

Clear Vision™

CV & CV External

Normal screen white

Clear Vision white

Refuse Vague Attitude, Bring New High-Definition Altitude.

HANDE Launched Clear Vision™ Series Sunscreen.



SUNESSE®
Sunscreen Finesse

By HanDe

Product Certificate

Fire, Smoke Classification	FR (US) - NFPA 701 TM#1			BS (GB) - 5867 Part2 TypeB	
	B1(CN) - GB17591			B1 (DE) - DIN4102	
Health & Safety	Oeko-tex Standard 100 class IV			Greenguard® Gold	MIF Certificate
	RoHS Directive (EU)2015/863			EN71 Part 3:1994	
	AATCC112-2014			GB18586 - 2001	
Bacterial & Fungal Resistance	ASTM G21-15	0 Grade	None fungi growth		
	ASTM E 2180-07	Reduce more than 99.9% of bacteria			
Colour fastness to light	Grade 8	ISO105 B02:2014			
	≥4.0	AATCC TM 16.3-2014; Option 3; Xenon Arc Lamp			
Warranty	5 Years				



Technical Data

STYLE		CV01	CV03	CV05	CV10	CVE05
Composition		22% Polyester	22% Polyester	22% Polyester	22% Polyester	31% Polyester
		78% PVC	78% PVC	78% PVC	78% PVC	69% PVC
Openness Factor		≈1%	≈3%	≈5%	≈10%	≈5%
UV Screen		Up to 99%	Up to 97%	Up to 94%	Up to 89%	Up to 95%
Width	inch	98"–118"	98"–118"	98"–118"	98"–118"	98"–118"
	cm	250–300	250–300	250–300	250–300	250–300
Weight	oz/yd ²	14.15±5%	13.46±5%	12.97±5%	10.91±5%	15.92±5%
(ISO 2286–2)	g/m ²	480 ± 5%	460 ± 5%	440 ± 5%	370 ± 5%	540 ± 5%
Thickness	inch	0.022 ± 5%	0.022 ± 5%	0.020 ± 5%	0.019 ± 5%	0.026 ± 5%
(ISO 2286–3)	mm	0.55 ± 5%	0.56 ± 5%	0.52 ± 5%	0.48 ± 5%	0.67 ± 5%
MECHANICAL RESISTANCE						
Breaking	Warp	≥1750 N/5cm	≥1700 N/5cm	≥1430 N/5cm	≥1250 N/5cm	≥3050 N/5cm
	Weft	≥1250 N/5cm	≥1400 N/5cm	≥1420 N/5cm	≥1200 N/5cm	≥2940 N/5cm
Tear	Warp	≥ 95 N	≥ 90 N	≥ 80 N	≥ 85 N	≥220 N
	Weft	≥ 70 N	≥ 70 N	≥ 85 N	≥ 90 N	≥220 N
Packing		32.8 yards	32.8 yards	32.8 yards	32.8 yards	32.8 yards
	(Roll Length)	30 lm	30 lm	30 lm	30 lm	30 lm

Thermal and Optical Factors

Color	Fabric Properties					Fabric & Glass	
	Thermal			Optical		SHGC % Improvement	SHGC
	Ts	Rs	As	Rv	Tv		

CV 1%

0101 White*White	3	78	20	85	3	73%	0.10
0104 White*Black	3	49	48	54	3	56%	0.21
0105 White*Grey	2	59	38	65	2	62%	0.11
0107 White*Sand	3	61	36	66	3	62%	0.12

CV 3%

0101 White*White	7	74	19	81	7	68%	0.14
0104 White*Black	6	40	53	44	7	50%	0.26
0105 White*Grey	6	53	41	58	6	57%	0.22
0107 White*Sand	7	54	39	58	7	57%	0.21

CV 5%

0101 White*White	8	74	18	81	8	67%	0.15
0104 White*Black	7	34	59	37	7	47%	0.28
0105 White*Grey	6	53	41	53	8	54%	0.24
0107 White*Sand	8	51	41	54	8	54%	0.23

CV 10%

0101 White*White	15	68	17	75	15	61%	0.20
0104 White*Black	12	33	55	36	12	44%	0.31
0105 White*Grey	14	45	41	50	14	50%	0.28
0107 White*Sand	14	48	38	52	14	51%	0.27

CVE 5%

0101 White*White	7	74	19	82	7	68%	0.14
0104 White*Black	7	36	57	40	7	48%	0.27
0105 White*Grey	7	50	43	55	7	55%	0.23
0107 White*Sand	7	52	41	56	7	56%	0.22

Recommended Comfort Classification				
Thermal Control	Visual			
	Daylight Utilization	Glare Control	Night Privacy	Outward Visibility

3	1	3	2	1
2	1	3	2	1
3	1	3	2	1
3	1	3	2	1

3	1	2	1	2
2	1	2	1	2
2	1	2	1	2
2	1	2	1	2

3	1	2	1	3
2	1	2	1	3
2	1	2	1	3
2	1	2	1	3

2	2	1	0	2
2	2	1	0	3
2	2	1	0	3
2	2	1	0	3

3	1	2	1	3
2	1	2	1	3
2	1	2	1	3
2	1	2	1	3

Ts (Solar transmittance): Proportion of solar energy transmitted through the fabric. Rs (Solar reflectance): Proportion of solar radiation reflected by the fabric. As (Solar absorptance): Proportion of solar radiation absorbed by the fabric. Tv (Visible light transmittance): Total percentage of light radiation through the fabric over a wavelength of 380 to 780 nm. Rv (visible light reflectance): Total percentage of light radiation reflected by the fabric over a wavelength of 380 to 780 nm. SHGC (Total solar factor): Solar energy which actually penetrates into a room through the blind and glazing. A low value means good thermal performance.

Comfort Classification According to EN14501 : 0. Very little effect 1. Little effect 2. Moderate effect 3. Good effect 4. Very good effect

Solar Fenestration Properties Comparison

Color	Fabric Properties				Fabric & Glass
	Thermal			Optical	SHGC
	Ts	Rs	As	Tv	
Clear Vision					
1%					
0101 White*White	3	78	20	3	0.10
0104 White*Black	3	49	48	3	0.21
0105 White*Grey	2	59	38	2	0.11
0107 White*Sand	3	61	36	3	0.12
0404 Black*Black	-	-	-	-	-
3%					
0101 White*White	7	74	19	7	0.14
0104 White*Black	6	40	53	7	0.26
0105 White*Grey	6	53	41	6	0.22
0107 White*Sand	7	54	39	7	0.21
0404 Black*Black	-	-	-	-	-
5%					
0101 White*White	8	74	18	8	0.15
0104 White*Black	7	34	59	7	0.28
0105 White*Grey	6	53	41	8	0.24
0107 White*Sand	8	51	41	8	0.23
0404 Black*Black	-	-	-	-	-
10%					
0101 White*White	15	68	17	15	0.20
0104 White*Black	12	33	55	12	0.31
0105 White*Grey	14	45	41	14	0.28
0107 White*Sand	14	48	38	14	0.27
0404 Black*Black	-	-	-	-	-
Clear Vision External					
5%					
0101 White*White	7	74	19	7	0.14
0104 White*Black	7	36	57	7	0.27
0105 White*Grey	7	50	43	7	0.23
0107 White*Sand	7	52	41	7	0.22
0404 Black*Black	-	-	-	-	-

Fabric Properties				Fabric & Glass
Thermal			Optical	SHGC
Ts	Rs	As	Tv	
Regular Screen				
1%				
16	72	12	13	0.21
3	25	72	3	0.28
8	45	47	5	0.25
12	55	33	8	0.23
0	3	97	0	0.36
3%				
18	70	12	15	0.23
8	26	66	7	0.29
9	40	51	7	0.27
14	51	35	10	0.26
3	3	94	3	0.37
5%				
21	67	12	17	0.25
12	27	61	9	0.31
12	38	50	9	0.30
14	46	40	12	0.28
6	3	91	3	0.37
10%				
21	61	18	17	0.26
19	23	58	18	0.29
18	36	46	15	0.33
18	48	34	12	0.30
10	3	87	6	0.37
5%				
23	66	11	20	0.25
11	28	61	9	0.29
11	39	50	9	0.28
14	49	37	11	0.27
7	3	90	7	0.38

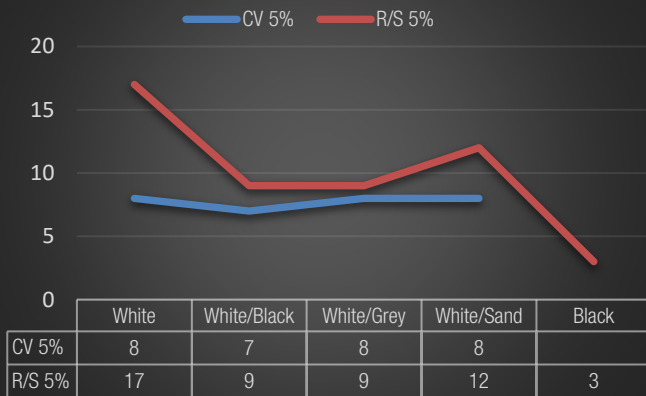
Ts (Solar transmittance): Proportion of solar energy transmitted through the fabric. Rs (Solar reflectance): Proportion of solar radiation reflected by the fabric. As (Solar absorptance): Proportion of solar radiation absorbed by the fabric. Tv (Visible light transmittance): Total percentage of light radiation through the fabric over a wavelength of 380 to 780 nm. Rv (visible light reflectance): Total percentage of light radiation reflected by the fabric over a wavelength of 380 to 780 nm. SHGC (Total solar factor): Solar energy which actually penetrates into a room through the blind and glazing. A low value means good thermal performance.

Solar Comparison Data

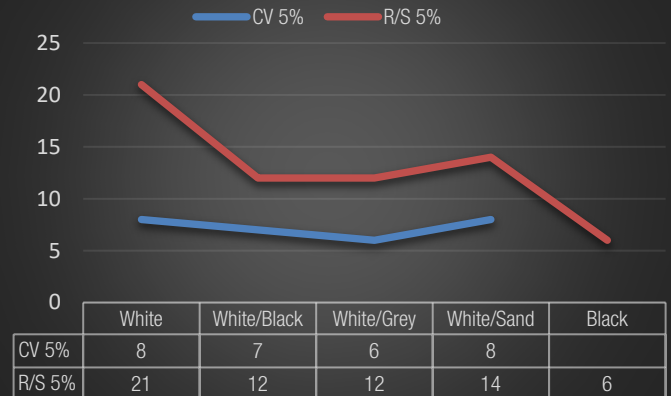
From comparison of Optical and thermal factor, Clear Vision White will reflect more solar heat ($R_s=74$, Black $R_s=3$), and also can achieve the same effect of glare control as black fabric ($T_v=8$, Black $T_v=3$), it solves the problem of combining solar reflection and glare control.

Clear Vision 5% (CV 5%) AND Regular Screen 5% (R/S 5%)

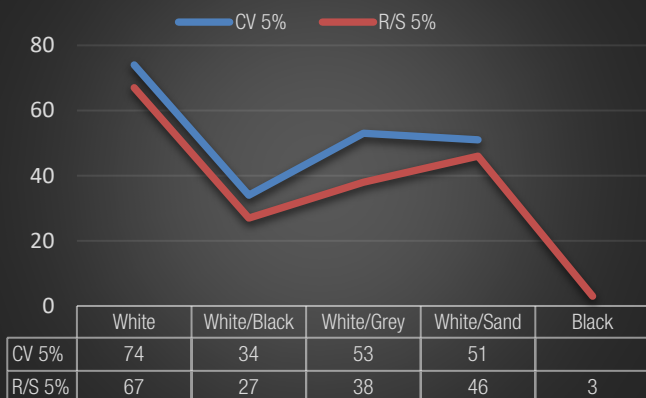
Visible Light Transmittance - T_v (%)



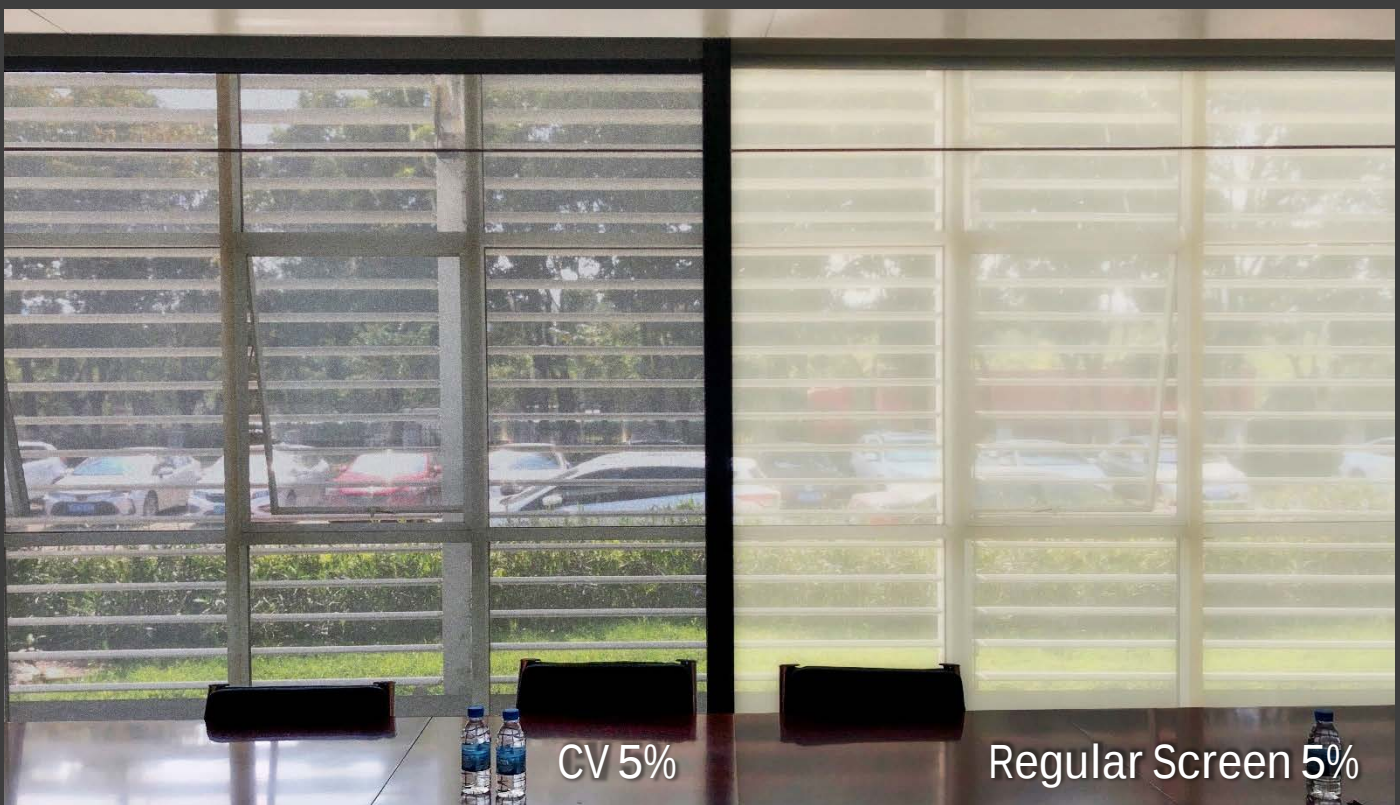
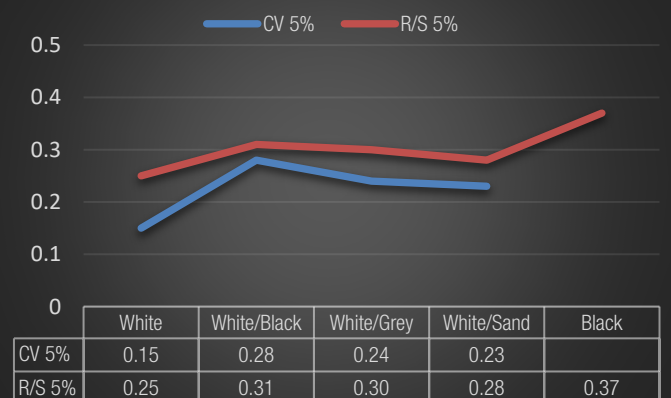
Solar Transmittance - T_s (%)



Solar Reflectance - R_s (%)



Total Solar Factor - SHGC



CLEAR VISION

INNOVATIVE SUNSCREEN FABRICS

WITH INTEGRATED TRANSPARENCY, THERMAL COMFORT AND GLARE CONTROL

With the special technology developed by Hande, the light color fabric can improve the heat reflection performance, while still can control more visible light into the room, effectively and efficiently reduce glare, increase the transparency clarity, and bring excellent visual comfort effect. And helps to improve the energy efficiency of buildings

- Excellent Glare control, Up to 98% of visible light blocked ($T_v=2\%$)
- Excellent solar protection, Up to 78% of solar reflection ($RS=78\%$, $SHGC=0.10$)
- Basket Weave 2X2, The classic and popular style of weaving
- 4 COLORS, 2 STYLES (Interior and Exterior), 4 OPENNESS FACTOR
- Available In 2 Standard Widths: 250cm and 300cm
- The customizable Maximum Width is 410cm
- COORDINATED RANGE WITH A VARIETY OF OPENNESS FACTORS (1%, 3%, 5% and 10%) To Optimize Solar Protection In All Applications, Maintaining a Consistent Design Aesthetic
- **CVE** Excellent MECHANICAL RESISTANCE And Dimensional Stability For Large Roller Blinds
- Health & Safty: Conforms To Standard Requirements For Buildings Open To The Public
- Excellent digital printing medium for custom designs

8% vs 17%

CV VS REGULAR SCREEN 5% WHITE

OF VISIBLE LIGHT

TRANSMITTANCE

78% UP TO

SOLAR REFLECTANCE

410 cm

MAXIMUM WIDTH

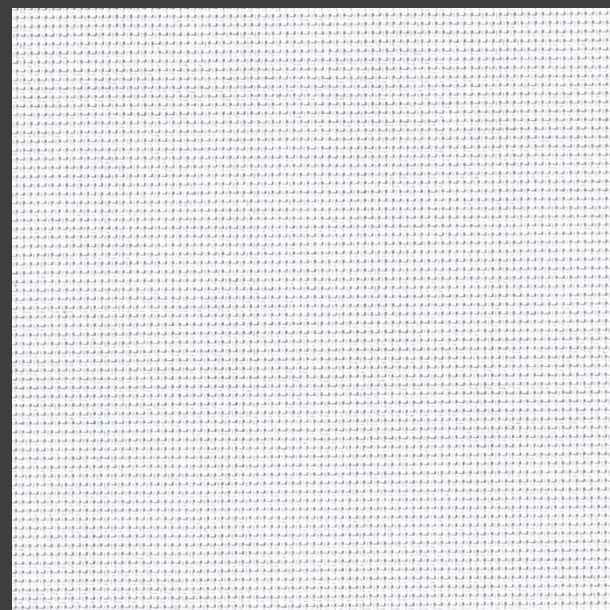
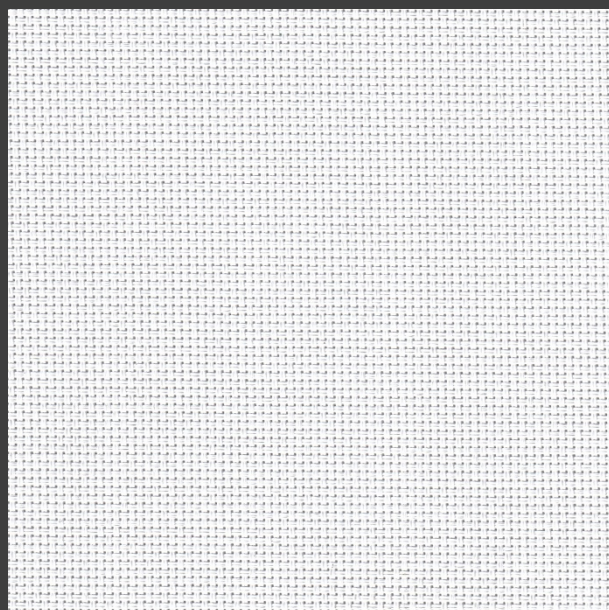


Openness Factor

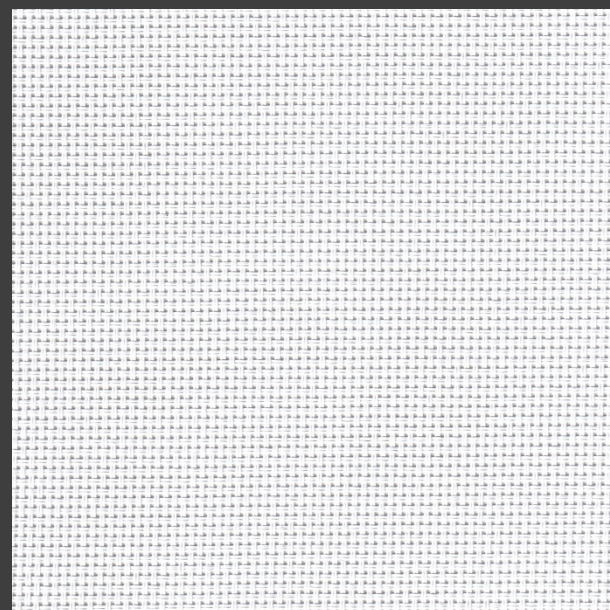
0101 White * White



CV 1%



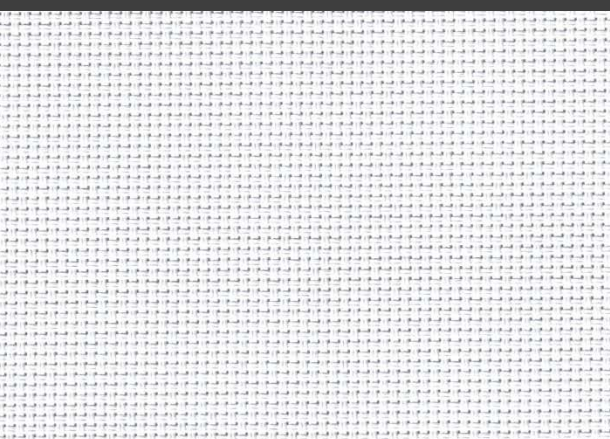
CV 3%



CV 5%



CV 10%

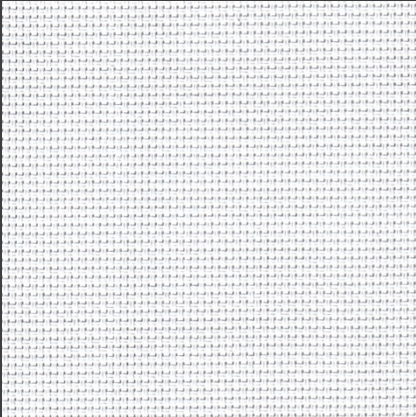


CV 5%

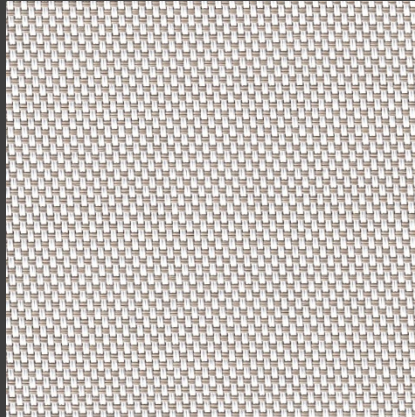
Openness Factor may be slightly different from the actual ones

Colours

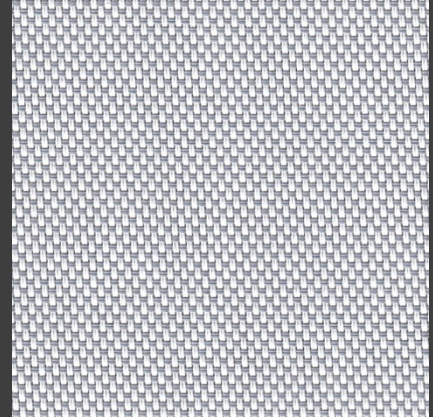
CV3% & CVE 5%



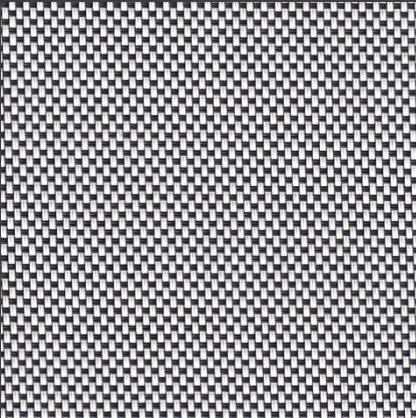
CV-0101 White * White



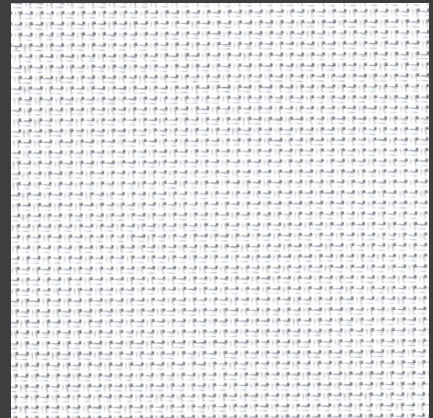
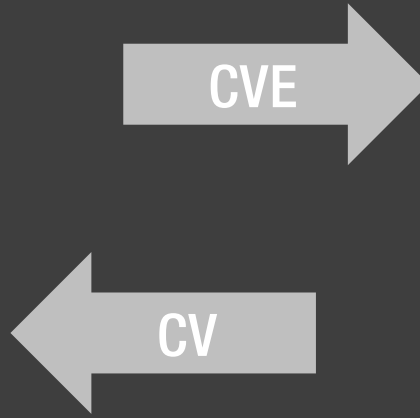
CV-0107 White * Sand



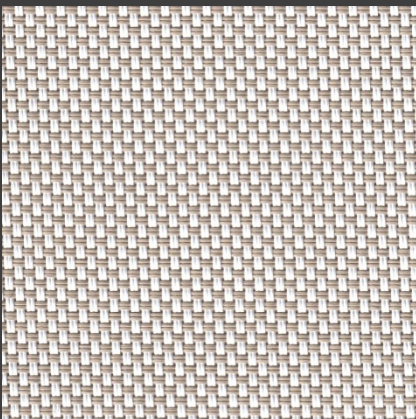
CV-0105 White * Grey



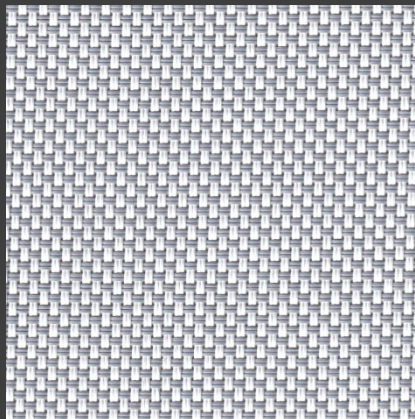
CV-0104 White * Black



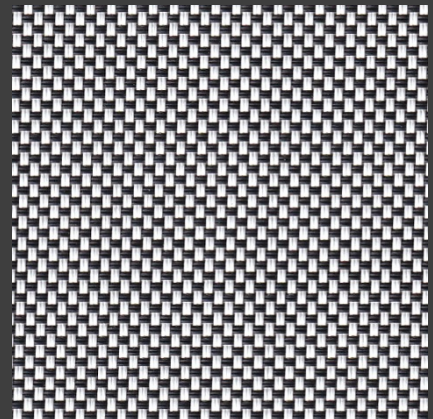
CVE-0101 White * White



CVE-0107 White * Sand



CVE-0105 White * Grey



CVE-0104 White * Black

* Colours may be slightly different from the actual ones



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