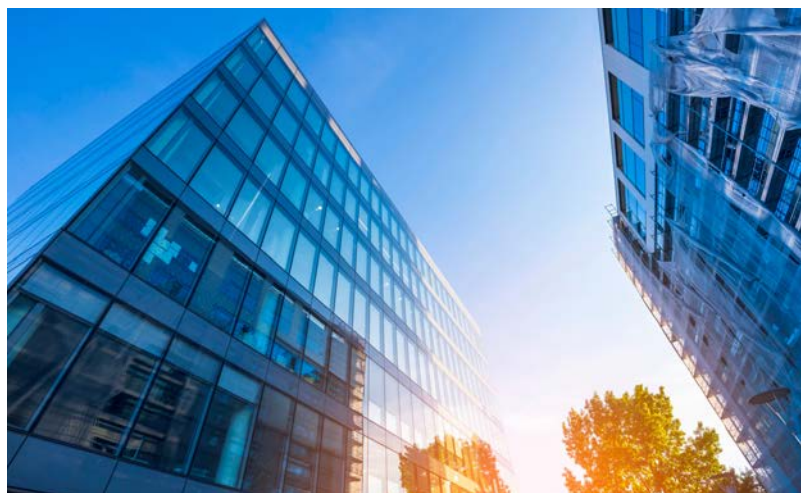


SKALMAR CONTRACT

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TKANINA SCREEN FR



SCREEN FR



Ivory-00



Chalk-01



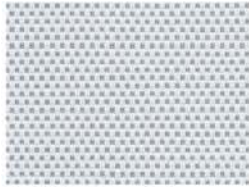
Chalk Beige Cream-02



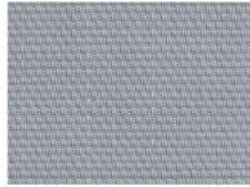
Grey Sand-09



Beige Pearl Grey-11



Chalk Soft Grey-03



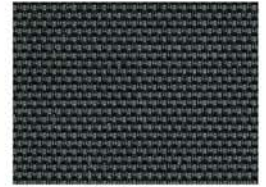
Soft Grey-08



Charcoal Iron Grey-05



Ebony-06



Charcoal Dark Bronze-10

SCR-3001		Optical Properties		Thermal Properties			Calculations based on reference glazing D			
Article	Color	Openness factor	Tv	Rs	Ts	As	Gtot/SHGC	Improvement %	UV Blockage	BREEAM Glare Class
SCR-3001-00	Ivory	1 %	11 %	70 %	15 %	15 %	0,25	22,9 %	100 %	1
SCR-3001-01	Chalk	1 %	9 %	72 %	13 %	15 %	0,24	23,6 %	100 %	1
SCR-3001-02	Chalk Beige Cream	1 %	7 %	67 %	11 %	22 %	0,25	22,2 %	100 %	2
SCR-3001-03	Chalk Soft Grey	1 %	5 %	55 %	8 %	37 %	0,26	18,9 %	100 %	2
SCR-3001-05	Charcoal Iron Grey	1 %	1 %	10 %	1 %	89 %	0,30	6,4 %	100 %	3
SCR-3001-06	Ebony	1 %	1 %	4 %	1 %	95 %	0,31	4,7 %	100 %	4
SCR-3001-08	Soft Grey	1 %	1 %	33 %	3 %	64 %	0,28	12,8 %	100 %	3
SCR-3001-09	Grey Sand	1 %	10 %	33 %	14 %	53 %	0,28	12,4 %	100 %	1
SCR-3001-10	Charcoal Dark Bronze	1 %	1 %	6 %	1 %	93 %	0,30	5,2 %	100 %	4
SCR-3001-11	Beige Pearl Grey	1 %	5 %	46 %	9 %	45 %	0,27	16,3 %	100 %	2

SCR-3003		Optical Properties		Thermal Properties			Calculations based on reference glazing D			
Article	Color	Openness factor	Tv	Rs	Ts	As	Gtot/SHGC	Improvement %	UV Blockage	BREEAM Glare Class
SCR-3003-00	Ivory	3 %	12 %	72 %	15 %	13 %	0,24	23,5 %	97 %	1
SCR-3003-01	Chalk	3 %	12 %	70 %	16 %	14 %	0,25	22,9 %	97 %	1
SCR-3003-02	Chalk Beige Cream	3 %	8 %	63 %	12 %	25 %	0,25	21,0 %	98 %	2
SCR-3003-03	Chalk Soft Grey	3 %	7 %	51 %	10 %	39 %	0,26	17,7 %	97 %	2
SCR-3003-05	Charcoal Iron Grey	3 %	3 %	12 %	3 %	85 %	0,30	6,9 %	98 %	3
SCR-3003-06	Ebony	3 %	3 %	5 %	3 %	92 %	0,30	4,9 %	98 %	3
SCR-3003-08	Soft Grey	3 %	3 %	33 %	5 %	62 %	0,28	12,8 %	97 %	3
SCR-3003-09	Grey Sand	3 %	12 %	51 %	16 %	33 %	0,26	17,5 %	98 %	1
SCR-3003-10	Charcoal Dark Bronze	3 %	3 %	7 %	3 %	90 %	0,30	5,5 %	98 %	3
SCR-3003-11	Beige Pearl Grey	3 %	8 %	43 %	11 %	46 %	0,27	15,4 %	97 %	2

SCR-3005		Optical Properties		Thermal Properties			Calculations based on reference glazing D			
Article	Color	Openness factor	Tv	Rs	Ts	As	Gtot/SHGC	Improvement %	UV Blockage	BREEAM Glare Class
SCR-3005-00	Ivory	5 %	15 %	70 %	18 %	12 %	0,25	22,8 %	94 %	1
SCR-3005-01	Chalk	5 %	13 %	68 %	17 %	15 %	0,25	22,3 %	95 %	1
SCR-3005-02	Chalk Beige Cream	5 %	19 %	57 %	22 %	21 %	0,26	19,0 %	94 %	1
SCR-3005-03	Chalk Soft Grey	5 %	9 %	49 %	12 %	39 %	0,27	17,1 %	94 %	2
SCR-3005-05	Charcoal Iron Grey	5 %	6 %	14 %	6 %	80 %	0,30	7,3 %	94 %	3
SCR-3005-06	Ebony	5 %	5 %	4 %	5 %	91 %	0,31	4,5 %	95 %	3
SCR-3005-08	Soft Grey	5 %	7 %	33 %	9 %	58 %	0,28	12,6 %	94 %	3
SCR-3005-09	Grey Sand	5 %	16 %	52 %	20 %	28 %	0,26	17,6 %	93 %	1
SCR-3005-10	Charcoal Dark Bronze	5 %	5 %	7 %	5 %	88 %	0,30	5,4 %	97 %	3
SCR-3005-11	Beige Pearl Grey	5 %	10 %	41 %	13 %	46 %	0,27	14,7 %	94 %	2

SCR-3010		Optical Properties		Thermal Properties			Calculations based on reference glazing D			
Article	Color	Openness factor	Tv	Rs	Ts	As	Gtot/SHGC	Improvement %	UV Blockage	BREEAM Glare Class
SCR-3010-00	Ivory	10 %	21 %	62 %	24 %	13 %	0,25	20,6 %	89 %	0
SCR-3010-01	Chalk	10 %	27 %	57 %	30 %	13 %	0,26	18,7 %	89 %	0
SCR-3010-02	Chalk Beige Cream	10 %	20 %	57 %	23 %	20 %	0,26	18,9 %	88 %	0
SCR-3010-03	Chalk Soft Grey	10 %	14 %	64 %	17 %	37 %	0,27	16,0 %	88 %	1
SCR-3010-05	Charcoal Iron Grey	10 %	12 %	14 %	12 %	74 %	0,30	7,1 %	89 %	1
SCR-3010-06	Ebony	10 %	11 %	4 %	11 %	58 %	0,31	4,3 %	89 %	1
SCR-3010-08	Soft Grey	10 %	12 %	30 %	15 %	55 %	0,28	11,5 %	89 %	1
SCR-3010-09	Grey Sand	10 %	20 %	50 %	23 %	27 %	0,27	17,0 %	89 %	0
SCR-3010-10	Charcoal Dark Bronze	10 %	10 %	7 %	10 %	83 %	0,30	5,2 %	90 %	1
SCR-3010-11	Beige Pearl Grey	10 %	16 %	37 %	19 %	44 %	0,28	13,4 %	89 %	1

Tests performed according to EN 14500: 2008-08 and EN 13363-1: 2003/07 / EN ISO 52022-1: 2017/07

SCREEN FR

Screen Essential basket weave 2x2 3000 series (1%, 3%, 5% and 10% open)

Screen Essential is a polyester based fabric with a subtle structure and a 2x2 basket weave. The collection is available in openness factors of 1 %, 3 %, 5 % and 10 %. The screens each have the same structure, which gives them the exact same optic. By mixing various openness factors in one space, a uniform look can be achieved. Screen Essential

comes in 10 timeless colors and is available in a width up to 3 meters. The screen fabric is free of VOC's, Phthalate, Formaldehyde and heavy metals and is safe for direct skin contact. Thanks to its anti-microbial protection coating, the growth of stains and bacteria is prevented.

	SCR-3001	SCR-3003	SCR-3005	SCR-3010
Product	Roller / Panel / Vertical	Roller / Panel / Vertical	Roller / Panel / Vertical	Roller / Panel
Openness factor	1 %	3 %	5 %	10 %
Cleaning	damp cloth	damp cloth	damp cloth	damp cloth
Weave	basketweave 2x2	basketweave 2x2	basketweave 2x2	basketweave 2x2
Composition	70 % PVC 30 % PES	70 % PVC 30 % PES	70 % PVC 30 % PES	70 % PVC 30 % PES
Fabric width	250 cm - 300 cm 98 in - 118 in	250 cm - 300 cm 98 in - 118 in	250 cm - 300 cm 98 in - 118 in	250 cm - 300 cm 98 in - 118 in
Weight	480 g/m ² 14.16 oz/yd ²	470 g/m ² 13.86 oz/yd ²	430 g/m ² 12.68 oz/yd ²	430 g/m ² 12.68 oz/yd ²
Thickness	0,68 mm 0.026 in	0,58 mm 0.022 in	0,55 mm 0.021 in	0,5 mm 0.020 in
Fire Classifications	DIN 4102, Class B1 NFPA 701 UNE-EN 13773:2003, Class 1	DIN 4102, Class B1 NFPA 701 UNE-EN 13773:2003, Class 1	DIN 4102, Class B1 NFPA 701 UNE-EN 13773:2003, Class 1	DIN 4102, Class B1 NFPA 701 UNE-EN 13773:2003, Class 1
Color fastness	ISO 105-B02 grade 8	ISO 105-B02 grade 8	ISO 105-B02 grade 8	ISO 105-B02 grade 8
Fabric warranty	5 years	5 years	5 years	5 years
Antimicrobial	ASTM G21 ASTM G22 BS ISO EN846	ASTM G21 ASTM G22 BS ISO EN846	ASTM G21 ASTM G22 BS ISO EN846	ASTM G21 ASTM G22 BS ISO EN846
Greenguard UL 2818	yes	yes	yes	yes
Greenguard UL 2818 Gold	yes	yes	yes	yes
Oeko-tex standard 100	11-34219 / Class II	11-34219 / Class II	11-34219 / Class II	11-34219 / Class II
Formaldehyde	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard
Phthalates	compliant with Oeko-Tex	compliant with Oeko-Tex	compliant with Oeko-Tex	compliant with Oeko-Tex
Heavy metal	compliant with Oeko-Tex	compliant with Oeko-Tex	compliant with Oeko-Tex	compliant with Oeko-Tex
VOC (volatile organic compounds)	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard	compliant with Oeko-Tex and Greenguard
Suitable for moist conditions	yes	yes	yes	yes
Recyclable	yes	yes	yes	yes

These are approximate values. Individual results may vary slightly.



About Coulisse

At Coulisse, we believe that window coverings are the perfect solution for creating healthy, comfortable and inspiring indoor spaces. They allow for perfect heat control and natural light management, and as a result, contribute to productivity, comfort and energy savings. With the unique decorative possibilities of the Coulisse Contract range, in addition, they allow for creating atmosphere, style and a sense of warmth and well-being.

Total solution

Our window covering solutions are created through a seamless concept of stylish contract fabrics, aesthetic systems and an intelligent automation concept. They offer the perfect combination of beauty, functionality and convenience.

Contact

If you have any questions about fabrics, systems or motion or you need advice, please call Coulisse Contract on +31 (0) 547 855 555 or e-mail your requirements to contract@coulisse.com.

SKALMAR CONTRACT

TKANINA
APOLLO 13
BLACKOUT



APOLLO 13

BLACKOUT



PVC-free



excellent dimensional stability



very good glare control



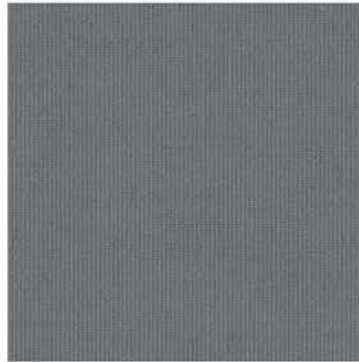
high reflection in all colours



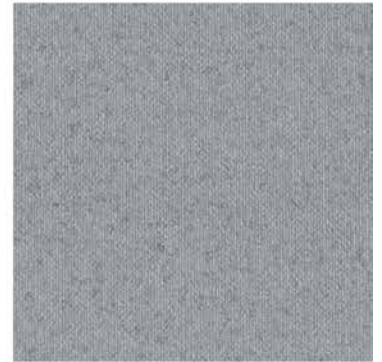
very good night privacy



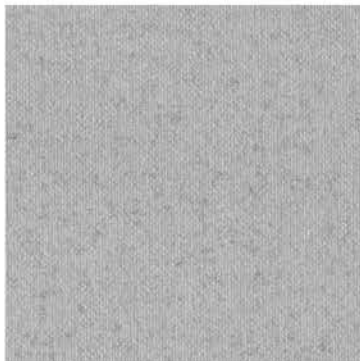
10355
Midnight Black



6625
New York Grey



5770
French Grey



5108
Grey Haze



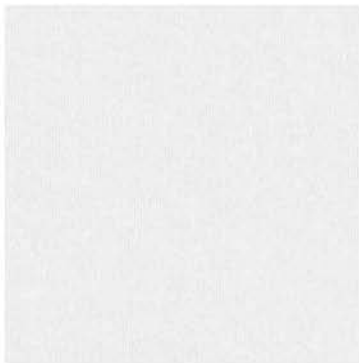
10331
Stone



4899
Perfect Greige



6117
Cream



4898
Snow

APOLLO 13 BLACKOUT



Technical specification

Width		310 cm / 122"
Basic material		100 % polyester
Weight approx.	EN 12127	430 g/m ² / 12,7 oz/yd ²
Thickness approx.	EN ISO 5084	0,55 mm / 0,022"
Openness factor OF	EN 14500	0 %
Flame retardancy		B1 / C1 / NFPA 701
Light fastness (window side)	EN ISO 105-B02	min. 6-7
Tensile properties: Determination of max. force Elongation at max. force	EN ISO 13934-1	warp: > 80 daN - weft: > 130 daN warp: approx. 17 % - weft: approx. 24 %
Suitable for moist atmosphere		yes
Manufacturing guidance		to cut with cold knife, to stick together with welding agent
Roll length approx.		25 m / 27 yd
Care instruction		spongeable

Optical and thermal factors

colour	optical factors										thermal factors				
	fabric						classification				fabric				fabric + glazing
	visible light (%)						glare control	night privacy	visual contact	daylight utilisation	solar radiation (%)				glazing E _{g=0.55 U_{g=0.8}}
	T _v	R _v	A _v	T _{v,n-n}	T _{v,n-dif}	R _a					T _s	R _s	A _s	T _{UV}	g _{tot} class
10355	0	87	13	0,0	0,0	44	4	4	0	0	0	79	21	0	0,31 2
6625	0	80	20	0,0	0,0	40	4	4	0	0	0	68	32	0	0,34 2
5770	0	79	21	0,0	0,0	50	4	4	0	0	0	67	33	0	0,34 2
5108	0	81	19	0,0	0,0	33	4	4	0	0	0	69	31	0	0,34 2
10331	0	80	20	0,0	0,0	40	4	4	0	0	0	68	32	0	0,34 2
4899	0	80	20	0,0	0,0	34	4	4	0	0	0	67	33	0	0,34 2
6117	0	82	18	0,0	0,0	43	4	4	0	0	0	70	30	0	0,33 2
4898	0	78	22	0,0	0,0	45	4	4	0	0	0	68	32	0	0,34 2

Data is measured according to EN 410:2011 and EN 14500:2008. Calculations of g_{tot} are defined according to EN ISO 52022-1:2017 using triple glazing type E ($g=0,55$; $U_g=0,8$). Other glazing types can be calculated on request.

Classifications: 0 (very little effect), 1 (little effect), 2 (moderate effect), 3 (good effect) and 4 (very good effect) refer to EN 14501:2005.

All specifications are based on average values and may deviate within the standard tolerance limits. Subject to technical modifications.

The life span of these products is at least four years, starting from the commercial launch of these items. Please request the individual life span for each product by contacting our customer service team.

Product certificates and guarantees



REACH
compliant



made in Germany

APOLLO 13 BLACKOUT

Classification of optical and thermal comfort properties

According to standard EN 14501 certain properties of solar protection devices are to be considered. The standard lists properties which quantify visual and thermal comfort and therefore are to be taken into consideration for comparison. While the optical properties are defined by glare control, night privacy, visual contact with the outside and daylight utilization as well as by the color rendering index R_a , the thermal comfort is influenced by total solar energy transmittance g_{tot} . The comfort properties are specified in five classes shown in the following table:

Influence on optical or thermal comfort

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

Optical factors – for wavelengths between 380 nm and 780 nm – verified in accordance with EN 410 and EN 14500/14501

T_v	Normal/hemispherical light transmittance ($T_{v, n-h}$); specifies the relation of transmitted to total incident light; states the sum of transmitted diffuse light ($T_{v, n-dif}$) and transmitted normal light ($T_{v, n-n}$)
R_v	Normal/hemispherical light reflectance; specifies the relation of reflected to total incident light
A_v	Normal/hemispherical light absorptance; specifies the relation of absorbed to total incident light
$T_{v, n-n}$	Normal/normal light transmittance; value is usually close to OF
$T_{v, n-dif}$	Normal/diffuse light transmittance
R_a	Color-Rendering-Index with values between 0 and 100; specifies an object's change of color due to alteration of incident light; the higher the index value, the lower the color distortion
Glare control	Specifies a solar protection device's capacity to protect a person against unpleasant luminance contrasts and thereby glare; it may be caused by solar spots on the work surface as well as direct view into the sun or other light sources with high luminance
Night privacy	Specifies a solar protection device's capacity to protect a person at night against external view in fully extended position
Visual contact	Specifies a solar protection device's capacity to allow a person's view to the outside in fully extended position
Daylight utilization	Specifies a solar protection device's capacity in fully extended position to optimize the usage of daylight and reduce the time during which artificial light is required

Thermal factors – for wavelengths between 280 nm and 2500 nm – verified in accordance with EN 410 and EN 14500

T_s	Normal/hemispherical solar transmittance; specifies the relation of transmitted to total incident solar radiation
R_s	Normal/hemispherical solar reflectance; specifies the relation of reflected to total incident solar radiation
A_s	Normal/hemispherical solar absorptance; specifies the relation of absorbed to total incident solar radiation
T_{UV}	Ultraviolet light transmittance (wavelengths from 280 nm to 380 nm); specifies the relation of transmitted to total UV-radiation
$IR (E)$	Emissivity; ratio of energy radiated from a material's surface to that radiated from a blackbody at the same temperature; value between 0 and 1; the lower the number, the better the insulation effect; determined in accordance with EN 15976
g	Total solar energy transmittance of a glazing; specifies the relation of transmitted to total incident solar energy
U_g	Heat transfer coefficient; specifies the glazing's insulation properties, as it reflects the energy flow through a window at a certain temperature; expressed in W/m^2K
g_{tot}	Total solar energy transmittance of a glazing in combination with a solar protection device; can either be calculated according to a simplified (EN ISO 52022-1) or detailed method (EN ISO 52022-3)

Technical specifications

Openness Factor OF	Specifies the relation of the area of openings to the total area of a textile fabric; measured in accordance with EN 14500
α_w / NRC	Sound absorption coefficient between 0 and 1; specifies a material's absorption properties; the higher the value, the better the textile's capacity to absorb sound; determined in accordance with EN ISO 354, assessed in accordance with EN ISO 11654 and ASTM C423
Light fastness	Specifies a fabric's resistance to fading when exposed to artificial light which equals natural daylight; classified in 8 classes (the higher the class, the better the light fastness); measured according to EN ISO 105-B2 for the interior