



# Serge 1%



GLASSFIBRE

OF = 1%

## Technical specifications

TECHNICAL SPECIFICATION		UNITY	STANDARD	RESULT	
composition			Glasfibre 42% - PVC 58%		
openness factor		%	NBN EN 410	1%	
weight		g/m <sup>2</sup>	NF EN 12127	638	
thickness		mm	ISO 2286-3	0,78	
density		yarn/cm	warp	ISO 7211/2	20
			weft		18
colour fastness to artificial light			ISO 105 B02	>7	
colour fastness to artificial weathering			ISO 105 B04	>7	
tear strength	original	daN	warp	ISO 4674-1 method 2	5,9
			weft		6,2
elongation up to break	original	%	warp	ISO 1421	4,7
			weft		3,8
breaking strength	original	daN/5 cm	warp	ISO 1421	321
			weft		277
elongation up to break	after colour fastness to artificial weathering	%	warp	ISO 1421	4,7
			weft		3,3
breaking strength	after colour fastness to artificial weathering	daN	warp	ISO 1421	225
			weft		216
tear strength	after climatic chamber -30°C	daN	warp	ISO 4674-1 method 2	6
			weft		6,2
elongation up to break	after climatic chamber -30°C	%	warp	ISO 1421	4,8
			weft		3,9
breaking strength	after climatic chamber -30°C	daN/5 cm	warp	ISO 1421	236
			weft		279
tear strength	after climatic chamber +70°C	daN	warp	ISO 4674-1 method 2	5,3
			weft		5,8
elongation up to break	after climatic chamber +70°C	%	warp	ISO 1421	5
			weft		3,7
breaking strength	after climatic chamber +70°C	daN/5 cm	warp	ISO 1421	251
			weft		266
air permeability		l/m <sup>2</sup> .s	ISO 9237	497	
fire classification	Europe		UNE-EN 13501-1:2007	C-s3,d0	
	France		NF P92-503	M1	
	Italy		UNI 9177	Class 1	
	Germany		DIN 4102	B1	
	UK		BS 5867	C	
	USA		NFPA 701	FR	
roll length	<b>30 m</b>				
cleaning	with soapy water				
confection	by heat, high frequency or ultrasonic welding				

These properties are given as indicative and don't have any contractual value

Serge 600 001010 - grey | charcoal (OF= 5%)

Serge 600 1% 001010 grey | charcoal (OF= 1%)





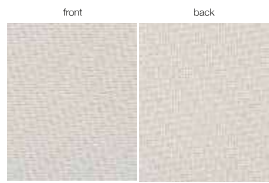
# Serge 1%



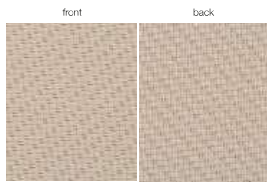
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OF = 1%

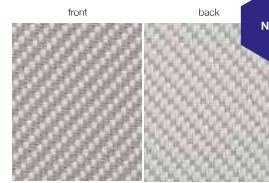
## Colours & references



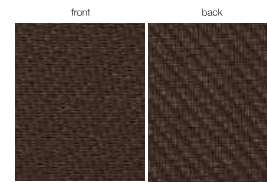
Serge 1% 002002 white | white



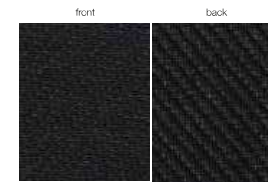
Serge 1% 008008 linen | linen



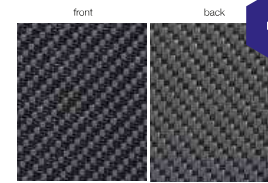
Serge 1% 002007 white | pearl grey



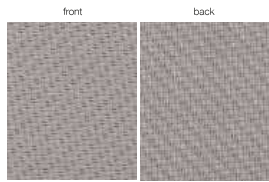
Serge 1% 011011 bronze | bronze



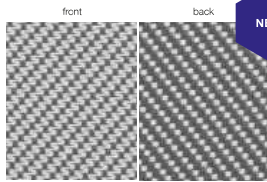
Serge 1% 010010 charcoal | charcoal



Serge 1% 001010 grey | charcoal



Serge 1% 007007 pearl grey | pearl grey



Serge 1% 001002 grey | white



Serge 1% 001001 grey | grey

Serge 1%	190 cm	270 cm
002002 white   white	•	•
008008 linen   linen		•
002007 white   pearl grey	•	•
007007 pearl grey   pearl grey	•	•
001002 grey   white	•	•
001001 grey   grey	•	•
011011 bronze   bronze		•
010010 charcoal   charcoal	•	•
001010 grey   charcoal	•	•



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OF = 1%

## Solar energetic properties

Serge 1% European Standard EN 14501 Calculation G-value according to EN 13363-1 version 7.0			SOLAR ENERGETIC PROPERTIES													VISUAL PROPERTIES	
			FABRIC			FABRIC + GLAZING						G-factor = total solar energy transmittance					
						EXTERIOR			INTERIOR								
references	colours		As = Solar Absorbance %	Rs = Solar Reflectance %	Ts = Solar Transmittance %	Glazing A - Gv = 0,85 - U = 5,8	Glazing B - Gv = 0,76 - U = 2,9	Glazing C - Gv = 0,59 - U = 1,2	Glazing D - Gv = 0,32 - U = 1,1	Glazing A - Gv = 0,85 - U = 5,8	Glazing B - Gv = 0,76 - U = 2,9	Glazing C - Gv = 0,59 - U = 1,2	Glazing D - Gv = 0,32 - U = 1,1	Tv = Visible Light Transmittance %	Tuv = UV Transmittance %		
002002	white   white	front	15,9	71,3	12,8	0,14	0,12	0,09	0,06	0,30	0,33	0,34	0,24	12,9	2,5		
		back	15,9	71,3	12,8	0,14	0,12	0,09	0,06	0,30	0,33	0,34	0,24	12,9	2,5		
008008	linen   linen	front	39,9	54,2	5,9	0,11	0,09	0,06	0,04	0,38	0,40	0,39	0,26	3,7	1,6		
		back	39,9	54,2	5,9	0,11	0,09	0,06	0,04	0,38	0,40	0,39	0,26	3,7	1,6		
002007	white   pearl grey	front	45,9	48,8	5,3	0,15	0,12	0,08	0,06	0,43	0,45	0,41	0,26	4,3	1,3		
		back	36,2	58,5	5,3	0,15	0,12	0,08	0,06	0,43	0,45	0,41	0,26	4,3	1,3		
007007	pearl grey   pearl grey	front	60,3	36,9	2,8	0,11	0,08	0,05	0,04	0,46	0,48	0,44	0,27	2,1	1,6		
		back	60,3	36,9	2,8	0,11	0,08	0,05	0,04	0,46	0,48	0,44	0,27	2,1	1,6		
001002	grey   white	front	53,0	44,8	2,2	0,13	0,10	0,06	0,05	0,45	0,47	0,42	0,27	2,0	1,1		
		back	66,6	31,2	2,2	0,13	0,10	0,06	0,05	0,45	0,47	0,42	0,27	2,0	1,1		

Serge 1% European Standard EN 14501 Calculation G-value according to EN 13363-1 version 7.0			SOLAR ENERGETIC PROPERTIES													VISUAL PROPERTIES	
			FABRIC			FABRIC + GLAZING						G-factor = total solar energy transmittance					
						EXTERIOR			INTERIOR								
references	colours		As = Solar Absorbance %	Rs = Solar Reflectance %	Ts = Solar Transmittance %	Glazing A - Gv = 0,85 - U = 5,8	Glazing B - Gv = 0,76 - U = 2,9	Glazing C - Gv = 0,59 - U = 1,2	Glazing D - Gv = 0,32 - U = 1,1	Glazing A - Gv = 0,85 - U = 5,8	Glazing B - Gv = 0,76 - U = 2,9	Glazing C - Gv = 0,59 - U = 1,2	Glazing D - Gv = 0,32 - U = 1,1	Tv = Visible Light Transmittance %	Tuv = UV Transmittance %		
001001	grey   grey	front	80,2	17,4	2,4	0,13	0,10	0,06	0,05	0,56	0,57	0,50	0,29	2,2	2,1		
		back	80,2	17,4	2,4	0,13	0,10	0,06	0,05	0,56	0,57	0,50	0,29	2,2	2,1		
011011	bronze   bronze	front	90,0	8,6	1,4	0,14	0,10	0,06	0,05	0,60	0,62	0,53	0,29	1,3	1,3		
		back	90,0	8,6	1,4	0,14	0,10	0,06	0,05	0,60	0,62	0,53	0,29	1,3	1,3		
010010	charcoal   charcoal	front	93,0	5,9	1,1	0,14	0,10	0,06	0,05	0,61	0,63	0,54	0,30	1,1	1,1		
		back	93,0	5,9	1,1	0,14	0,10	0,06	0,05	0,61	0,63	0,54	0,30	1,1	1,1		
001010	grey   charcoal	front	88,3	10,5	1,2	0,20	0,15	0,09	0,08	0,65	0,64	0,53	0,30	1,2	1,2		
		back	84,8	14,0	1,2	0,20	0,15	0,09	0,08	0,65	0,64	0,53	0,30	1,2	1,2		

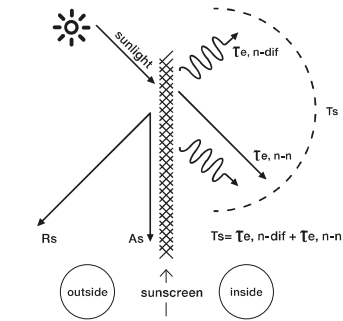
GLAZING A = clear single glazing 4 mm	Gv = 0,85
GLAZING B = clear double glazing (4/12/4), space filled with air	Gv = 0,76
GLAZING C = double glazing (4/16/4), with a low emissivity coating in position 3, space filled with argon	Gv = 0,59
GLAZING D = reflective double glazing (4/16/4), with a low emissivity coating in position 2, space filled with argon	Gv = 0,32

# Working of a sunscreen



## Sunscreen = protection against sunrays

Sunscreen means protection against the sunrays, so the function is the protection against light and heat, which is expressed in several properties.



<b>Rs</b>	Solar reflectance
<b>As</b>	Solar absorptance
<b>Ts</b>	Solar transmittance
<b>Te,n-dif</b>	Diffuse solar transmittance
<b>Te,n-n</b>	Normal solar transmittance

## Classes indicate effect of a sunscreen

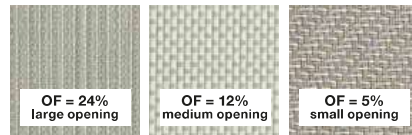
Based on certain properties, the screen can be split up in classes, from 0 to 4. Those classes are used, starting from the norm EN 14501, to indicate the effect of a certain sunscreen.

influence on thermal and visual comfort	
<b>Class 0</b>	very little effect
<b>Class 1</b>	little effect
<b>Class 2</b>	moderate effect
<b>Class 3</b>	good effect
<b>Class 4</b>	very good effect

## Visual properties

### Openness factor

The openness of a screen is indicated by the openness factor = **OF**. The openness coefficient is the relative area of the openings in the fabric seen under a given incidence. The openness factor is seen under a normal incidence.



The sunrays are subdivided in: **Visible light**, **UV-light** and **IR-light**.

**Visible light** (55% of the sun-energy) is that part for which our eyes are most sensitive. How larger the light intensity, how more detrimental for our eyes.

The factor Visible Light Transmittance = **Tv**, is the ratio of visible light that will be transmitted. How lower this factor can be kept, how better for the eyes.

**UV-light** (3% of the sun-energy) is the part of radiation which is detrimental for our health. This factor is indicated by the UV Transmittance = **Tuv**. This is the quantity UV-light transmitted by the sunscreen.

**IR-light** is invisible. This is however 42% of the sun-energy. These rays care for the reheating of solid substances and gases.

### Influence of colours

The choice of the colour has direct influence on the criteria which justify the use of sunscreen protection:

- Protection against visible light, expressed by the factor **Tv**.
- Protection against sun-energy, expressed by the **G** value.
- Protection against secondary heat, expressed by the factor **Qi**.
- Protection against UV-light, expressed by the factor **Tuv**.

## Visual properties: classes

### Glare control

The capacity of the solar protection device to control the luminance level of openings and to reduce the luminance contrasts between different zones within the field.

Tv,n-n	Tv,n-dif			
	Tv,n-dif < 0,02	0,02 ≤ Tv,n-dif < 0,04	0,04 ≤ Tv,n-dif < 0,08	Tv,n-dif ≥ 0,08
Tv,n-n > 0,10	0	0	0	0
0,05 < Tv,n-n ≤ 0,10	1	1	0	0
Tv,n-n ≤ 0,05	3	2	1	1
Tv,n-n = 0,00	4	3	2	2

### Privacy at night

Night privacy is the capacity of an internal or external blind or a shutter in the fully extended position or fully extended and closed position to protect persons, at night in normal light conditions from external view. External views means the ability of an external observer located 5m from the fully extended and closed product, to distinguish a person or object standing 1m behind the protection device in the room.

Tv,n-n	Tv,n-dif		
	0 < Tv,n-dif ≤ 0,04	0,04 < Tv,n-dif ≤ 0,15	Tv,n-dif > 0,15
Tv,n-n > 0,10	0	0	0
0,05 < Tv,n-n ≤ 0,10	1	1	1
Tv,n-n ≤ 0,05	2	2	2
Tv,n-n = 0,00	4	3	2

### Visual contact with the outside

Visual contact with the outside is the capacity of the solar protection device to allow an exterior view when it is fully extended. This function is affected by different light conditions during the day.

Tv,n-n	Tv,n-dif		
	0 < Tv,n-dif ≤ 0,04	0,04 < Tv,n-dif ≤ 0,15	Tv,n-dif > 0,15
Tv,n-n > 0,10	4	3	2
0,05 < Tv,n-n ≤ 0,10	3	2	1
Tv,n-n ≤ 0,05	2	1	0
Tv,n-n = 0,00	0	0	0

### Daylight utilisation

Daylight utilisation is characterised by:

- the capacity of the solar protection device to reduce the time period during the artificial light is required.
- the capacity of the solar protection device to optimise the daylight which is available.

CLASS	0	1	2	3	4
Tv,dif-h	Tv,dif-h < 0,02	0,02 ≤ Tv,dif-h < 0,10	0,10 ≤ Tv,dif-h < 0,25	0,25 ≤ Tv,dif-h < 0,40	Tv,dif-h ≥ 0,40