warp 8.1 daN, weft 8.8 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue white not included	ISO 105 B02
UV-resistance	min. 4 scale of grey (1-5)	ISO 105 B02
Air porosity	500 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Basket 2120

108108 rock
108114 quartz
108120 pigeon
108150 cobble
118108 basalt
118117 graphite
118118 night
118126 gold
127127 ivory
127139 amber
150116 desert
150117 silver
150150 snow

108108 rock

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	6.0	16.5	77.5	5.7	0.9	4.9	5.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.62	0.17	0.61	0.11	0.51	0,09	0.29
Classes	2	0	2	0	3	0	4	2

108114 quartz

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	5.3	13.8	80.9	5.0	0.7	4.3	4.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.64	0.17	0.63	0.11	0.52	0,09	0.30
Classes	2	0	2	0	3	0	4	2

108120 pigeon

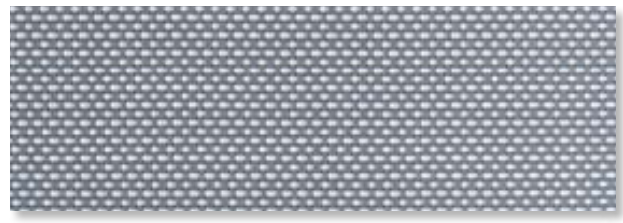
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	7.1	19.7	73.2	5.7	0.8	4.9	5.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.61	0.17	0.60	0.11	0.50	0,09	0.29
Classes	2	0	2	0	3	0	4	2

108150 cobble



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	7.7	29.7	62.6	7.2	2.4	4.7	5.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.20	0.55	0.16	0.55	0.11	0.47	0,09	0.28
Classes	2	0	2	0	3	0	4	2

118108 basalt

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.4	9.2	86.4	4.4	0.4	4.0	4.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.66	0.17	0.65	0.11	0.54	0,09	0.30
Classes	2	0	2	0	3	0	4	2

118117 graphite

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.5	14.9	80.6	4.3	0.8	3.6	3.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.21	0.63	0.16	0.62	0.10	0.52	0,09	0.30
Classes	2	0	2	0	3	0	4	2

118118 night

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.2	4.7	91.1	4.2	0.4	3.9	4.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.23	0.69	0.18	0.67	0.11	0.55	0,09	0.30
Classes	2	0	2	0	3	0	4	2

118126 gold

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.9	16.8	78.3	4.7	0.6	4.1	4.5

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.21	0.62	0.16	0.61	0.10	0.51	0,09	0.29
Classes	2	0	2	0	3	0	4	2

127127 ivory

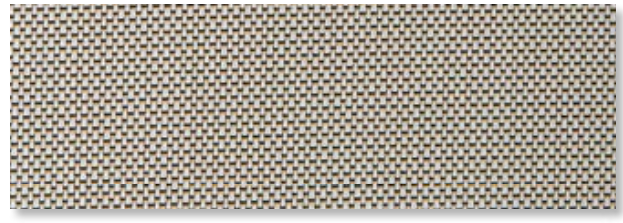
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	17.6	65.4	17.0	16.6	12.8	3.8	4.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.20	0.35	0.17	0.37	0.13	0.36	0,09	0.25
Classes	2	1	2	1	3	1	4	2

127139 amber



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.4	41.8	45.8	10.9	6.5	4.3	4.7

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.21	0.48	0.17	0.49	0.12	0.43	0,09	0.27
Classes	2	1	2	1	3	1	4	2

150116 desert

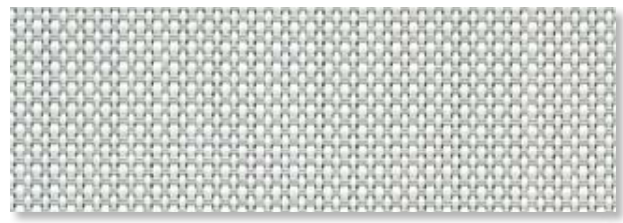
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	16.0	61.6	22.4	14.2	10.7	3.5	4.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.19	0.37	0.17	0.39	0.13	0.37	0,09	0.25
Classes	2	1	2	1	3	1	4	2

150117 silver



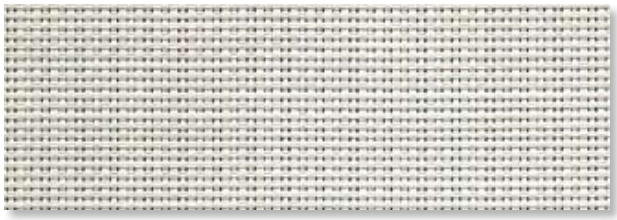
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	13.3	54.4	32.3	11.5	7.4	4.0	4.4

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.19	0.41	0.16	0.42	0.12	0.39	0,08	0.26
Classes	2	1	2	1	3	1	4	2

150150 snow



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	19.5	67.8	12.7	19.2	15.2	4.0	4.3

gtot

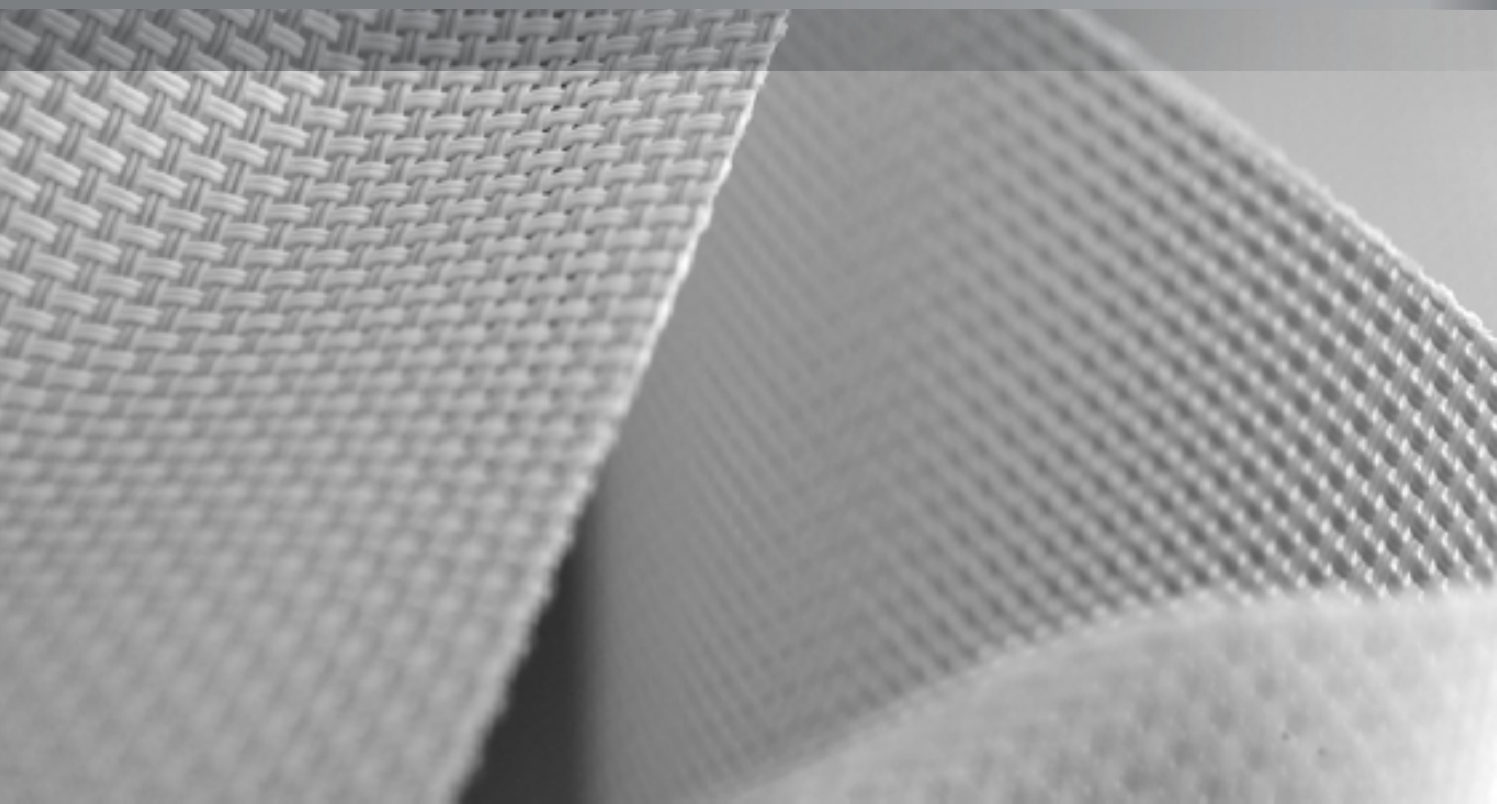
	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.21	0.34	0.18	0.36	0.14	0.35	0,09	0.25
Classes	2	2	2	1	3	1	4	2

Natte 2165

OF 10%

PVC-coated fibreglass fabric
Basket Weave
Fabric code WNAA
OF 10%
Weight 460 g/m^2
External and internal applications

Enduris™ GLASS CORE



Fabric code WNAA

Natte 2165 | OF 10%

Yarn

Technical specifications	Average Values	Standard
Titer	165 tex	ISO 1889
Weighted composition	Glass 41.5%, PVC 58.5%	ISO 3801
Diameter	0.38 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.58 mm	ISO/DIS 5084.2
Mass	460 g/m²	ISO 3801
Yarns in warp/weft/cm	14/14	IS0 7211
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
	B1	DIN 4102
Breaking strength	warp 280 daN, weft 260 daN	ISO 13934-1
Elongation at break	warp 4.6%, weft 5.8%	ISO 13934-1
Tear resistance	warp 13 daN, weft 15 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue white not included	ISO 105 B02
UV-resistance	min. 4 scale of grey (1-5)	ISO 105 B02
Air porosity	1040 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Natte 2165


101101
white


101112
white-sand


101116
white-linen

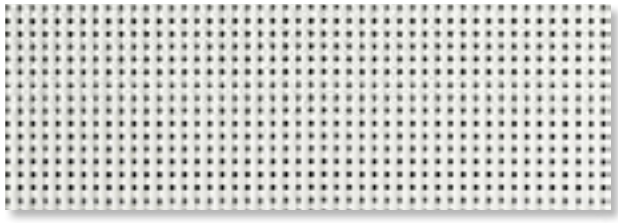

101117
white-pearl


108101
grey-white


108108
grey


108118
grey-black

101101 white



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	24.0	63.1	12.9	23.9	14.6	9.3	9.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.25	0.38	0.22	0.39	0.17	0.37	0.11	0.25
Classes	2	1	2	1	2	1	3	2

101112 white-sand

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	18.4	48.3	33.3	17.2	6.7	10.5	11.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.24	0.46	0.21	0.46	0.15	0.41	0.11	0.27
Classes	2	1	2	1	2	1	3	2

101116 white-linen

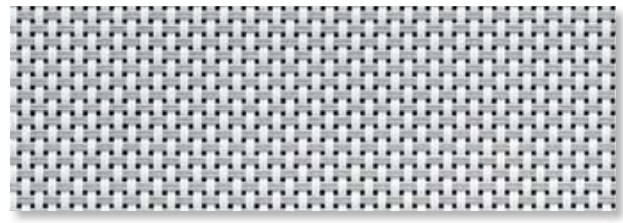
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	19.0	54.0	27.0	17.0	6.5	10.5	11.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.23	0.42	0.20	0.43	0.15	0.40	0.10	0.26
Classes	2	1	2	1	3	1	3	2

101117 white-pearl



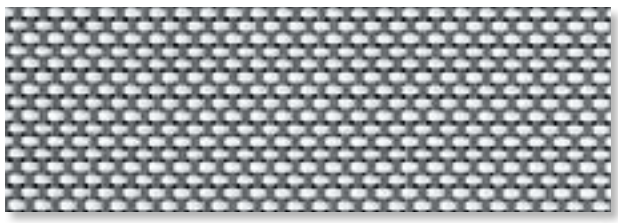
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	16.0	49.5	34.5	14.4	5.0	9.4	9.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.22	0.44	0.19	0.45	0.14	0.41	0.10	0.27
Classes	2	1	2	1	3	1	4	2

108101 grey-white



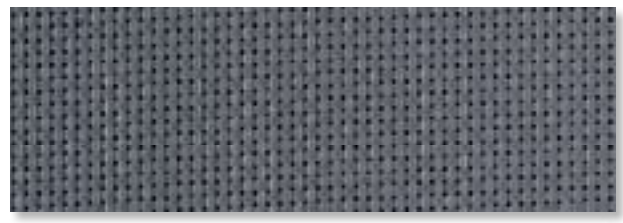
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	13.6	35.4	51.0	13.3	3.7	9.7	10.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.23	0.52	0.19	0.52	0.14	0.46	0.10	0.28
Classes	2	0	2	0	3	1	3	2

108108 grey



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	10.5	15.9	73.6	10.5	0.6	9.9	10.4

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.25	0.63	0.20	0.62	0.13	0.52	0.11	0.30
Classes	2	0	2	0	3	0	3	2

108118 grey-black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	10.1	9.3	80.6	10.1	0.5	9.6	10.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.26	0.67	0.21	0.65	0.14	0.54	0.11	0.30
Classes	2	0	2	0	3	0	3	2

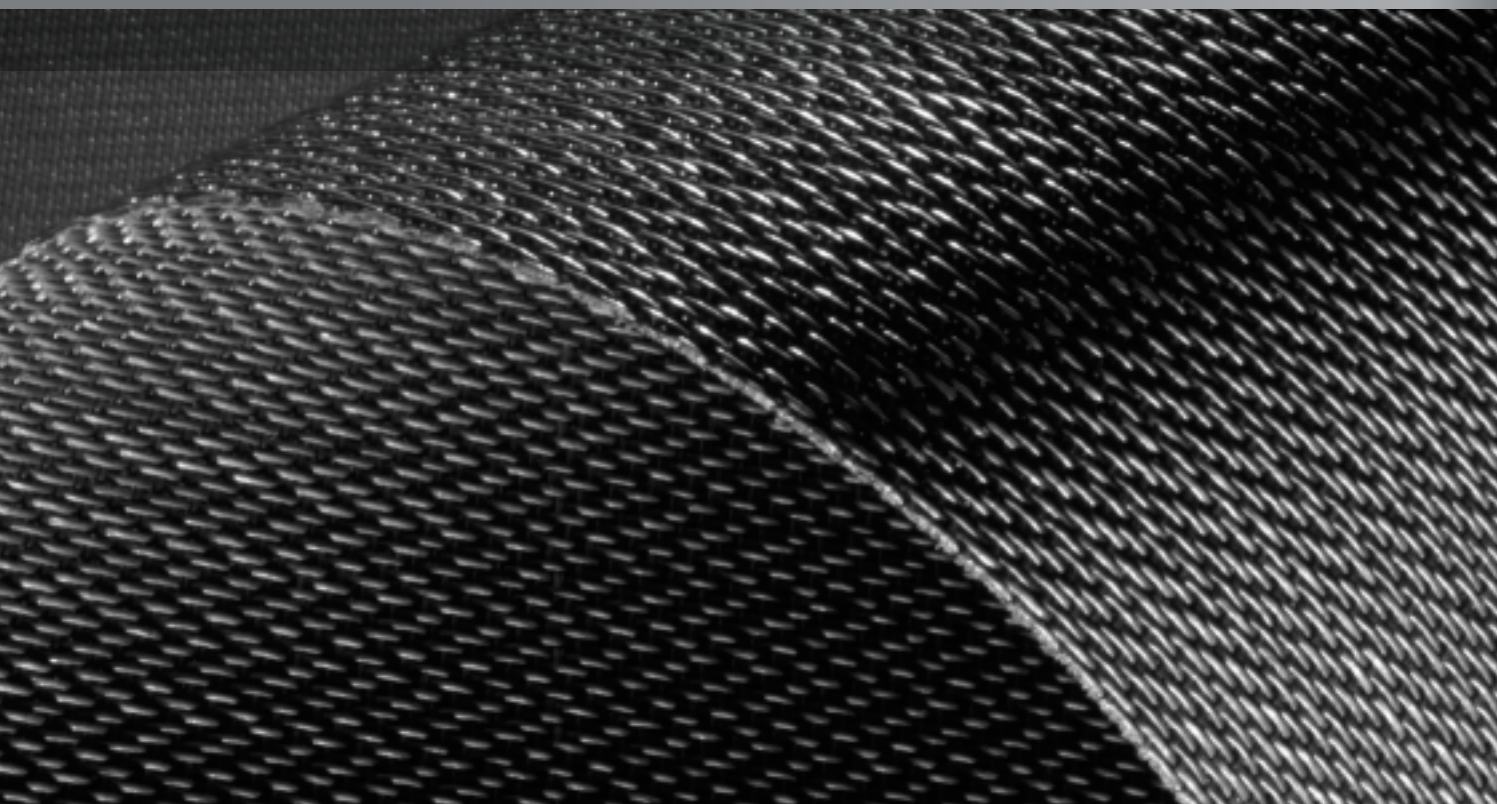
Fabric code KMAA

Aurelium

OF 8%

PVC-coated fibreglass fabric
Satin Weave
Fabric code KMAA
OF 8%
Weight 557 g/m^2
External and internal applications

Enduris™ GLASS CORE



Fabric code KMAA

Aurelium | OF 8%

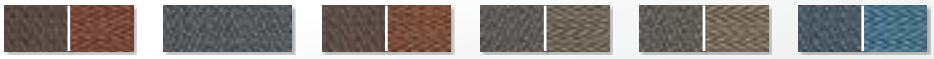
Yarn

Technical specifications	Average Values	Standard
Titer	190 tex	ISO 1889
Weighted composition	Glass 36%, PVC 64%	ISO 3801
Diameter	0.41 mm	
Environment		Oekotex standard 100

Fabric

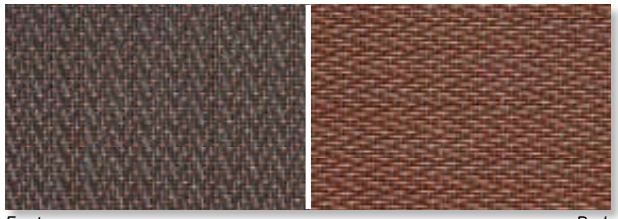
Technical specifications	Average Values	Standard
Thickness	0.97 mm	ISO/DIS 5084.2
Mass	557 g/m²	ISO 3801
Yarns in warp/weft/cm	15/14	IS0 7211
Fire resistance	M1 (under certification)	NF P92-503
	FR	NFPA 701
Breaking strength	warp 310 daN, weft 300 daN	ISO 13934-1
Elongation at break	warp 4.8%, weft 6.2%	ISO 13934-1
Tear resistance	warp 31 daN, weft 31 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
Air porosity	2120 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Aurelium



183182 mars
183183 mercury
183184 jupiter
183185 saturn
183186 venus
183187 neptune

183182 mars



Front *Back*

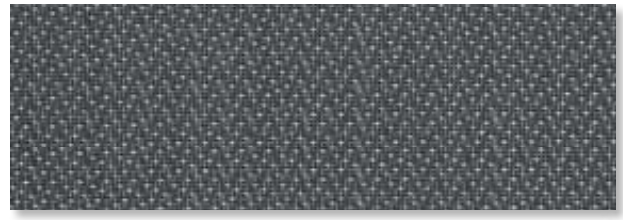
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	14.6	16.9	68.5	11.9	3.5	8.4	9.5
Back	14.6	22.6	62.8	11.9	3.5	8.4	9.5

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.28	0.63	0.23	0.62	0.16	0.52	0.12	0.29
Front Classes	2	0	2	0	2	0	3	2
Back Values	0.27	0.60	0.22	0.59	0.15	0.50	0.12	0.29
Back Classes	2	0	2	0	2	1	3	2

183183 mercury



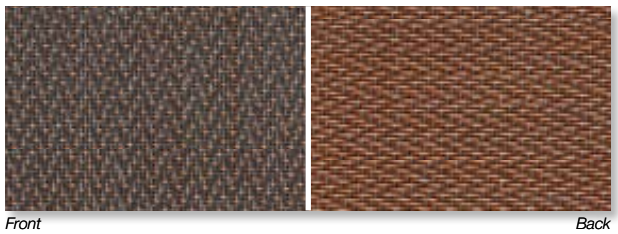
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	9.5	16.2	74.3	9.6	1.7	7.9	9.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.24	0.63	0.19	0.62	0.13	0.52	0.10	0.30
Classes	2	0	2	0	3	0	3	2

183184 jupiter



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	14.6	17.5	67.9	12.4	3.8	8.6	9.8
Back	14.6	23.1	62.3	12.4	3.8	8.6	9.8

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.28	0.63	0.23	0.61	0.16	0.51	0.12	0.29
Front Classes	2	0	2	0	2	0	3	2
Back Values	0.27	0.60	0.22	0.58	0.15	0.50	0.11	0.29
Back Classes	2	0	2	0	2	1	3	2

183185 saturn

Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	13.5	17.0	69.6	13.2	5.3	7.9	9.1
Back	13.5	20.1	66.4	13.2	5.3	7.9	9.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.27	0.63	0.22	0.62	0.15	0.52	0.12	0.29
Front Classes	2	0	2	0	2	0	3	2
Back Values	0.26	0.61	0.22	0.60	0.15	0.50	0.11	0.29
Back Classes	2	0	2	0	3	0	3	2

183186 venus

Front *Back*

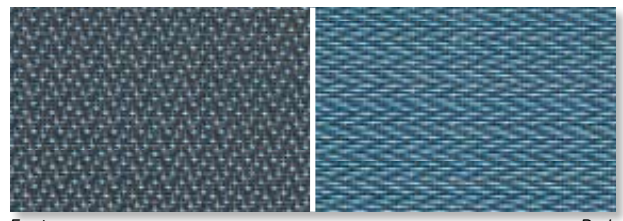
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	14.6	17.4	68.0	14.2	5.5	8.7	9.9
Back	14.6	22.6	62.8	14.2	5.5	8.7	9.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.28	0.63	0.23	0.61	0.16	0.51	0.12	0.29
Front Classes	2	0	2	0	2	0	3	2
Back Values	0.27	0.60	0.22	0.59	0.15	0.50	0.12	0.29
Back Classes	2	0	2	0	2	1	3	2

183187 neptune



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	15.1	17.6	67.3	13.1	4.8	8.3	9.4
Back	15.1	22.9	62.1	13.1	4.8	8.3	9.4

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Front Values	0.28	0.63	0.23	0.61	0.16	0.51	0.12	0.29
Front Classes	2	0	2	0	2	0	3	2
Back Values	0.27	0.60	0.22	0.59	0.15	0.50	0.12	0.29
Back Classes	2	0	2	0	2	1	3	2

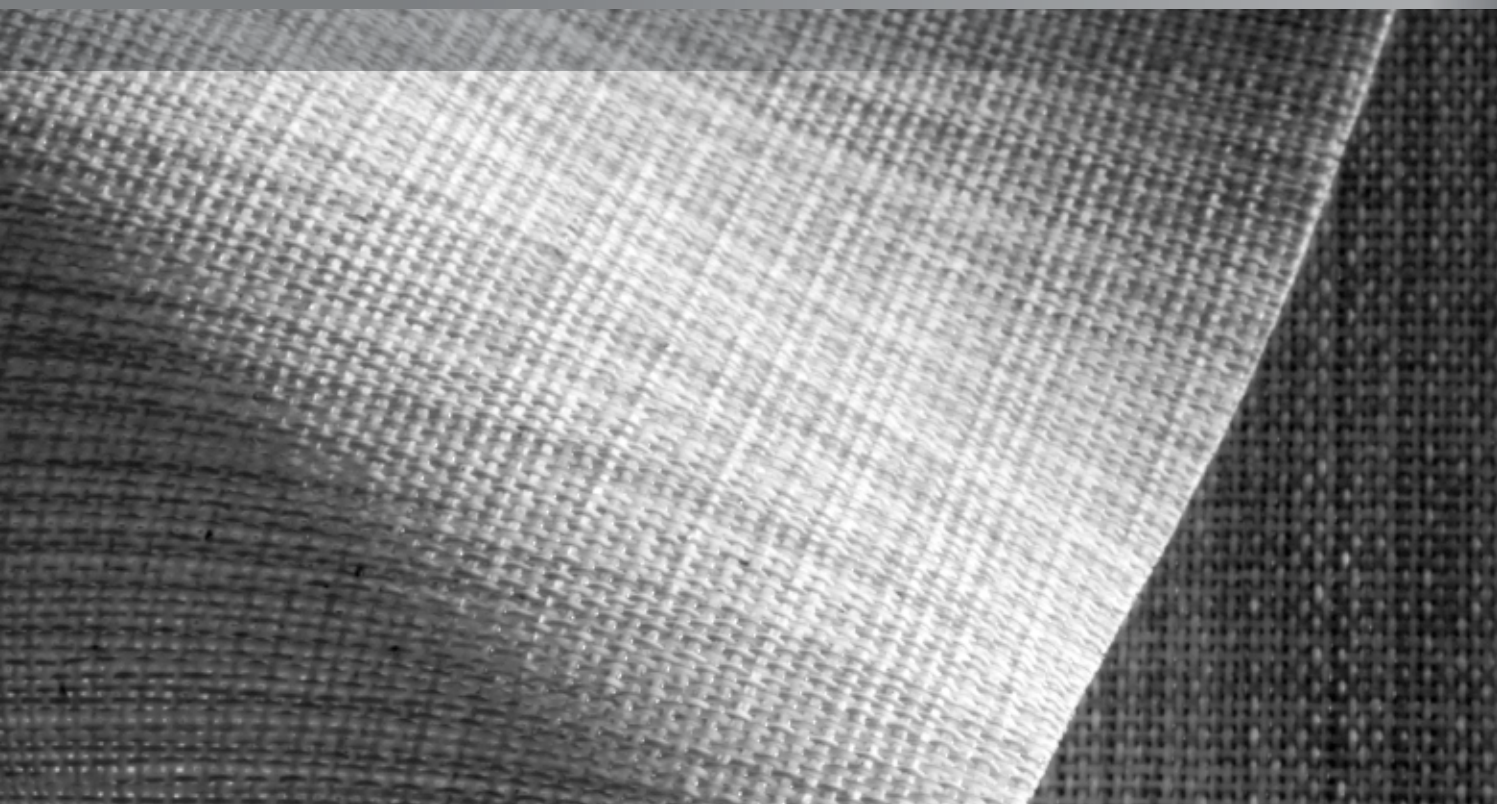
Fabric code KQAA

Allegro

OF 10%

PVC-coated fibreglass fabric
Basket Weave
Fabric code KQAA
OF 10%
Weight 455 g/m^2
External and internal applications

Enduris™
GLASS CORE



Fabric code KQAA

Allegro

OF 10%

Yarn

Technical specifications	Average Values	Standard
Titer	200 tex	ISO 1889
Weighted composition	Glass 34%, PVC 66%	ISO 3801
Diameter	0.43 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.87 mm	ISO/DIS 5084.2
Mass	455 g/m²	ISO 3801
Yarns in warp/weft/cm	14/8	IS0 7211
Fire resistance	M1 (under certification)	NF P92-503
	FR	NFPA 701
Breaking strength	warp 170 daN, weft 130 daN	ISO 13934-1
Elongation at break	warp 5.0%, weft 2.8%	ISO 13934-1
Tear resistance	warp 12 daN, weft 19 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue	ISO 105 B02
Air porosity	1380 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Allegro

173175
walnut

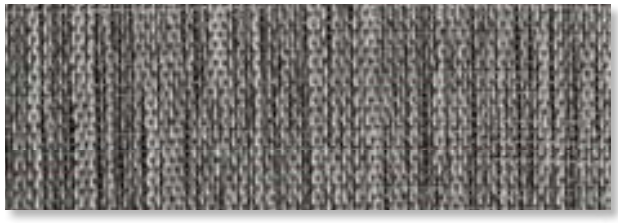
173176
pine

173177
birch

173178
teak

173179
poplar

173175 walnut



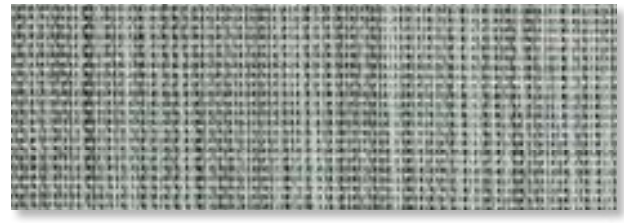
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	20.4	18.1	61.5	18.0	6.9	11.1	12.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.32	0.63	0.27	0.61	0.19	0.51	0.14	0.29
Classes	2	0	2	0	2	0	3	2

173176 pine



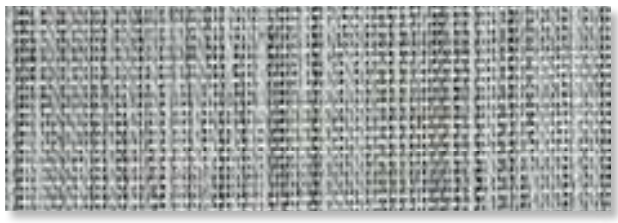
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	22.8	28.0	49.2	21.0	11.2	9.9	11.0

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.31	0.58	0.27	0.57	0.19	0.48	0.14	0.29
Classes	2	0	2	0	2	1	3	2

173177 birch



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	24.6	28.1	47.3	22.3	13.9	8.4	10.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.32	0.58	0.28	0.57	0.20	0.48	0.15	0.29
Classes	2	0	2	0	2	1	3	2

173178 teak

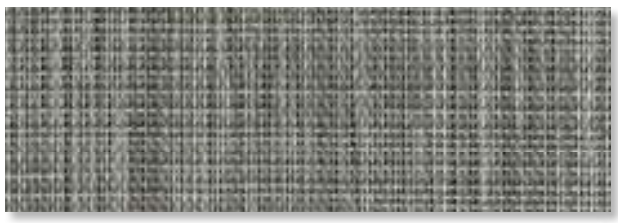
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	21.3	25.2	53.5	19.1	9.0	10.1	11.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.31	0.59	0.26	0.58	0.19	0.49	0.14	0.29
Classes	2	0	2	0	2	1	3	2

173179 poplar



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	18.8	23.3	58.0	17.2	7.3	10.0	11.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.29	0.60	0.25	0.59	0.18	0.50	0.13	0.29
Classes	2	0	2	0	2	1	3	2

Fabric code KLAA

Andante

OF 6%

PVC-coated fibreglass fabric
Twill Weave
Fabric code KLAA
OF 6%
Weight 554 g/m^2
External and internal applications

Enduris™
GLASS CORE

Fabric code KLAA

Andante

OF 6%

Yarn

Technical specifications	Average Values	Standard
Titer	200 tex	ISO 1889
Weighted composition	Glass 34%, PVC 66%	ISO 3801
Diameter	0.43 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.81 mm	ISO/DIS 5084.2
Mass	554 g/m^2	ISO 3801
Yarns in warp/weft/cm	15/13	IS0 7211
Fire resistance	M1 (under certification)	NF P92-503
	FR	NFPA 701
Breaking strength	warp 240 daN, weft 210 daN	ISO 13934-1
Elongation at break	warp 5%, weft 6%	ISO 13934-1
Tear resistance	warp 19 daN, weft 23 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue	ISO 105 B02
Air porosity	1320 l/m^2/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Andante

173172
menhir

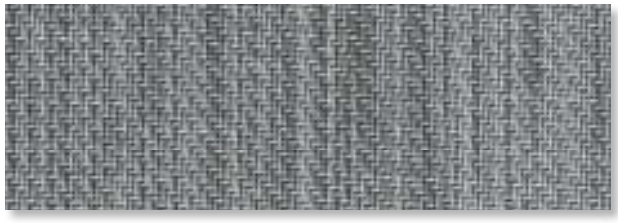
173173
mushroom

173174
moss

173175
turf

173178
bark

173172 menhir



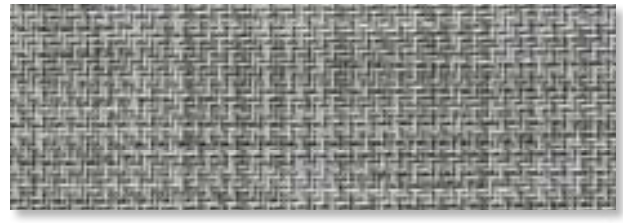
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	13.6	22.5	63.9	12.9	7.2	5.8	6.9

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.26	0.60	0.21	0.59	0.15	0.50	0.11	0.29
Classes	2	0	2	0	3	1	3	2

173173 mushroom



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	16.6	26.9	56.5	14.9	8.6	6.3	7.3

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.27	0.58	0.23	0.57	0.16	0.48	0.12	0.29
Classes	2	0	2	0	2	1	3	2

173174 moss

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	16.4	26.9	56.8	14.0	7.7	6.3	7.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.27	0.58	0.22	0.57	0.16	0.48	0.12	0.29
Classes	2	0	2	0	2	1	3	2

173175 turf

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.6	18.3	69.1	10.7	4.3	6.4	7.2

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.26	0.62	0.21	0.61	0.14	0.51	0.11	0.29
Classes	2	0	2	0	3	0	3	2

173178 bark

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	15.6	26.0	58.4	13.8	7.6	6.2	7.1

gtot

	A		B		C		D	
	ext.	int.	ext.	int.	ext.	int.	ext.	int.
Values	0.27	0.58	0.22	0.57	0.15	0.49	0.12	0.29
Classes	2	0	2	0	2	1	3	2

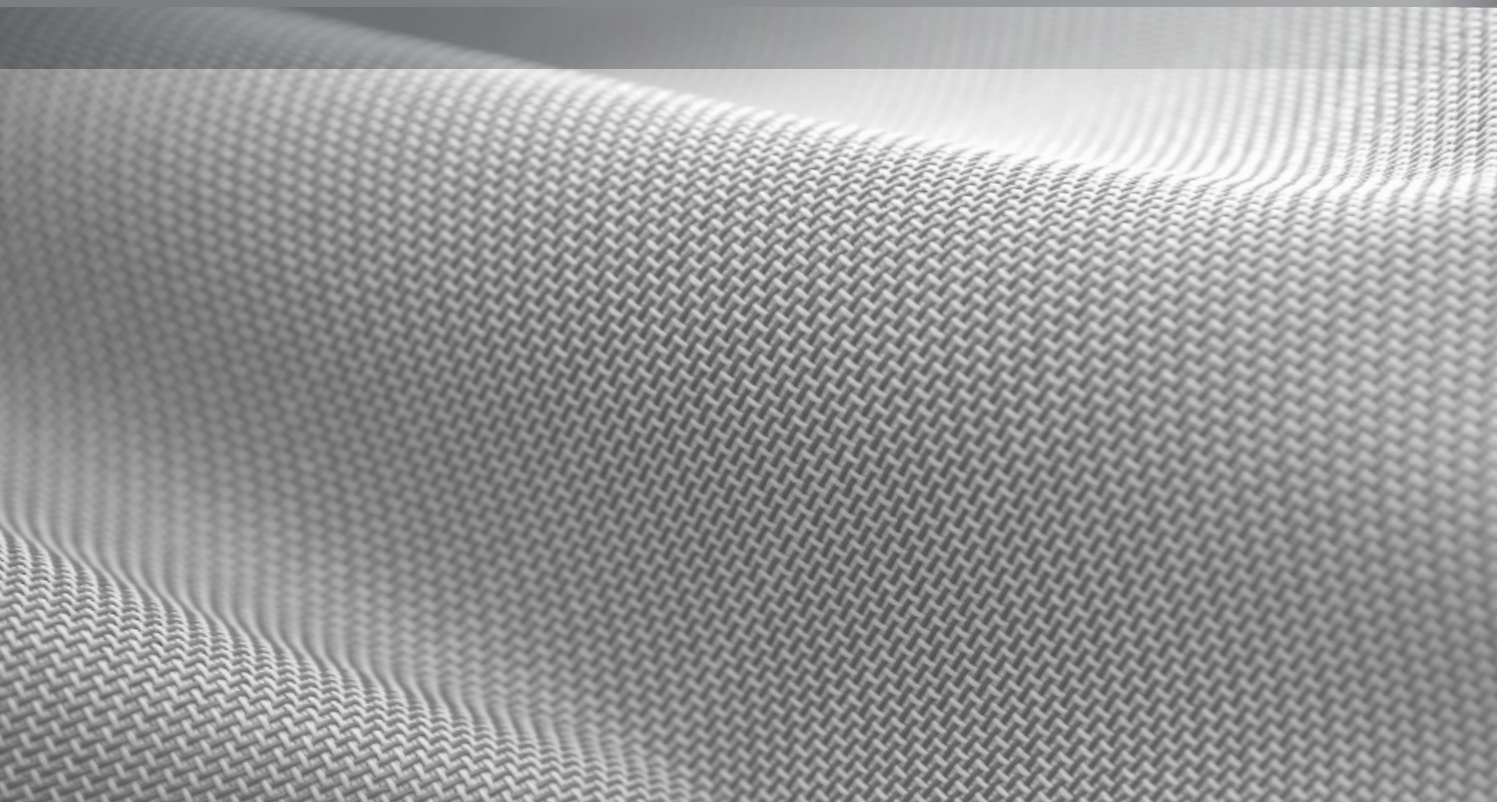
Fabric code TRAA

Star 2115

OF 3%

PVC-coated fibreglass fabric
Satin Weave
Fabric code TRAA
OF 3%
Weight 420 g/m^2
Internal applications

Enduris™
GLASS CORE



Fabric code TRAA

Star 2115

OF 3%

Yarn

Technical specifications	Average Values	Standard
Titer	115 tex	ISO 1889
Weighted composition	Glass 34%, PVC 66%	ISO 3801
Diameter	0.29 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.57 mm	ISO/DIS 5084.2
Mass	420 g/m²	ISO 3801
Yarns in warp/weft/cm	24/13	IS0 7211
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
	B1	DIN 4102
	Classe 1	UNI 9476 - D
Volatile organic compounds (VOC)	complies	DIBt (June 2004)
	complies	AgBB (March 2008)
	complies	AFSSET (2006)
	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 190 daN, weft 110 daN	ISO 13934-1
Elongation at break	warp 3.6%, weft 3.4%	ISO 13934-1
Tear resistance	warp 7.2 daN, weft 6.6 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue white not included	ISO 105 B02
UV-resistance	min. 4 scale of grey (1-5)	ISO 105 B02
Air porosity	760 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Star 2115


108108
rock


108114
quartz


118117
graphite


118118
night

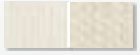

118126
gold


118150
dusk


127127
ivory

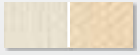

150108
iron


150114
alcantara


150116
desert

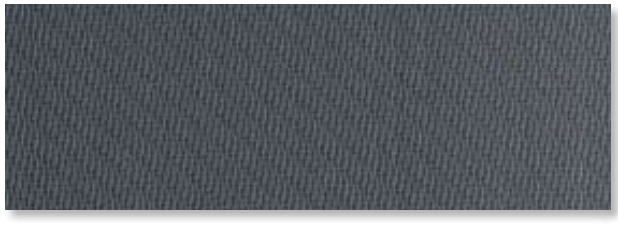

150117
silver


150118
pewter


150126
sahara


150150
snow

108108 rock



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	7.4	15.2	77.4	7.1	1.6	5.5	6.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.63	0.62	0.52	0.30
Classes	0	0	0	2

108114 quartz

Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	8.4	13.7	77.9	8.0	1.6	6.5	7.5
Back	8.4	11.8	79.8	8.0	1.6	6.5	7.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.64	0.63	0.52	0.30
Front Classes	0	0	0	2
Back Values	0.65	0.64	0.53	0.30
Back Classes	0	0	0	2

118117 graphite

Front *Back*

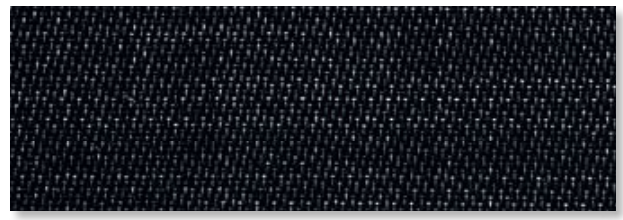
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.6	7.2	88.2	4.5	1.2	3.4	4.1
Back	4.6	16.7	78.7	4.5	1.2	3.4	4.1

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.68	0.66	0.54	0.30
Front Classes	0	0	0	2
Back Values	0.62	0.61	0.51	0.29
Back Classes	0	0	0	2

118118 night



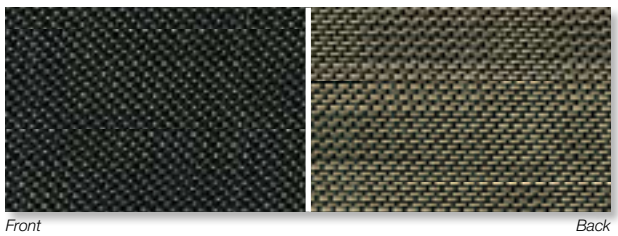
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	3.7	4.2	92.1	3.8	0.6	3.1	3.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.69	0.67	0.55	0.31
Classes	0	0	0	2

118126 gold



Front *Back*

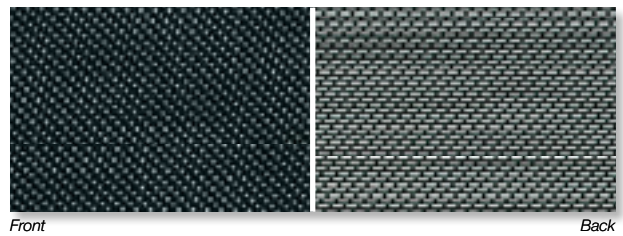
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	4.7	7.8	87.5	4.6	1.0	3.6	4.3
Back	4.7	19.6	75.7	4.6	1.0	3.6	4.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.67	0.66	0.54	0.30
Front Classes	0	0	0	2
Back Values	0.60	0.60	0.50	0.29
Back Classes	0	0	0	2

118150 dusk



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	5.6	8.7	85.7	5.6	1.6	4.0	4.9
Back	5.6	24.8	69.6	5.6	1.6	4.0	4.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.67	0.65	0.54	0.30
Front Classes	0	0	0	2
Back Values	0.57	0.57	0.49	0.29
Back Classes	0	0	1	2

127127 ivory

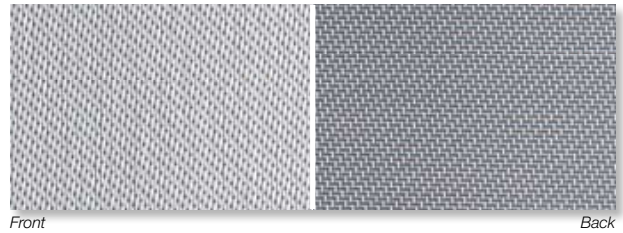
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	20.2	63.0	16.8	19.8	16.8	3.0	3.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.37	0.38	0.37	0.25
Classes	1	1	1	2

150108 iron



Front *Back*

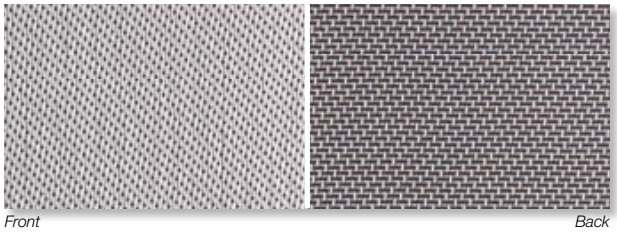
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	16.2	48.5	35.3	15.6	10.7	4.9	5.8
Back	16.2	32.9	50.9	15.6	10.7	4.9	5.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.45	0.46	0.41	0.27
Front Classes	1	1	1	2
Back Values	0.54	0.54	0.46	0.28
Back Classes	0	0	1	2

150114 alcantara



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	13.2	47.1	39.7	12.5	8.6	3.9	4.6
Back	13.2	27.9	58.9	12.5	8.6	3.9	4.6

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.46	0.46	0.42	0.27
Front Classes	1	1	1	2
Back Values	0.57	0.56	0.48	0.28
Back Classes	0	0	1	2

150116 desert

Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	22.0	60.6	17.4	20.7	15.5	5.3	6.2
Back	22.0	56.2	21.8	20.7	15.5	5.3	6.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.39	0.40	0.38	0.26
Front Classes	1	1	1	2
Back Values	0.41	0.42	0.39	0.26
Back Classes	1	1	1	2

150117 silver

Front *Back*

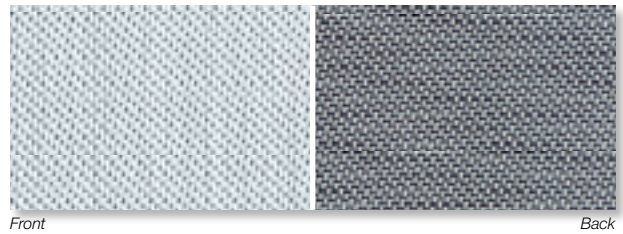
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	15.7	58.1	26.2	14.0	9.9	4.0	4.8
Back	15.7	49.2	35.1	14.0	9.9	4.0	4.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.39	0.41	0.38	0.26
Front Classes	1	1	1	2
Back Values	0.45	0.45	0.41	0.27
Back Classes	1	1	1	2

150118 pewter



Front *Back*

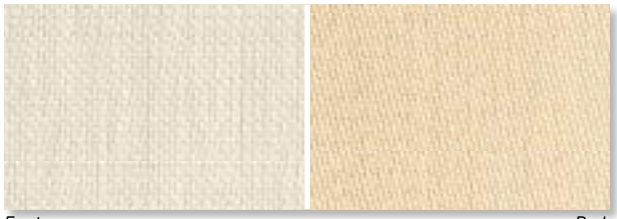
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	9.6	48.4	42.0	9.4	6.2	3.2	3.9
Back	9.6	26.0	64.4	9.4	6.2	3.2	3.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.44	0.45	0.41	0.27
Front Classes	1	1	1	2
Back Values	0.57	0.57	0.48	0.29
Back Classes	0	0	1	2

150126 sahara



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	17.1	60.1	22.8	15.3	12.4	2.9	3.5
Back	17.1	52.6	30.3	15.3	12.4	2.9	3.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.38	0.40	0.38	0.26
Front Classes	1	1	1	2
Back Values	0.43	0.44	0.40	0.26
Back Classes	1	1	1	2

150150 snow

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	23.5	63.7	12.8	23.3	18.7	4.6	5.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.37	0.38	0.37	0.25
Classes	1	1	1	2

© Nike Bourgeois

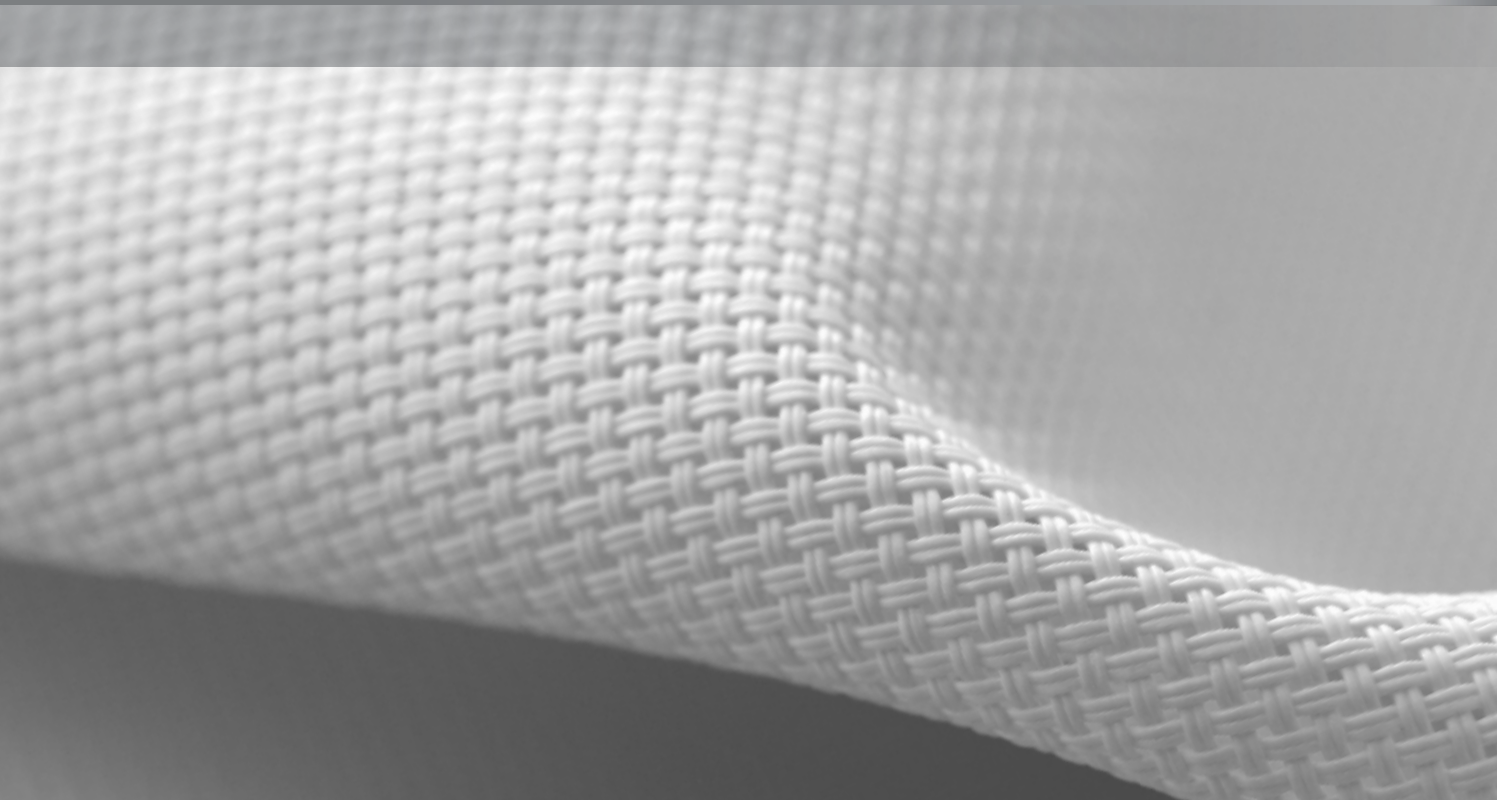
Fabric code TNAA

Natte 2115

OF 10%

PVC-coated fibreglass fabric
Basket Weave
Fabric code TNAA
OF 10%
Weight 400 g/m^2
Internal applications

Enduris™ GLASS CORE



Fabric code TNAA

Natte 2115

OF 10%

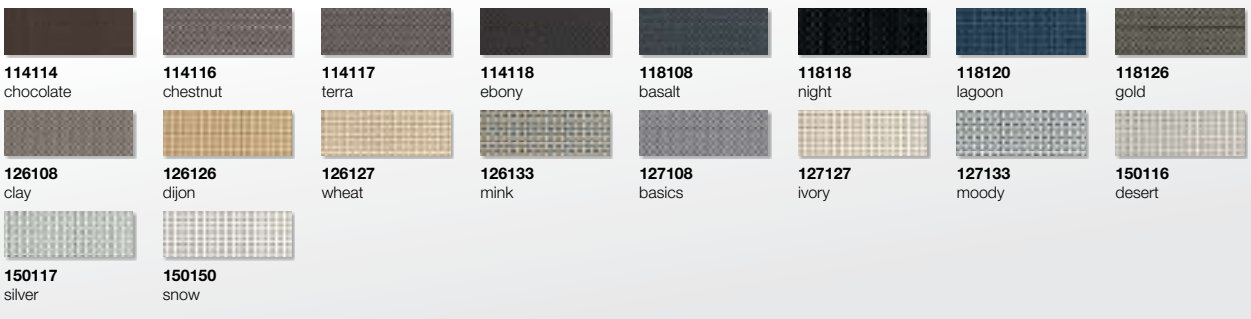
Yarn

Technical specifications	Average Values	Standard
Titer	115 tex	ISO 1889
Weighted composition	Glass 34%, PVC 66%	ISO 3801
Diameter	0.29 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.57 mm	ISO/DIS 5084.2
Mass	400 g/m²	ISO 3801
Yarns in warp/weft/cm	18/18	IS0 7211
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
	B1	DIN 4102
	Classe 1	UNI 9476 - D
Volatile organic compounds (VOC)	complies	DIBt (June 2004)
	complies	AgBB (March 2008)
	complies	AFSSET (2006)
	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 150 daN, weft 140 daN	ISO 13934-1
Elongation at break	warp 4.2%, weft 4.6%	ISO 13934-1
Tear resistance	warp 6 daN, weft 5.8 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue white not included	ISO 105 B02
UV-resistance	min. 4 scale of grey (1-5)	ISO 105 B02
Air porosity	1500 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Natte 2115



114114 chocolate
114116 chestnut
114117 terra
114118 ebony
118108 basalt
118118 night
118120 lagoon
118126 gold
126108 clay
126126 dijon
126127 wheat
126133 mink
127108 basics
127127 ivory
127133 moody
150116 desert
150117 silver
150150 snow

114114 chocolate

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.2	8.9	78.9	11.8	0.7	11.1	11.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.66	0.54	0.30
Classes	0	0	0	2

114116 chestnut

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	15.2	22.8	62.0	14.3	3.3	11.0	11.6

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.60	0.59	0.50	0.29
Classes	0	0	1	2

114117 terra

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	14.2	19.6	66.2	13.1	2.3	10.8	11.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.62	0.60	0.51	0.29
Classes	0	0	0	2

114118 ebony

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	11.5	7.1	81.4	11.3	0.6	10.7	11.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.69	0.66	0.55	0.30
Classes	0	0	0	2

118108 basalt

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.2	10.1	77.7	12.0	0.9	11.1	11.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.67	0.65	0.54	0.30
Classes	0	0	0	2

118118 night

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	10.3	4.5	85.2	10.3	0.5	9.8	10.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.70	0.68	0.56	0.31
Classes	0	0	0	2

118120 lagoon

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	12.3	13.9	73.8	11.1	0.6	10.4	11.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.65	0.63	0.52	0.30
Classes	0	0	0	2

118126 gold

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	14.0	17.7	68.3	13.6	2.7	10.9	11.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.63	0.61	0.51	0.29
Classes	0	0	0	2

126108 clay

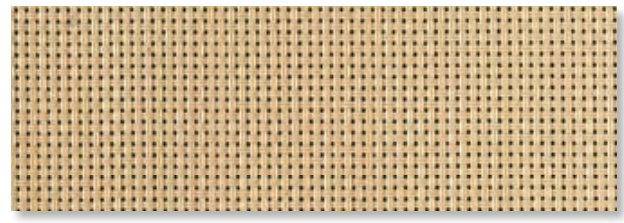
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	15.6	26.4	58.0	14.6	3.7	10.9	11.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.58	0.57	0.48	0.29
Classes	0	0	1	2

126126 dijon



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	18.1	40.7	41.2	15.7	4.7	11.0	11.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.50	0.50	0.44	0.27
Classes	1	1	1	2

126127 wheat

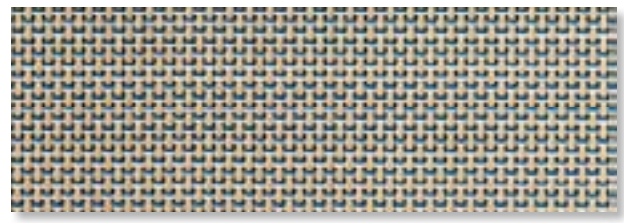
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	21.0	48.4	30.6	18.8	8.1	10.7	11.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.46	0.46	0.41	0.27
Classes	1	1	1	2

126133 mink



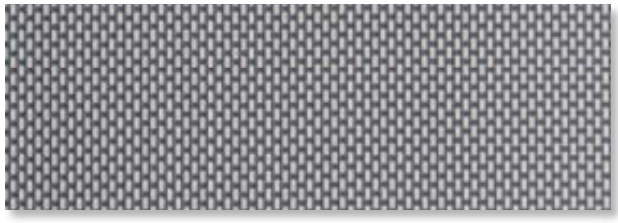
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	17.7	41.1	41.2	13.7	3.8	9.9	10.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.50	0.50	0.44	0.27
Classes	1	1	1	2

127108 basics



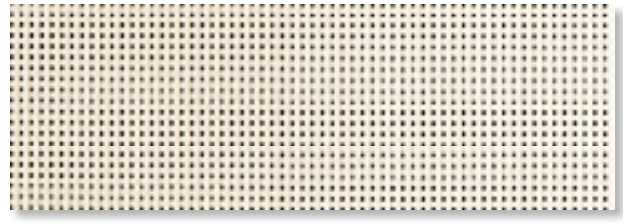
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	17.6	32.6	49.8	16.9	5.2	11.7	12.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.55	0.54	0.47	0.28
Classes	0	0	1	2

127127 ivory



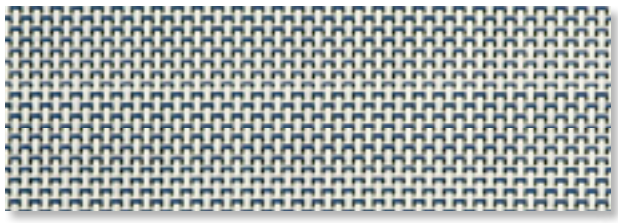
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	25.2	58.8	16.0	24.0	14.0	10.1	10.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.40	0.41	0.38	0.26
Classes	1	1	1	2

127133 moody



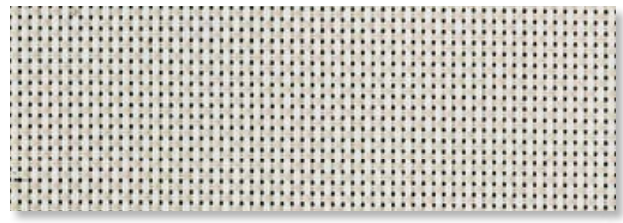
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	23.2	48.0	28.8	18.9	7.8	11.1	11.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.46	0.46	0.42	0.27
Classes	1	1	1	2

150116 desert



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	23.7	55.5	20.8	21.8	11.0	10.8	11.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.42	0.43	0.39	0.26
Classes	1	1	1	2

150117 silver

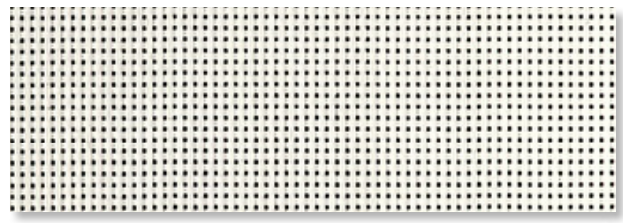
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	19.6	47.8	32.6	17.3	7.1	10.2	10.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.46	0.46	0.42	0.27
Classes	1	1	1	2

150150 snow



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	26.3	61.8	11.9	25.4	15.2	10.2	10.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.39	0.40	0.37	0.26
Classes	1	1	1	2

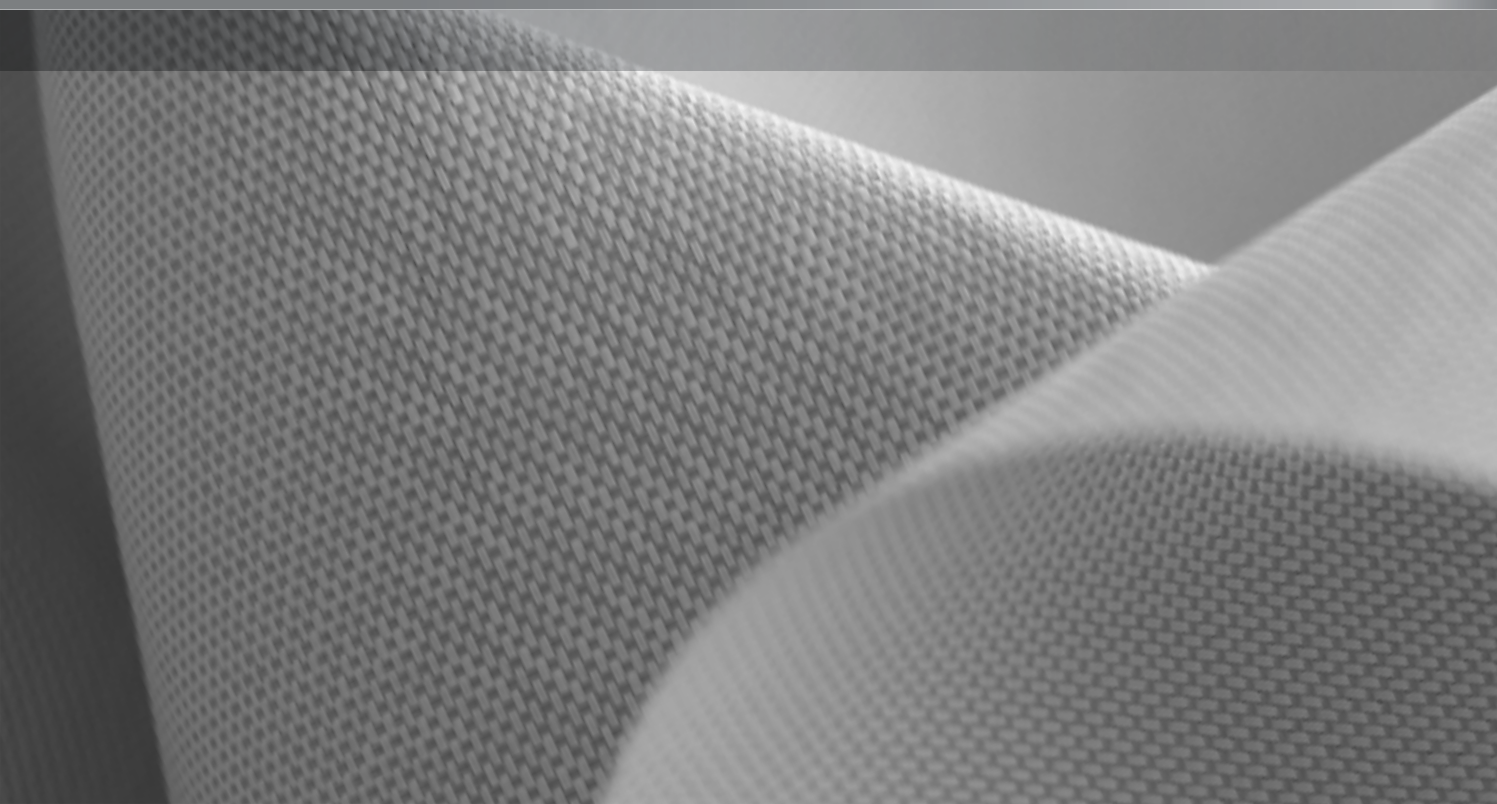
Fabric code P03A

Panama 3

OF 3%

PVC-coated fibreglass fabric
Basket Weave
Fabric code P03A
OF 3%
Weight 365 g/m^2
Internal applications

Enduris™ GLASS CORE



Fabric code P03A

Panama 3

OF 3%

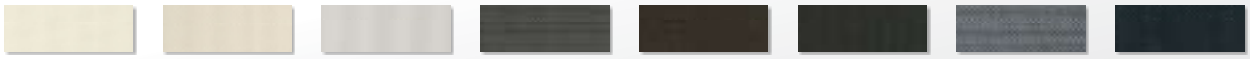
Yarn

Technical specifications	Average Values	Standard
Titer	78 tex	ISO 1889
Weighted composition	Glass 29%, PVC 71%	ISO 3801
Diameter	0.28 mm	
Environment		Oekotex 100

Fabric

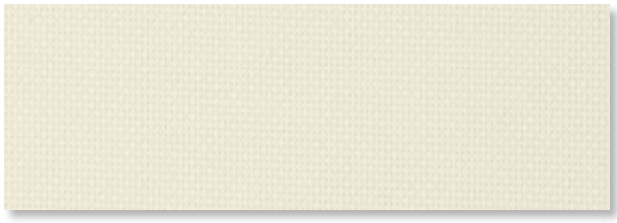
Technical specifications	Average Values	Standard
Thickness	0.42 mm	ISO/DIS 5084.2
Mass	365 g/m²	ISO 3801
Yarns in warp/weft/cm	26/24	IS0 7211
Fire resistance	M2	NF P92-503
	FR	NFPA 701
Volatile organic compounds (VOC)	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 170 daN, weft 160 daN	ISO 13934-1
Elongation at break	warp 5.8%, weft 5.6%	ISO 13934-1
Tear resistance	warp 3.6 daN, weft 3.2 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
Air porosity	581 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Panama 3



101101 white
101116 white-linen
101117 white-pearl
113108 bronze-grey
113113 bronze
113118 bronze-black
118117 black-pearl
118118 black

101101 white



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	22.9	65.4	11.7	21.6	17.8	3.7	4.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.36	0.37	0.36	0.25
Classes	1	1	1	2

101116 white-linen

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	20.5	60.4	19.1	18.2	14.5	3.7	4.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.39	0.40	0.38	0.26
Classes	1	1	1	2

101117 white-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	16.7	53.0	30.3	13.9	9.7	4.2	4.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.43	0.43	0.40	0.26
Classes	1	1	1	2

113108 bronze-grey

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.9	13.3	81.8	4.7	0.7	4.0	4.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.64	0.63	0.53	0.30
Classes	0	0	0	2

113113 bronze

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.4	7.8	87.8	4.3	0.4	3.8	4.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.67	0.66	0.54	0.30
Classes	0	0	0	2

113118 bronze-black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.1	6.7	89.2	4.0	0.4	3.6	4.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.66	0.55	0.30
Classes	0	0	0	2

118117 black-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	5.7	18.0	76.3	5.4	1.0	4.4	4.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.61	0.60	0.51	0.29
Classes	0	0	0	2

118118 black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	5.2	4.6	90.2	5.2	0.4	4.8	5.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.69	0.67	0.55	0.31
Classes	0	0	0	2

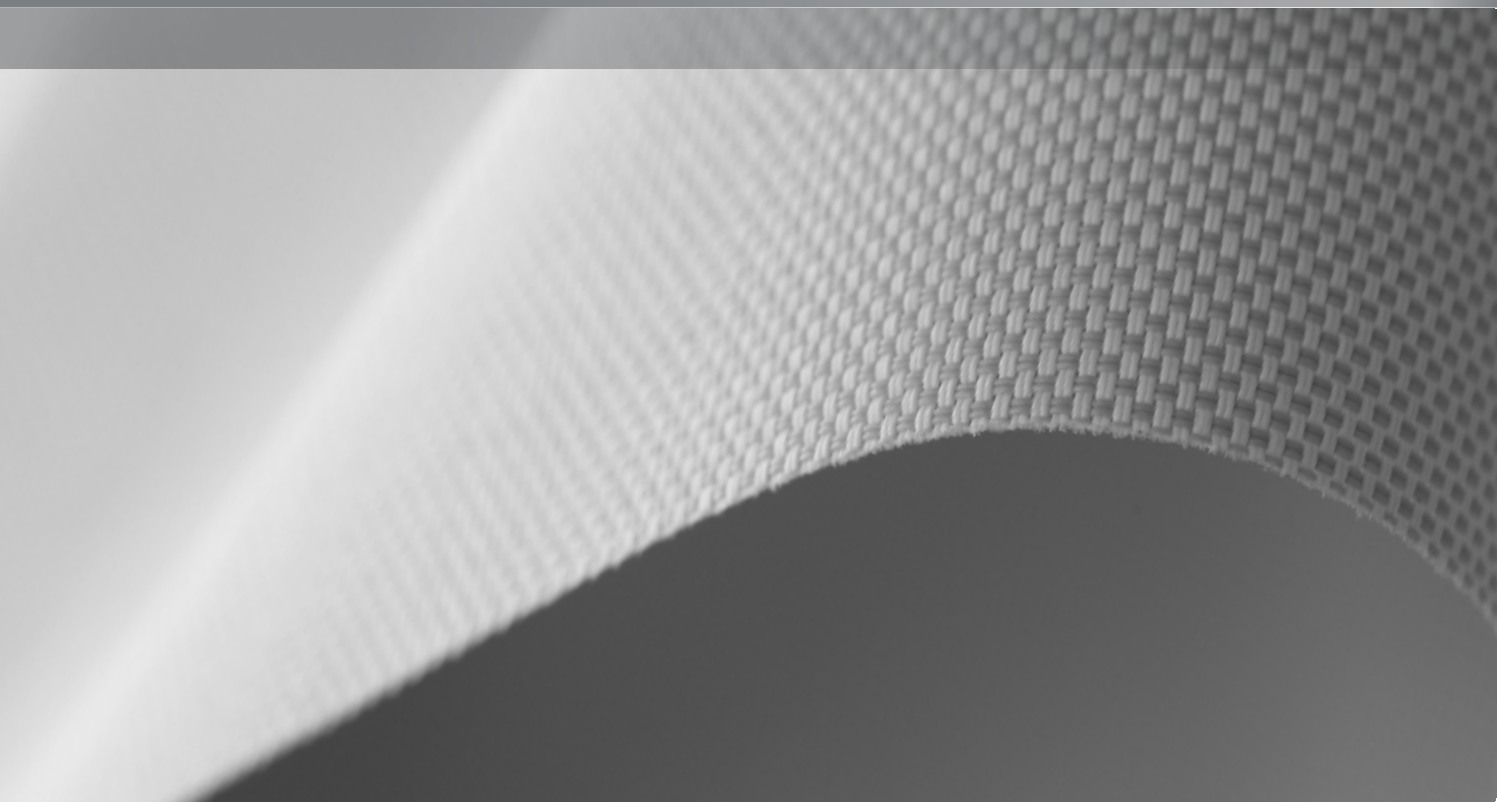
Fabric code P05A

Panama 5

OF 5%

PVC-coated fibreglass fabric
Basket Weave
Fabric code P05A
OF 5%
Weight 345 g/m^2
Internal applications

Enduris™ GLASS CORE



Fabric code P05A

Panama 5

OF 5%

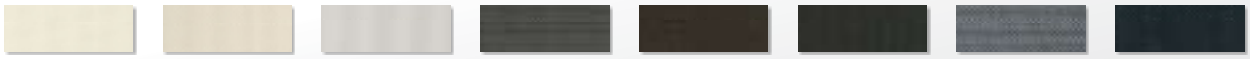
Yarn

Technical specifications	Average Values	Standard
Titer	78 tex	ISO 1889
Weighted composition	Glass 29%, PVC 71%	ISO 3801
Diameter	0.28 mm	
Environment		Oekotex 100

Fabric

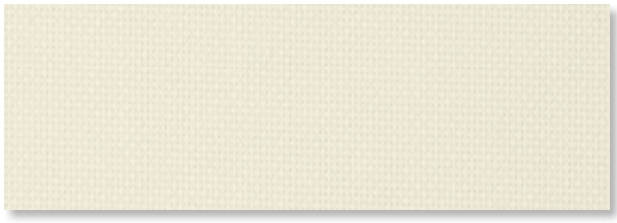
Technical specifications	Average Values	Standard
Thickness	0.44 mm	ISO/DIS 5084.2
Mass	345 g/m²	ISO 3801
Yarns in warp/weft/cm	26/21	IS0 7211
Fire resistance	M2	NF P92-503
	FR	NFPA 701
Volatile organic compounds (VOC)	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 170 daN, weft 150 daN	ISO 13934-1
Elongation at break	warp 5.8%, weft 4.6%	ISO 13934-1
Tear resistance	warp 2.9 daN, weft 3.2 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
Air porosity	782 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Panama 5



101101 white
101116 white-linen
101117 white-pearl
113108 bronze-grey
113113 bronze
113118 bronze-black
118117 black-pearl
118118 black

101101 white



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	25.5	63.6	10.9	24.1	18.7	5.4	5.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.38	0.39	0.37	0.25
Classes	1	1	1	2

101116 white-linen

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	23.0	59.5	17.5	20.7	15.6	5.1	5.6

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.40	0.40	0.38	0.26
Classes	1	1	1	2

101117 white-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	20.0	52.6	27.4	17.4	11.0	6.3	6.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.43	0.44	0.40	0.26
Classes	1	1	1	2

113108 bronze-grey

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	7.1	12.6	80.3	6.8	0.9	6.0	6.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.65	0.63	0.53	0.30
Classes	0	0	0	2

113113 bronze

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	5.9	7.7	86.4	5.8	0.5	5.3	5.8

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.66	0.54	0.30
Classes	0	0	0	2

113118 bronze-black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	6.0	6.7	87.3	5.9	0.5	5.4	5.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.66	0.55	0.30
Classes	0	0	0	2

118117 black-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	8.1	16.4	75.5	7.8	1.2	6.6	7.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.63	0.61	0.52	0.29
Classes	0	0	0	2

118118 black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	6.8	4.5	88.7	6.7	0.4	6.3	6.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.70	0.67	0.55	0.31
Classes	0	0	0	2

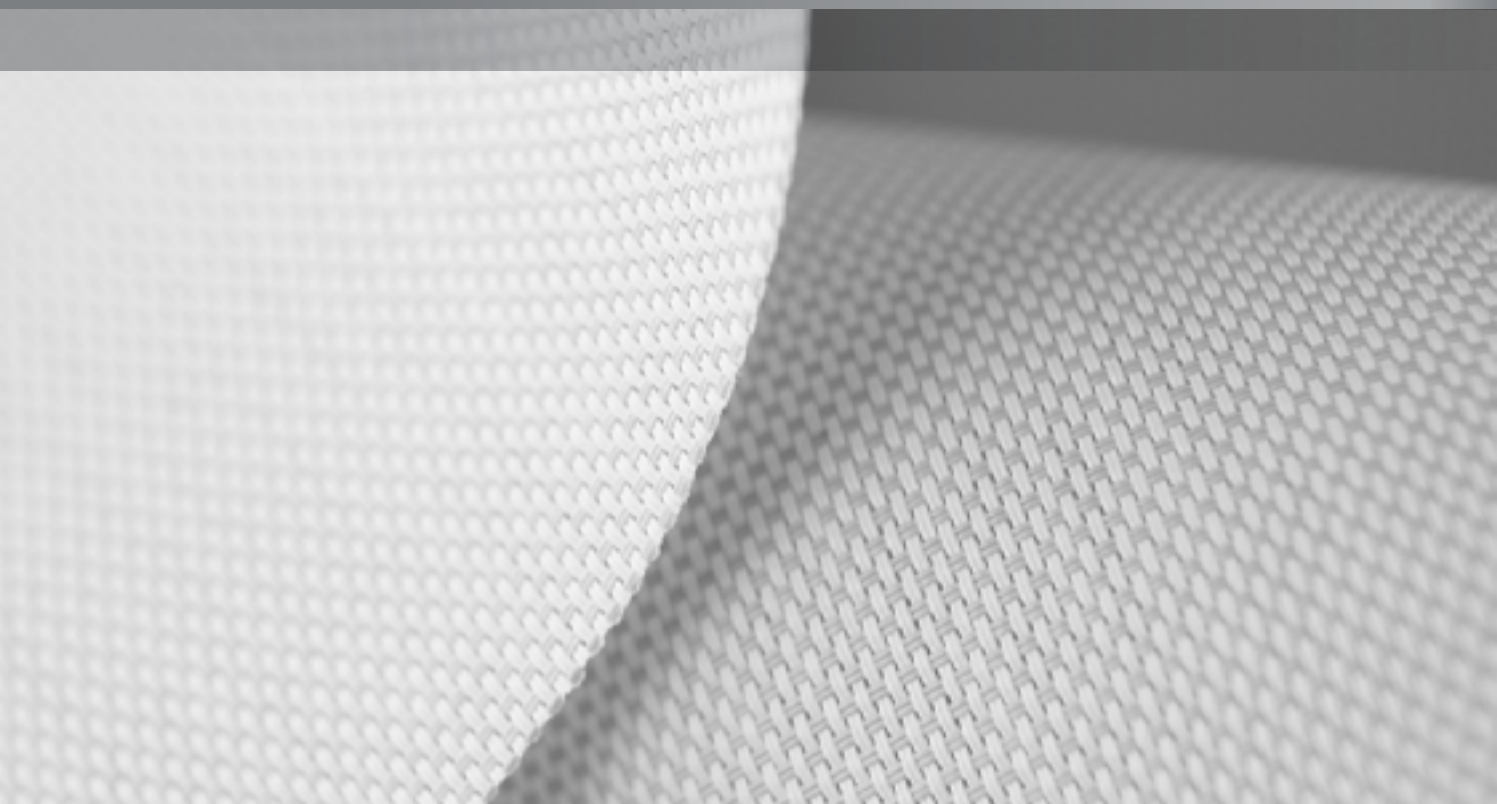
Fabric code P10A

Panama 10

OF 10%

PVC-coated fibreglass fabric
Basket Weave
Fabric code P10A
OF 10%
Weight 320 g/m^2
Internal applications

Enduris™
GLASS CORE



Fabric code P10A

Panama 10

OF 10%

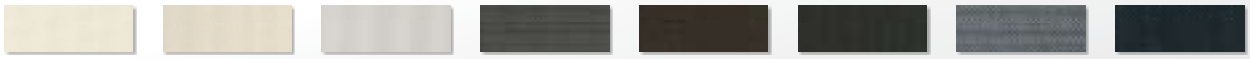
Yarn

Technical specifications	Average Values	Standard
Titer	78 tex	ISO 1889
Weighted composition	Glass 29%, PVC 71%	ISO 3801
Diameter	0.28 mm	
Environment		Oekotex 100

Fabric

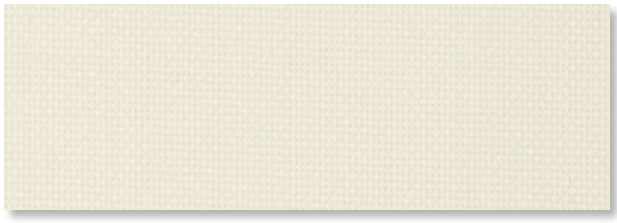
Technical specifications	Average Values	Standard
Thickness	0.46 mm	ISO/DIS 5084.2
Mass	320 g/m²	ISO 3801
Yarns in warp/weft/cm	26/16	IS0 7211
Fire resistance	M2	NF P92-503
	FR	NFPA 701
Volatile organic compounds (VOC)	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
Breaking strength	warp 165 daN, weft 110 daN	ISO 13934-1
Elongation at break	warp 5.2%, weft 3.8%	ISO 13934-1
Tear resistance	warp 2.8 daN, weft 3.8 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
Air porosity	1190 l/m²/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Panama 10



101101 white
101116 white-linen
101117 white-pearl
113108 bronze-grey
113113 bronze
113118 bronze-black
118117 black-pearl
118118 black

101101 white



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	32.7	57.5	9.8	31.6	20.5	11.1	12.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.42	0.42	0.39	0.26
Classes	1	1	1	2

101116 white-linen

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	28.1	56.6	15.3	26.1	16.6	9.5	10.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.42	0.42	0.39	0.26
Classes	1	1	1	2

101117 white-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	25.7	51.5	22.8	23.4	13.0	10.3	11.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.45	0.45	0.41	0.26
Classes	1	1	1	2

113108 bronze-grey

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	9.9	11.2	78.9	9.6	1.0	8.5	9.3

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.66	0.64	0.53	0.30
Classes	0	0	0	2

113113 bronze

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	9.1	7.4	83.5	8.9	0.7	8.3	8.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.66	0.55	0.30
Classes	0	0	0	2

113118 bronze-black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	9.9	6.5	83.6	9.7	0.7	9.0	9.7

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.69	0.67	0.55	0.30
Classes	0	0	0	2

118117 black-pearl

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	11.0	13.6	75.4	10.7	1.3	9.4	10.1

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.65	0.63	0.53	0.30
Classes	0	0	0	2

118118 black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	10.5	4.7	84.8	10.5	0.7	9.8	10.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.70	0.68	0.55	0.31
Classes	0	0	0	2

© Nike Bourgeois

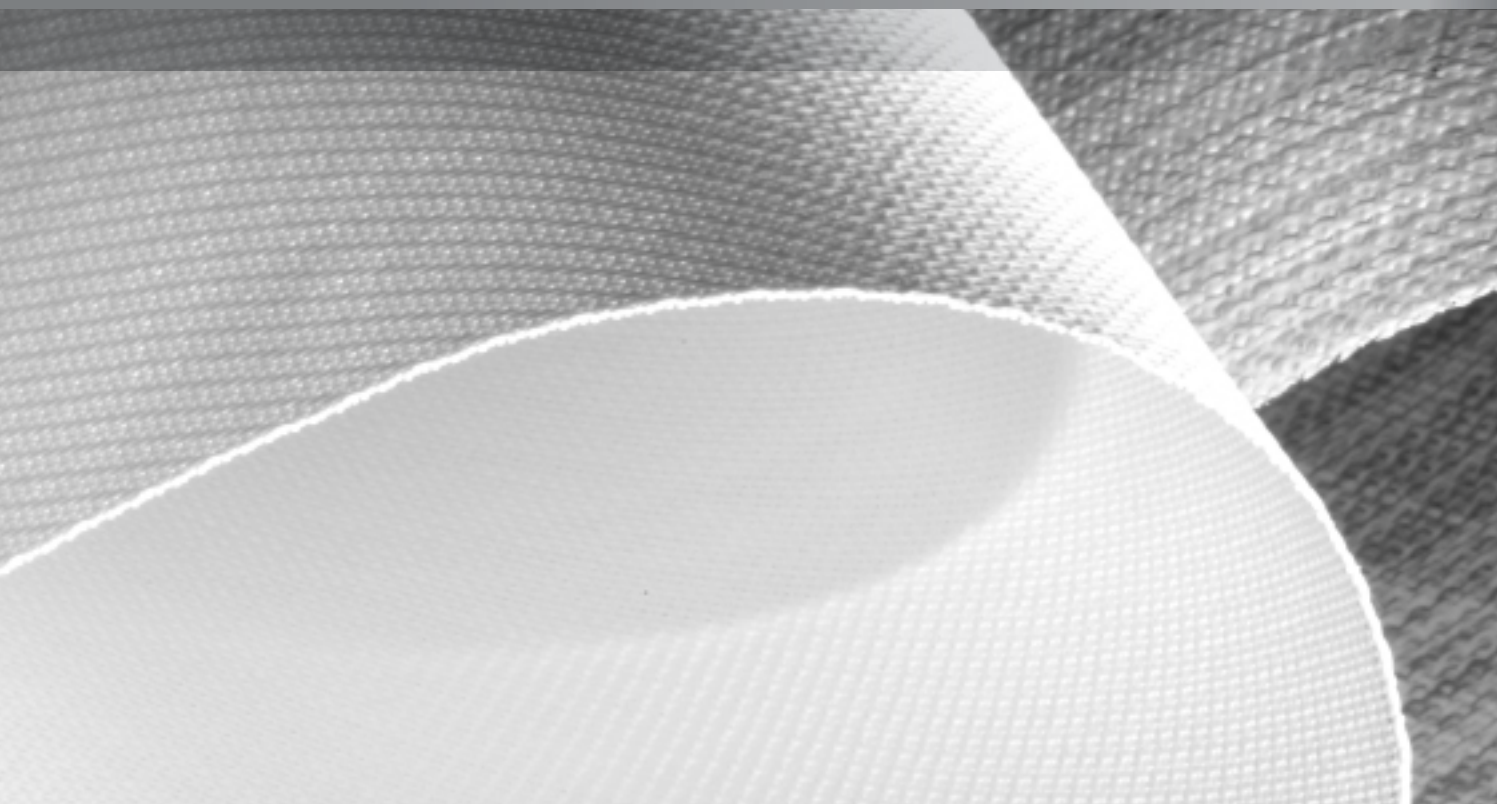
Fabric code PT3A

Panama Twill

OF 3%

PVC-coated fibreglass fabric
Twill Weave
Fabric code PT3A
OF 3%
Weight 355 g/m^2
Internal applications

Enduris™ GLASS CORE



Fabric code PT3A

Panama Twill

OF 3%

Yarn

Technical specifications	Average Values	Standard
Titer	78 tex	ISO 1889
Weighted composition	Glass 29%, PVC 71%	ISO 3801
Diameter	0.28 mm	
Environment		Oekotex standard 100

Fabric

Technical specifications	Average Values	Standard
Thickness	0.50 mm	ISO/DIS 5084.2
Mass	355 g/m^2	ISO 3801
Yarns in warp/weft/cm	27/19	IS0 7211
Fire resistance	M2	NF P92-503
	FR	NFPA 701
	B2	DIN 4102
Volatile organic compounds (VOC)	complies	GREENGUARD
	complies	GREENGUARD Children & Schools
	warp 180 daN, weft 130 daN	ISO 13934-1
Elongation at break	warp 4.8%, weft 5.4%	ISO 13934-1
Tear resistance	warp 5.8 daN, weft 5.2 daN	ISO 4674 part 1 method A
Colourfastness	7-8 scale of blue	ISO 105 B02
Air porosity	550 l/m^2/sec	ISO/DIS 9237
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Panama Twill

101101
white

101116
white-linen

101117
white-pearl

118117
black-pearl

118118
black

101101 white

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	22.8	66.2	11.0	22.0	19.3	2.7	3.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.36	0.37	0.36	0.25
Classes	1	1	1	2

101116 white-linen

Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	20.7	58.4	20.9	18.7	16.2	2.5	3.2
Back	20.7	58.4	20.9	18.7	16.2	2.5	3.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.40	0.41	0.38	0.26
Front Classes	1	1	1	2
Back Values	0.40	0.41	0.38	0.26
Back Classes	1	1	1	2

101117 white-pearl

Front *Back*

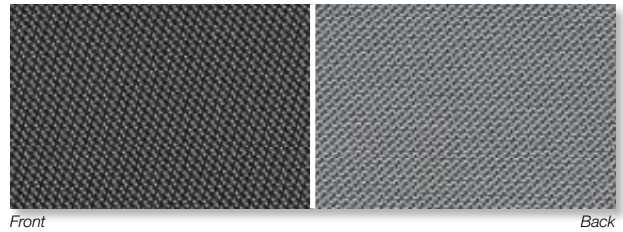
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	18.4	58.6	23.0	16.1	13.0	3.1	3.9
Back	18.4	51.7	29.9	16.1	13.0	3.1	3.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.39	0.41	0.38	0.26
Front Classes	1	1	1	2
Back Values	0.43	0.44	0.40	0.26
Back Classes	1	1	1	2

118117 black-pearl



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	5.9	10.9	83.2	5.6	1.4	4.2	4.9
Back	5.9	21.9	72.2	5.6	1.4	4.2	4.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.66	0.64	0.53	0.30
Front Classes	0	0	0	2
Back Values	0.59	0.58	0.50	0.29
Back Classes	0	0	1	2

118118 black

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	4.8	5.3	89.9	4.8	0.6	4.2	4.8

gtot

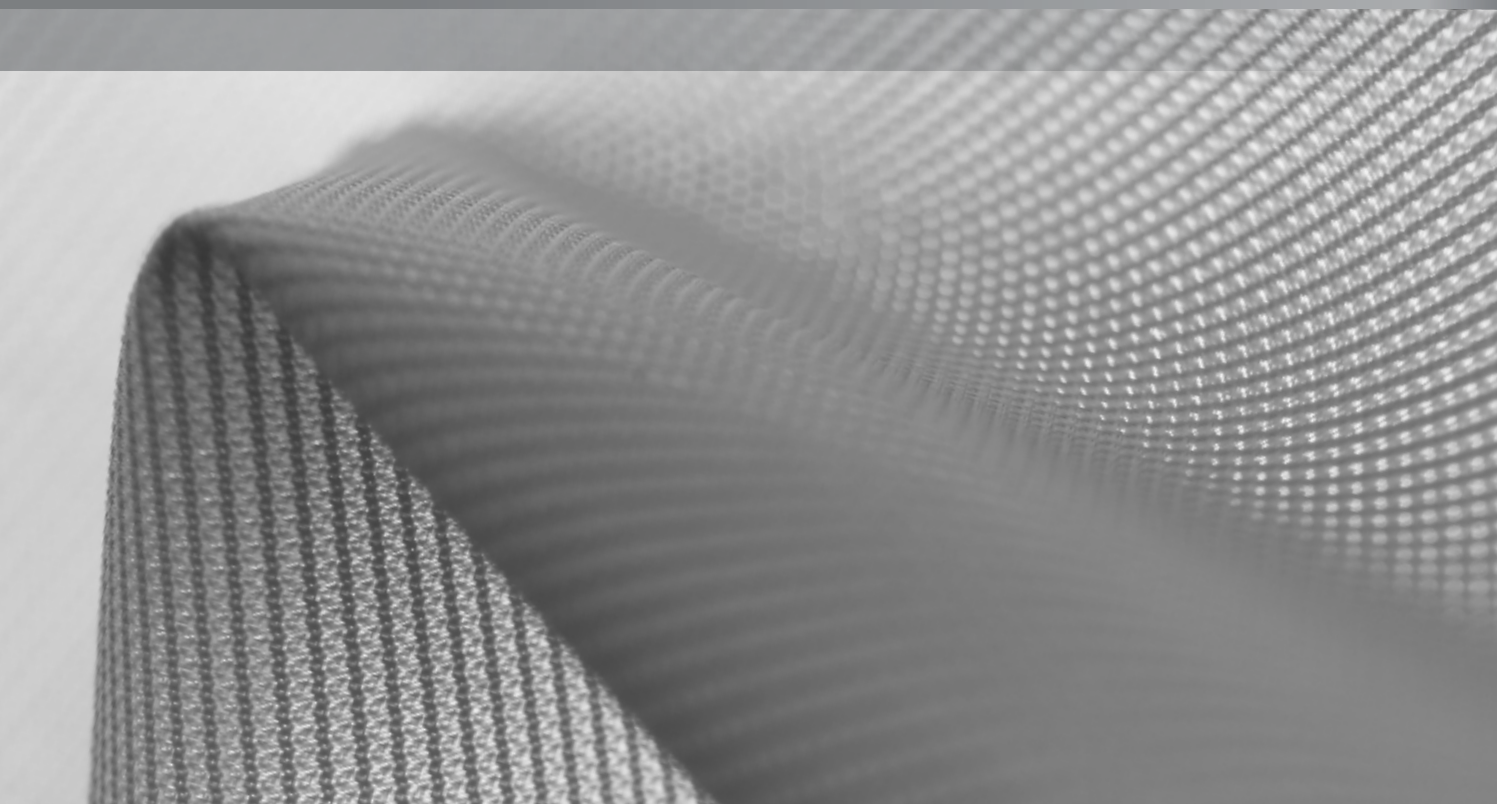
	A	B	C	D
	int.	int.	int.	int.
Values	0.69	0.67	0.55	0.30
Classes	0	0	0	2

Fabric code ASAA

Greenscreen Eco

OF 4%

100% polyester fabric
Fabric code ASAA
OF 4%
Weight 180 g/m^2
Internal applications



Fabric code ASAA

Greenscreen Eco | OF 4%

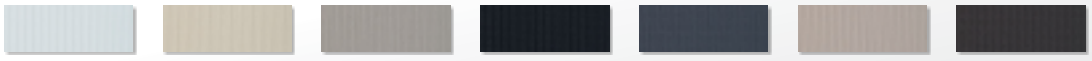
Yarn

Technical specifications	Average Values	Standard
Weighted composition	Polyester 100%	ISO 3801

Fabric

Technical specifications	Average Values	Standard
Thickness	0.39 mm	ISO 5084.2
Mass	180 g/m^2	ISO 3801
Fire resistance	M1	NF P92-503
	B1	DIN4102
Breaking strength	warp 97 daN, weft 38.1 daN	ISO 13934-1
Elongation at break	warp 53.5%, weft 34%	ISO 13934-1
Tear resistance	warp 5.97 daN, weft 4.8 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
UV-resistance	4-5 scale of grey (1-5)	ISO 105 B02
Air porosity	1220 l/m^2/sec	ISO 9237.2
Cutting	ultrasonic cutting	
Welding	thermal, HF and ultrasonic by means of pvc welding tape, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Greenscreen Eco



000204 ice
000750 eggshell
001500 iron
001887 charcoal
002780 rock
004748 feather
004999 ebony

000204 ice

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	49.1	46.1	4.8	49.1	44.1	5.0	22.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.55	0.53	0.45	0.28
Classes	0	0	1	2

000750 eggshell

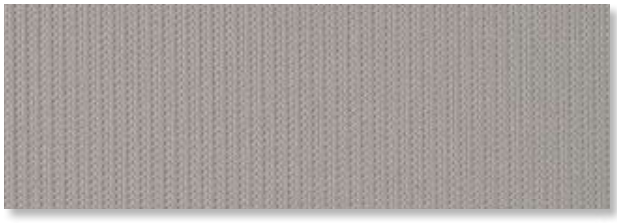
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	43.0	43.0	14.0	39.7	35.4	4.3	18.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.51	0.49	0.43	0.27
Classes	0	1	1	2

001500 iron



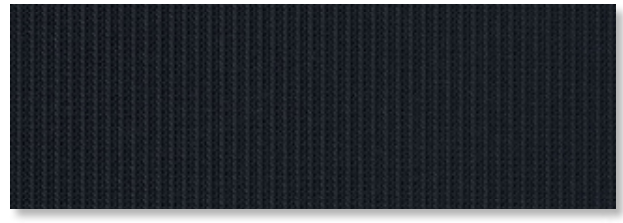
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	38.8	37.9	23.3	28.2	24.3	3.9	17.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.52	0.50	0.44	0.27
Classes	0	0	1	2

001887 charcoal



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	29.2	23.4	47.4	5.8	2.5	3.3	9.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.54	0.53	0.45	0.28
Classes	0	0	1	2

002780 rock

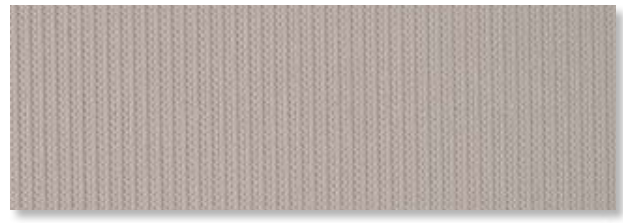
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	31.4	29.2	39.4	12.3	8.2	4.1	10.6

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.62	0.59	0.50	0.29
Classes	0	0	1	2

004748 feather



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	42.4	38.0	19.6	33.8	28.9	4.9	18.5

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.58	0.56	0.48	0.29
Classes	0	0	1	2

004999 ebony

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	28.4	25.9	45.7	9.2	5.4	3.7	8.1

gtot

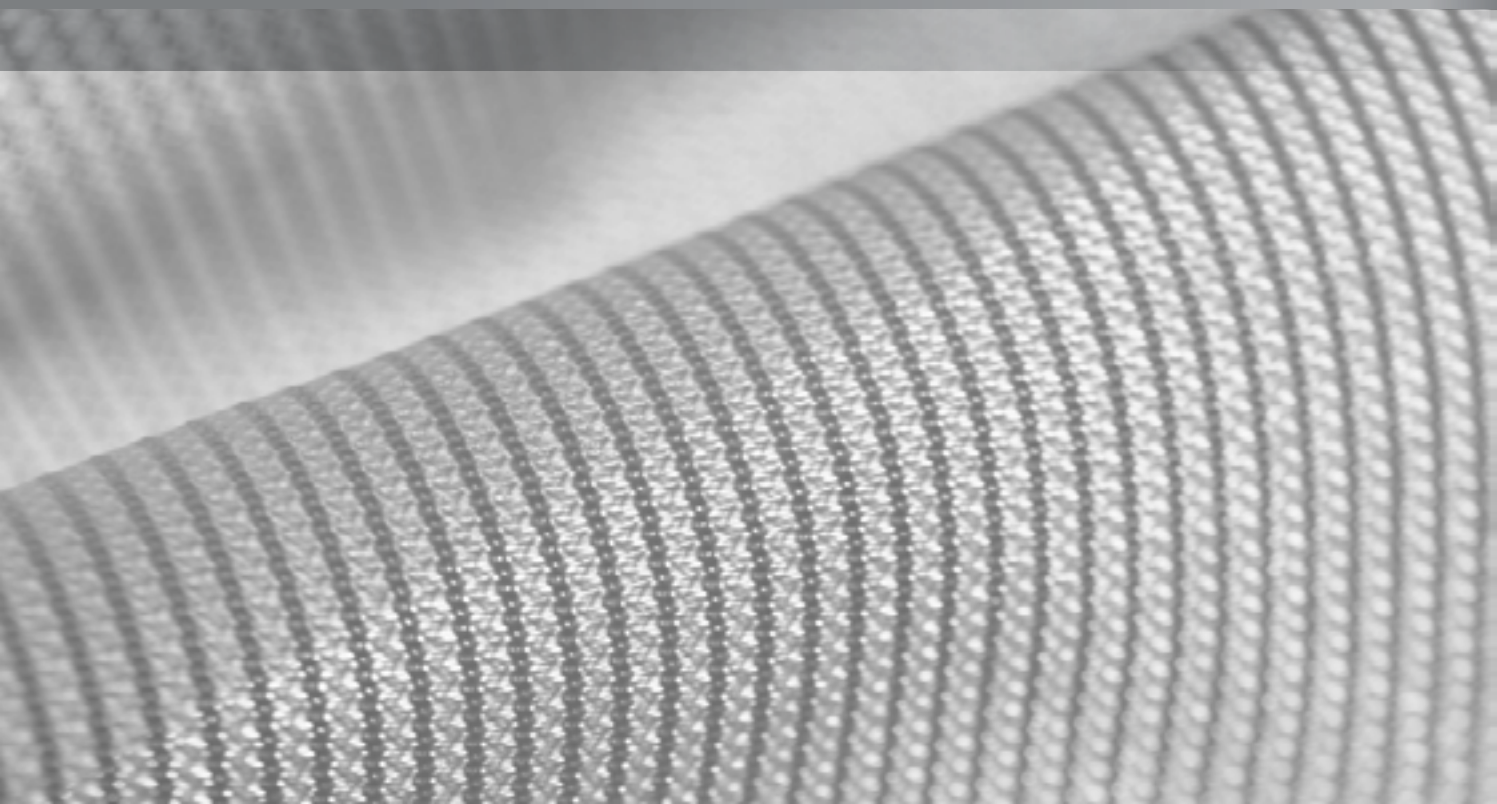
	A	B	C	D
	int.	int.	int.	int.
Values	0.60	0.58	0.49	0.29
Classes	0	0	1	2

Fabric code ASMA

Greenscreen Platinum

OF 2%

100% polyester fabric
Fabric code ASMA (metalized backing)
OF 2%
Weight 180 g/m^2
Internal applications



Fabric code ASMA

Greenscreen Platinum | OF 2%

Yarn

Technical specifications	Average Values	Standard
Composition	100% Polyester	ISO 3801

Fabric

Technical specifications	Average Values	Standard
Composition	with metalized backing	
Thickness	0.40 mm	ISO 5084
Mass	179 g/m²	ISO 3801
Fire resistance	M1	NF P92-503
	B1	DIN 4102
Breaking strength	warp 104 daN, weft 40.8 daN	ISO 13934-1
Elongation at break	warp 43.5%, weft 41%	ISO 13934-1
Tear resistance	warp 5.24 daN, weft 5.9 daN	ISO 4674 part 1 method A
Colourfastness	7 scale of blue	ISO 105 B02
UV-resistance	5 scale of grey (1-5)	ISO 105 B02
Air porosity	693 l/m²/sec	ISO 9237.2
Cutting	ultrasonic cutting	
Welding	thermal, HF and ultrasonic by means of pvc welding tape, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Greenscreen Platinum

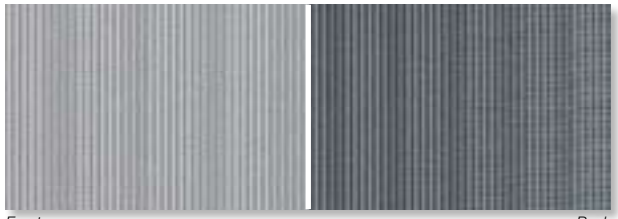
000204
ice

001500
iron

001887
charcoal

004999
ebony

000204 ice



Front *Back*

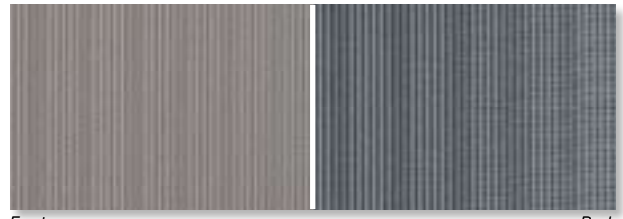
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	10.5	42.1	47.4	10.9	8.8	2.0	7.0
Back	10.5	46.4	43.1	10.9	8.8	2.0	7.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.48	0.49	0.43	0.27
Front Classes	1	1	1	2
Back Values	0.46	0.46	0.42	0.27
Back Classes	1	1	1	2

001500 iron



Front *Back*

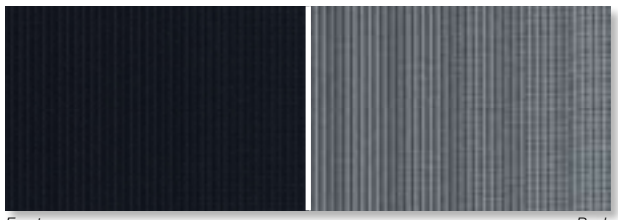
Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	9.3	35.9	54.8	8.1	5.8	2.4	6.4
Back	9.3	46.0	44.7	8.1	5.8	2.4	6.4

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.52	0.52	0.45	0.28
Front Classes	0	0	1	2
Back Values	0.46	0.46	0.42	0.27
Back Classes	1	1	1	2

001887 charcoal



Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	7.5	21.8	70.7	3.2	0.9	2.3	4.2
Back	7.5	41.7	50.8	3.2	0.9	2.3	4.2

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.60	0.59	0.50	0.29
Front Classes	0	0	1	2
Back Values	0.48	0.49	0.43	0.27
Back Classes	1	1	1	2

004999 ebony

Front *Back*

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
Front	9.1	23.0	67.8	5.1	2.4	2.7	4.9
Back	9.1	39.9	51.0	5.1	2.4	2.7	4.9

gtot

	A	B	C	D
	int.	int.	int.	int.
Front Values	0.59	0.58	0.49	0.29
Front Classes	0	0	1	2
Back Values	0.49	0.50	0.44	0.27
Back Classes	1	1	1	2

Fabric code ZZOA

Opac 6000

OF 0%

Glassfibre fabric with double sided pvc-backing

Blackout

Fabric code ZZOA

OF 0%

Weight 400 g/m^2

Internal applications

Fabric code ZZOA

Opac 6000 | OF 0%

Fabric

Technical specifications	Average Values	Standard
Composition	glassfibre fabric with double sided PVC-backing	
Thickness	0.30 mm	ISO/DIS 5084.2
Mass	400 g/m^2	ISO 3801
Fire resistance	M1	NF P92-503
	FR	NFPA 701
	Type B	BS 5867
Breaking strength	warp 82 daN, weft 68 daN	ISO 13934-1
Elongation at break	warp 3.6%, weft 3.4%	ISO 13934-1
Tear resistance	warp 1.3 daN, weft 0.9 daN	ISO 4674 part 1 method A
Colourfastness	6+ scale of blue	ISO 105 B02
Cutting	best result with crush cutting	
Welding	thermal, HF, ultrasonic, sewing	
Cleaning	remove dust from the fabric surface, then wipe gently with a humid soft sponge while using a mild detergent	

Collection overview Opac 6000

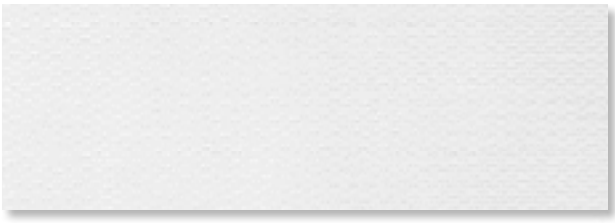
101101
white

118118
night

170170
lightgrey

171171
cream

101101 white



Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	0.0	56.0	44.0	0.0	0.0	0.0	0.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.38	0.41	0.39	0.26
Classes	1	1	1	2

118118 night

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	0.0	5.0	95.0	0.0	0.0	0.0	0.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.68	0.67	0.55	0.30
Classes	0	0	0	2

170170 lightgrey

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	0.0	22.0	78.0	0.0	0.0	0.0	0.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.58	0.58	0.50	0.29
Classes	0	0	1	2

171171 cream

Solar Heat & Light Control Properties

	Ts	Rs	As	Tv	TVdiff	TVdir	Tuv
	0.0	60.0	40.0	0.0	0.0	0.0	0.0

gtot

	A	B	C	D
	int.	int.	int.	int.
Values	0.36	0.39	0.37	0.25
Classes	1	1	1	2

Performance in **service**

Helioscreen Glassfibre fabrics optimize light quality and reduce solar heat gain. To help you visualize this, Helioscreen has developed two programs:

- Capsol®, a scientific computer program, calculates temperatures in building zones using real climate data.
- Helioscreen LightTool® visualizes quality of light using a dynamic computer simulation.

Capsol®

For a better Performance in Thermal Comfort

Capsol® Interface

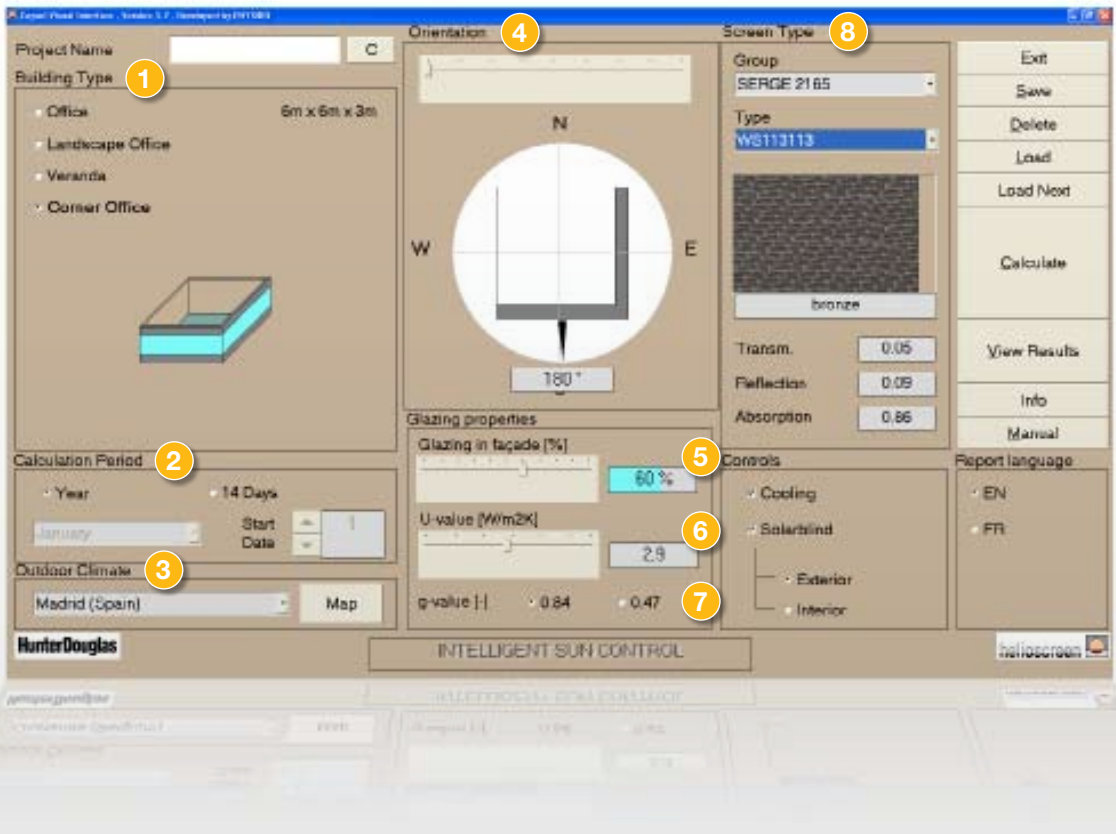
The problem of overheating in private and public buildings has probably been there for centuries. It is only due to the increasing use of big glazed surfaces, the rising insulation quality of our present buildings and the higher comfort requirements, that the problem became more and more apparent. Today, Helioscreen has proven to be a reliable partner in the search for the most efficient solution on your way to thermal comfort.

Moreover it is even possible to calculate the approximate energy gains you will enjoy after installing blinds with Helioscreen fabric. For quite some years, Helioscreen has been working with the Capsol® software, of which we have now an updated version. The most actual fabric and climate data from locations all over the world, enable us to produce the most accurate simulations. An elaborated report containing graphs and calculation results, makes it possible to compare various scenarios and helps you in making the right decision.

An example of a calculation:

You can choose:

1. The type of buiding
2. Calculation period
3. Outdoor climate
4. Main orientation
5. % glazing in façade
6. U-value of the glazing
7. G-value of the glazing
8. Preferred Helioscreen fabric



Capsol®

For the example on your left, the results can be summarized as follows:

	Cooling NO Solarshading NO	Cooling YES Solarshading NO	Cooling NO Solarshading YES	Cooling YES Solarshading YES
Maximum temperature inside:	50,7 °C	26,3 °C	35,7 °C	25,4 °C
Duration with temperature > 25 °C:	5967,3 h	407,0 h	2523,8 h	84,0 h
Duration with temperature > 28 °C:	5149,3 h	0,0 h	1635,1 h	0,0 h
Cooling energy demand per m^2 glass:	0 kWh	797 kWh	0 kWh	160 kWh
Heating energy demand per m^2 glass:	39 kWh	43 kWh	105 kWh	105 kWh

These results show that a solar blind can help you save a lot of cooling energy throughout the year. Details of the calculation can be found in the Capsol® Report. Calculations are in accordance with EN-ISO 13791:2004.

If you would like a free Capsol® simulation (one simulation per project) just go to www.helioscreen.com/support/capsolcalc.php and fill out the form.

LightTool®

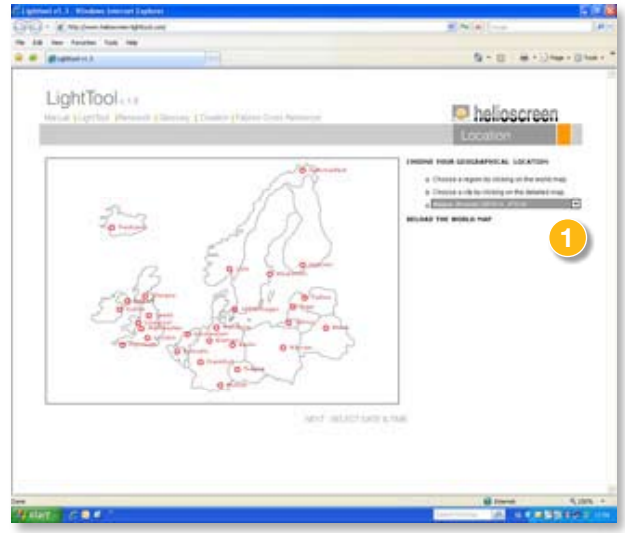
For a better Performance in Visual comfort

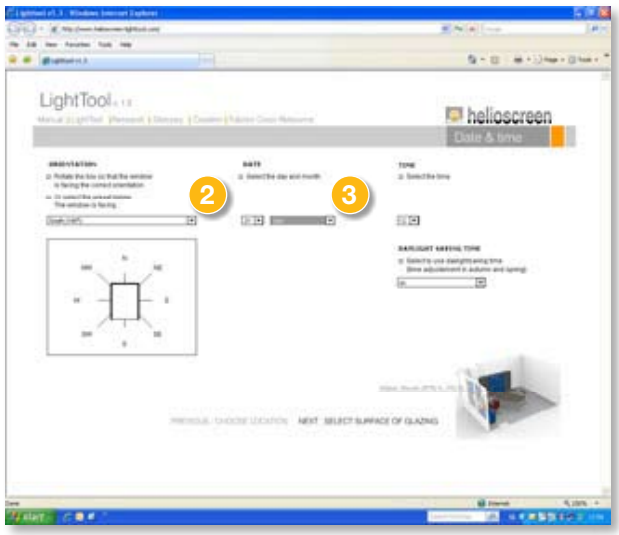
Natural daylight is of the utmost importance for a feeling of well-being for all human beings. The intensity of the daylight and the colour of the light, which is predominated by the seasons and the weather conditions, has a clear influence on the motivation and the working capacity of people. Dealing with daylight in the right way when designing a building will have a positive influence on the psychology of the inhabitants.

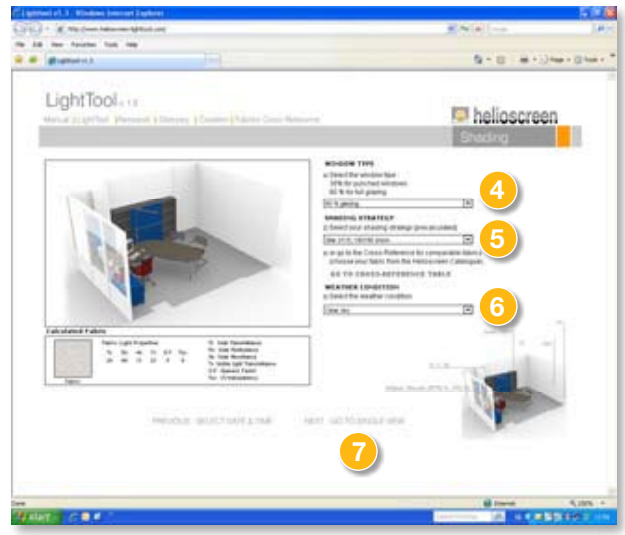
Therefore Helioscreen has designed and developed an intelligent software program, called LightTool®, which allows for making daylight simulations in an office environment. This valuable tool will help you in choosing an appropriate fabric and solar control system for the office environment.

In a few steps LightTool® leads you to the right choice:

1. **Choose the geographical location**
2. **Select the orientation of the façade**
3. **Select the date and time**
4. **Select the percentage of glazing in the façade**
5. **Select your shading strategy**
6. **Select the weather condition**
7. **Now you can go to single view and create your report**





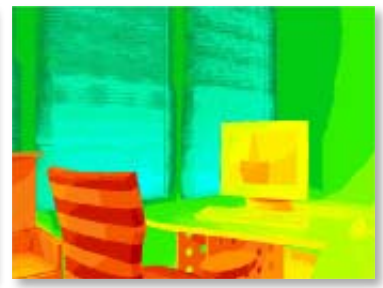


LightTool®

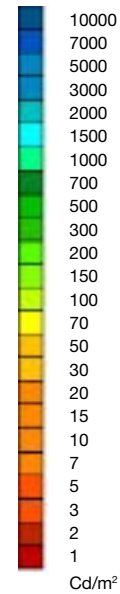
You can make a simulation for several situations, for example:

Without solar shading

With Star 2115 – 118150 - dusk



With Natte 2115 – 150116 - desert



Simulation for Santiago de Chile	Average illumination at 1 m	Luminance ratio screen/reflection
Without solar shading	3138 Lux	1.6 to 1
With solar shading: Star 2115 - 118150	418 Lux	5.2 to 1
With solar shading: Natte 2115 - 150116	975 Lux	2.8 to 1

Visual comfort is available when:

- **The contrast levels on different surfaces inside the office are mastered**.
- **Sufficient light is available, preferably natural daylight.**
  Illumination levels in between 500 and 1500 lux are ideal. In the above example the column 'Average illumination at 1 m' shows that Natte 2115 - 150116 is with 975 lux within the ideal range to provide sufficient daylight.
- **There are no annoying reflections in the computer screen.**
  The luminance ratio (in Cd/m²) of the computer screen and the daylight falling on the computer screen should be minimum 3 to 1 or higher. In the above example the 'Luminance ratio screen/reflection' shows that Star 2115 - 118150 provides the best result with a ratio of 5.2 to 1.

If you would like a free LightTool® simulation (one simulation per project), just go to www.helioscreen-lighttool.com/calculation.php and fill out the form.

helioscreen

Helioscreen n.v.

Dijkstraat 26
Industriezone E17/1080
9160 Lokeren - Belgium
T. +32 (0)9 348 90 00
F. +32 (0)9 348 06 69
fabrics@helioscreen.com
www.helioscreen.com

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